

**KERALA UNIVERSITY OF DIGITAL SCIENCES, INNOVATION AND TECHNOLOGY****Annual Report 2024**

In pursuance of the provisions contained in section 29 of the Kerala University of Digital Sciences, Innovation and Technology Act 2021 (Act 10 of 2021), the Board of Governors of the University presents the Annual Report for the year 2024.

## About Us

The Digital University Kerala (DUK), formally known as the *Kerala University of Digital Sciences, Innovation and Technology*, is a pioneering institution in India dedicated to building a responsible digital society. The University traces its origins to the *Indian Institute of Information Technology and Management–Kerala (IIITMK)*, established by the Government of Kerala in 2000 to advance learning and innovation in information technology.

While IIITMK made notable contributions, particularly in Kerala's e-governance initiatives, its growth was constrained by limited infrastructure and its status as a registered company, which restricted its ability to independently confer degrees or expand academic programs. Academic activities had to be carried out in association with the Cochin University of Science and Technology (CUSAT), and statutory limitations hampered the institute's capacity to meet the fast-evolving demands of the knowledge economy.

Recognizing these challenges, the Government of Kerala elevated IIITMK to university status through Ordinance No. 9 of 2020, later formalized as the Kerala University of Digital Sciences, Innovation and Technology Act, 2021 (Act 10 of 2021). With this transformation, the University received a broadened mandate to engage in interdisciplinary teaching, research, and outreach across digital sciences, technology, and the humanities, aspiring to emerge as a global centre of excellence.

The University began operations on October 28, 2020, at its new campus in Technocity, Thiruvananthapuram, under the leadership of Prof. Saji Gopinath (from IIM Kozhikode) as its founding Vice-Chancellor. It was formally inaugurated on February 20, 2021, by the Hon'ble Governor of Kerala, in the presence of the Hon'ble Chief Minister. Despite the disruptions caused by the COVID-19 pandemic, which delayed legislative approval, the University secured recognition from the University Grants Commission (UGC) under Section 2(f) and obtained AICTE approval for its M.Tech programs, ensuring smooth commencement of its academic activities.

The academic and research agenda of DUK is structured around three core domains – Research, Education, and Outreach. These functions are carried out through *Research Centres* and *Centres of Excellence* for frontier research, *Schools*

*of Education* for advanced learning, and *Outreach Centres* for societal engagement. The University offers master's and doctoral-level programs in cutting-edge areas aligned with Industry 4.0 and 5.0, including Artificial Intelligence, Cybersecurity, Connected Systems, AI Hardware, Signal Processing, Machine Learning, Data Analytics, Geospatial Sciences, and Ecological Informatics.

Admissions to postgraduate programs are conducted through GATE/University entrance examinations followed by interviews, while Ph.D. admissions are based on the Digital University Research Aptitude Test (DRAT), GATE/NET qualifications, and interviews. Scholarships from central and state governments support deserving students, and DUK is listed under the National Scholarship Portal, Egrantz Kerala, and the Directorate of Collegiate Education. Research scholars, except industry-sponsored candidates, are supported through UGC/NET fellowships or University scholarships.

The Government of Kerala is supporting the University's initial operations. In line with its vision, DUK seeks to evolve as a self-sustaining institution within five years, generating internal revenue and functioning with the efficiency and autonomy of an industrial or business entity, setting itself apart from conventional state universities.

## **Vision**

The vision of the University is to become a global destination of repute in Digital World Education and Research and to become an academic leader by nurturing futuristic talent capable of developing innovative and sustainable solutions for the industry, Governments, and society by leveraging Digital Technologies, Science & Humanities, through education, research, and application

## **Mission**

The motto of the University will be to *Curate a Responsible Digital World*. The development and application of Digital Technologies for social good is the underlying mission of the University. Towards this, the University shall focus on four themes of action namely, Computing, Intelligence, Sustainability, and Entrepreneurship; the first two themes shall form the focus area of work, and the next two themes act as guiding light for the overall mission while designing programs, developing products and services as well as for providing training and extension activities. The University shall catalyze technical advances that promote societal welfare.

## Governance and Administration

### Chancellor

Shri. Arif Mohammed Khan  
Hon'ble Governor of Kerala

### Pro-Chancellor

Shri. Pinarayi Vijayan  
Chief Minister of Kerala &  
Minister in charge of Electronics & IT

### Vice Chancellor

Prof. (Dr.) Saji Gopinath (till 26 October 2024)  
Dr. Ciza Thomas (from 28 November 2024)

### General Council

(Being constituted)

### Board of Governors

Sl. No	Members	Name and Designation
1.	Chairperson	<b>Prof. Vijay Chandru</b> Co-Founder & Director, Strand Life Sciences, Bengaluru Professor, Indian Institute of Science
2.	Principal Secretary/Secretary to Government, Electronics and Information Technology Department- Ex-officio Member	<b>Dr. Rathan U Kelkar, IAS</b> Additional Chief Secretary
3.	Principal Secretary/Secretary to Government, Finance Department – Ex-officio Member	<b>Sri. Rabindra Kumar Agarwal, IAS</b> Additional Chief Secretary
4.	Principal Secretary/Secretary to Government, Higher Education Department – Ex-officio Member	<b>Smt. Ishita Roy, IAS</b> Additional Chief Secretary
5.	One nominee of Higher Education Council, Government of Kerala- Ex-officio Member	<b>Dr. Rajan Varughese</b> Member Secretary
6.	The Joint Secretary, Ministry of Electronics and Information Technology,	

- Govt. of India  
One nominee of the Department of Science & Technology, Government of India – Ex-officio Member
7. Director, Indian Institute of Technology, Palakkad – Ex-officio Member
8. Director, Indian Institute of Management, Kozhikode – Ex-officio Member
9. Director, Indian Institute of Science, Education and Research Thiruvananthapuram – Ex-officio Member
10. Director, Indian Institute of Space, Science and Technology, Thiruvananthapuram – Ex-officio Member
11. Director, Sree Chithira Tirunal Institute of Medical Sciences and Technology (SCTIMST), Thiruvananthapuram – Ex-officio Member
12. Director, National Institute of Interdisciplinary Science and Technology, Thiruvananthapuram – Ex-officio Member
13. Experts from industry or academia with proven expertise in education, research or practice in Information Technology and allied disciplines – Members
14. Vice-Chancellor – Ex-officio Member
15. **Dr. Anitha Gupta**  
Scientist-G & Head, National Science & Technology Entrepreneurship Development Board (NSTEDB)
- Prof. A. Seshadri Sekhar**  
Director, Indian Institute of Technology Palakkad
- Prof. Debashis Chatterjee**  
Director, Indian Institute of Management-Kozhikode
- Prof. Jarugu Narasimha Moorthy**  
Director, Indian Institute of Science Education and Research (IISER), Thiruvananthapuram
- Dr. S. Unnikrishnan Nair**  
Director, Indian Institute of Space Science and Technology (IIST), Thiruvananthapuram
- Dr. Sanjay Behari**  
Director, Sree Chitra Tirunal Institute for Medical Sciences & Technology (SCTIMST), Thiruvananthapuram
- Dr. C. Anandaramakrishnan**  
Director, CSIR-National Institute for Interdisciplinary Science and Technology (NIIST), Thiruvananthapuram
- 1. Shri V K Mathews**  
Founder and Executive Chairman, IBS Software (IBS Group)
- 2. Prof. C Mohan**  
Distinguished Visiting Professor, Tsinghua University, China and Former Shaw Visiting Professor, National University of Singapore (NUS)
- 3. Shri Sam Santhosh**  
Founder, Medgenome Labs
- Dr. Saji Gopinath (till 26 October 2024)**  
Vice-Chancellor, Kerala University of Digital Sciences Innovation and Technology
- Dr. Ciza Thomas (from 28 November 2024)**  
Vice-Chancellor, Kerala University of Digital Sciences Innovation and Technology

## Deans

**Prof. A.P. James**

Dean (Academic)

**Prof. Asharaf S**

Dean (Development & HR)

**Prof. Tony Thomas**

Associate Dean (Academic)

**Prof. Manojkumar T K**

Dean (Research)

Registrar

**Prof. A Mujeeb**

Controller of Examinations

**Prof. Sabu M. Thampi**

Head, Knowledge Centre

**Dr. Gopakumar V**

Deputy Registrar

**Shri. Murali R** (Administration)

**Shri. Vishnu V** (Finance)

**Shri. S Vijayakumar** (Exams & VCs Office)

Assistant Registrar

**Shri. Aneesh S** (Finance)

Technical Officer

**Shri. Jayachandran M B** (CTO)

## School of Computer Science and Engineering (SoCSE)



## **School of Computer Science and Engineering (SoCSE)**

---

Established in 2020, SoCSE provides doctoral and master's degree programs, with research focus areas including theoretical computer science, computational intelligence, and systems & networks. Our mission is to educate and inspire the next generation of scientists and engineers to pursue their research goals. We strive to provide top-notch teaching, research, and learning opportunities that benefit our students, faculty, and society.

### **Vision**

To become a world-leading center of advanced learning, research and development, and societal outreach in the field of Computer Science and Engineering.

### **Mission**

To provide an enriching scholastic environment that nurtures innovative and effective ways of knowledge creation, dissemination and application to facilitate world-class education and cutting-edge research in the field of Computer Science and Engineering and thereby contributing to the society nationally and globally.

### **Objectives**

- ❖ SoCSE targets to focus its activities in the following dimensions:
- ❖ World-class research and academics with national and international collaborations.
- ❖ Nurturing globally competent and socially responsible talent pool through academic programmes.
- ❖ Commercialization of research outcomes through consultancy, collaborative new business initiatives and promotion of entrepreneurship.
- ❖ Creating an inclusive and collaborative environment to foster local, sustainable and globally relevant knowledge and expertise.

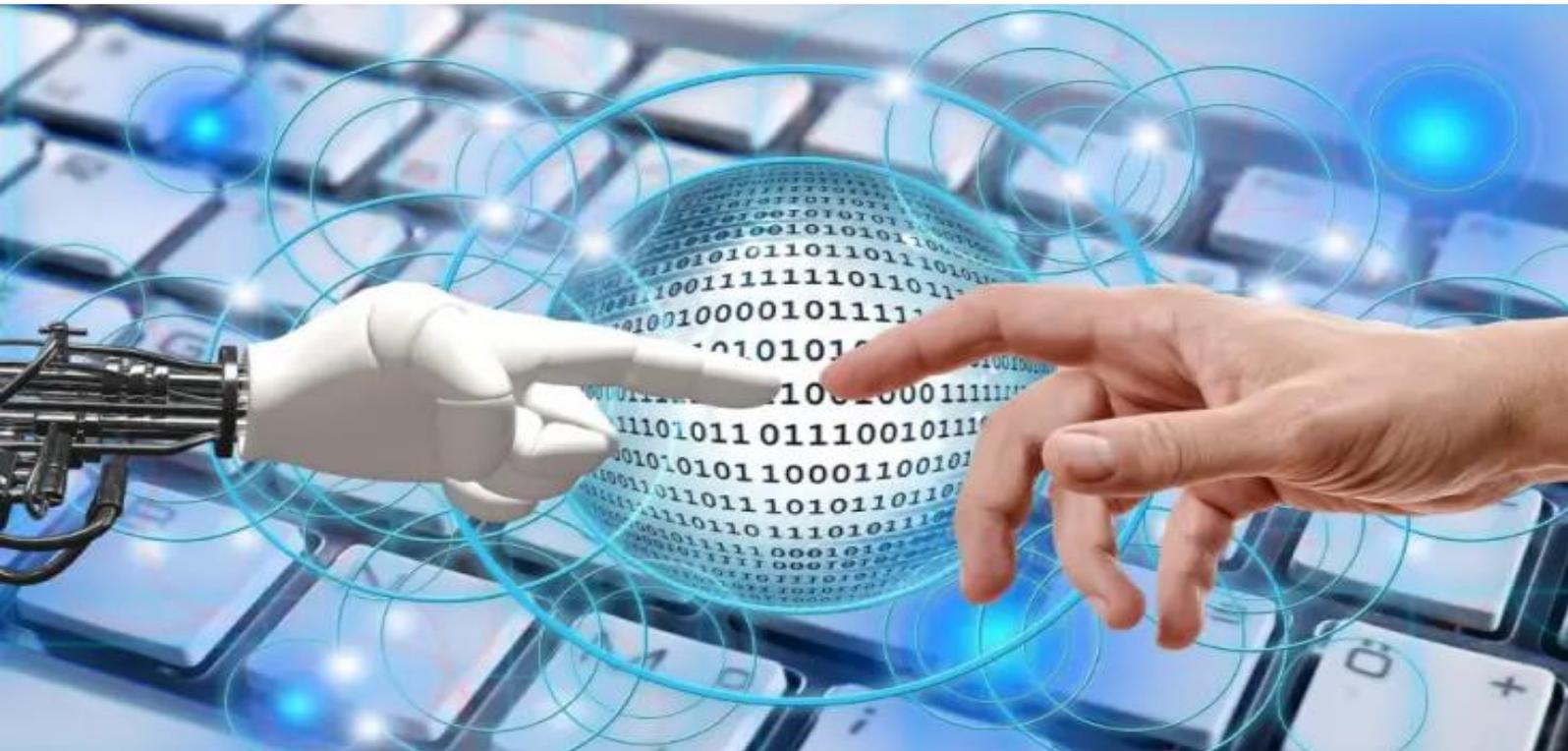
**Courses**

1. MTech in Computer Science and Engineering (90 seats) AICTE Approved
2. MSc in Computer Science with Specialization in Cyber Security
3. MSc in Computer Science with Specialization in Machine Intelligence
4. Ph.D. program is offered in Full-time, Part time, and Industry regular mode.

**Faculty**

1. Dr. Asharaf S
2. Dr. Balasubramaniam. S
3. Dr. Elizabeth Sherly
4. Dr. Malu G
5. Dr. Preetam Mukherjee
6. Dr. Sabu M Thampi
7. Dr. Sinnu Susan Thomas
8. Dr. Tony Thomas

## School of Digital Humanities and Liberal Arts (SoDiHLA)



## **School of Digital Humanities and Liberal Arts (SoDiHLA)**

---

Digital Humanities is a multidisciplinary field that explores the various dimensions of the interplay of digital technologies, societies, and communities. It encompasses research in various areas where digital technologies influence, contribute, and advance the cause of humanities and explores the intersection of digital technologies and humanities. The field attempts to produce applications and models that make possible new kinds of research, both in the humanitarian disciplines as well as in computer science and its allied technologies. It also studies the impact of these technologies on cultural heritage, libraries, archives, digital culture, lifestyles, technology-empowered communities, and the deployment of mathematical and predictive models on the future of a digitally empowered society.

The School of Digital Humanities and Liberal Arts (SoDiHLA) at KUDSIT will focus on research related to digital culture and society and will explore the use of advanced technology-related methods in humanities research. In current times, cultural artefacts are increasingly available in digitized or born-digital form, and computing power, which has grown exponentially over the last several decades, is more accessible than ever. The activities at the Centre would focus on the exploration and use of digital tools, analytical techniques, and technology to explore humanistic questions and solve business-related issues. The DiHLA will have its own academic and research programs in areas such as Digital Law, Digital Pedagogy, Computational Social Science, e-Governance, management science, entrepreneurship, innovation, etc. The school will also collaborate with other schools of KUDSIT for supporting interdisciplinary programs of KUDSIT that have a humanities/social science component.

### **Objectives**

- ❖ To cater to the demand of trained human resources to promote and influence the informed and critical uses of digital technology and computational approaches in social sciences, art, literature, history, area studies, linguistics, media, management and other disciplines of the humanities.
- ❖ To promote multidisciplinary domains of research in the social sciences that connect sociology, humanities, law economics, management, governance, policy, education, and related disciplines with technical innovations in mathematics, statistics, and computer science.

- ❖ To bring together students and faculty from within various centers of KUDSIT as well as researchers and community members to explore the crossroads of the humanities and computing.
- ❖ To encourage and motivate the student community to take up the future challenges of the growing IT industry
- ❖ To enable researchers and students to adapt computational and computer-aided methods to access, analyze, sequence, and present social and cultural artefacts in innovative ways.
- ❖ To engage with the wider community of researchers, academics, and practitioners for initiating, developing, and sharing ideas to address and influence various emerging digital policy challenges
- ❖ To generate new and relevant knowledge through original research, and intervening through direct engagement with civil society and communities.

### **Courses**

1. Postgraduate Diploma in e-Governance
2. Master of Business Administration
  - Business Analytics
  - Digital Governance
  - Digital Transformation
  - Finance
  - Human Resources
  - Information Security Management
  - Marketing
  - Operations
  - Systems
  - Technology Management

### **Faculty**

1. Dr. Ajith Kumar R
2. Dr. K Pradeep Kumar
3. Dr. K G Satheesh Kumar
4. Shri. Jayachandran M B
5. Dr. Meraj Uddin
6. Prof. Santhosh Kurup
7. Dr. Shanujas V
8. Dr. Sini V Pillai

## School of Digital Sciences (SoDS)



## **School of Digital Sciences (SoDS)**

---

The school focuses on STEM education, which is a broad term for science, technology, engineering, and mathematics. According to STEMconnector.org, projections estimate a need for 8.65 million workers in STEM-related jobs. Additionally, it was reported that STEM jobs in India increased by 44% from 2016 to 2019.

In the era of Industrial Revolution 4.0, it's imperative to train our nation's youth with the latest technologies and prepare them to bring knowledge and skills to solve complex problems and use them for decision-making. These competencies collectively known as STEM, are vital to help meet the expectations to create a dynamic workforce who can lead our nation tomorrow. It is essential to have trained human resources in STEM fields. The theme of the School of Digital Science is STEM, spanning the broad areas of Computational Science, Data Analytics, and Scalable Data Systems across various science and technology domains.

### **Vision**

To become an internationally renowned advanced center in the school's thematic areas, and to provide socially relevant services to the general public using the knowledge and skills acquired through learning, research, and development.

### **Mission**

To provide a critical meeting ground for people to learn the subject, interact with world-class experts, and foster collaborations; to organize and regulate access to federated data, information, and computational resources for knowledge creation, dissemination, and applications; and thereby to facilitate world-class education and cutting-edge research in the field of digital sciences, empowering society with updated skills and knowledge.

### **Objectives**

- ❖ To cater to the demand for trained human resources in STEM.
- ❖ To foster advanced research, development, and Innovation in the frontier areas of Digital Sciences.
- ❖ To encourage and motivate the student community to tackle the future challenges of the growing IT industry.

- ❖ To promote an innovation and entrepreneurship ecosystem for social innovations and to commercialize research outcomes.

## **Courses**

1. MSc in Computer Science with Specialization in Data Analytics
2. MSc in Data Analytics and Computational Science
3. MSc in Data Analytics and Geoinformatics
4. MSc in Data Analytics and BioAI
5. PhD program is offered in Full-time regular, Industry regular, and Part-time mode of study

## **Faculty**

1. Dr. John Eric Steephen
2. Dr. Manoj Kumar T K
3. Dr. Anoop Ayyappan
4. Dr. Ajith Kumar
5. Dr. Radhakrishnan
6. Dr. K. Satheesh Kumar
7. Dr. Sanil P Nair
8. Dr. Sherin D R
9. Dr. Aswin V S
10. Dr. Sishu Shankar Muni
11. Dr. Shamjid P
12. Dr. Shweta Srivastava
13. Dr. Anoop V S

## School of Electronic Systems and Automation (SoESA)



## **School of Electronics Systems and Automation (SoESA)**

---

The School of Electronic Systems and Automation (SoESA) believes in the practice of open Innovation, open hardware and open minds. And hold the following values to its heart:

- ❖ Learning is a process and not a product
- ❖ Innovation and creative thinking as a core value
- ❖ Promote inclusive education and learning
- ❖ Focus on student centred educational practices
- ❖ Embrace multiculturalism and international diversity
- ❖ Encourage diverse ways to make and demonstrate impact
- ❖ Enable an active start-up ecosystem

We welcome the visitors, industry representatives and students to be part of this journey and value system.

### **Vision**

We identify exceptional research and commercialisation opportunities, inspire collaborative works, promote industry, and make connections to accelerate social, economic, technological and environmental development.

### **Mission**

The School of Electronic Systems and Automation (SoESA), The Kerala University of Digital Sciences, Innovation and Technology is established in 2020, in the Technocity campus, Trivandrum. The SoESA aims to be a premier centre of research and Innovation in Electronics Systems and Automation making key contributions to the economic, technological and social well-being.

### **Objectives**

- ❖ The SoESA is an Engineering school that focuses mainly on applied research and Innovation in Electronic Systems. The SoESA aims to be international from its work environment to professional practice and offer intellectual freedom to grow. All the faculty in the School are considered intellectual equals irrespective of the stage of career.
- ❖ The SoESA will place quality ahead of all the other parameters.
- ❖ The SoESA places merit and quality ahead of equal opportunities principles. Although it will follow all the national guidelines and requirements where necessary, it will focus on the quality.

- ❖ It is expected that faculty members will attain high standards in research, teaching and services.
- ❖ The communications within the School aims to be transparent and fast. Being a digital university, all documentations to communications are expected to be in digital forms.
- ❖ SoESA believes in a student-centered education. The students are expected to be internationally competitive and be highly disciplined in academic matters.
- ❖ SoESA encourages internationalization of its education and research activities in all levels. It envisions collaborative programs and encourages faculty to build programs that benefit the Indian society.
- ❖ SoESA encourages all its faculty to commercialize, productize, and perform social innovations and patent research.
- ❖ SoESA sets high priority to industry-academic collaborations and international research collaborations.
- ❖ SoESA programs and activities shall follow at the minimum the relevant university guidelines and those required by regulatory bodies. However, SoESA shall set higher standards than prescribed by the university in its educational programs, outreach, consulting, and recruitment activities.

The School will focus on the broad areas of AI Hardware, AI Robotics, Signal Processing and Automation and Computational Imaging System

### **Courses**

- ❖ MTech in Electronics Engineering with Specialization in AI Hardware, IoT and Robotics and VLSI Design (60 seats)
- ❖ MSc in Electronics with Specialization in AI Hardware, IoT and Robotics, and
- ❖ VLSI Design (60 seats)
- ❖ MSc in Applied Physics with Specialization in VLSI Design and Applied Materials (20 seats)
- ❖ PhD program is offered in Full-time regular, Industry regular, and Part-time mode of study.

### **Faculty**

1. Dr. Alex P James
2. Dr. Jose Joseph
3. Dr. Sumit Datta
4. Dr. Christie Thomas Cherian
5. Dr. Muthusankar Eswaran

**School of Informatics (Sol)**



## **School of Informatics**

---

The School of Informatics is a frontier-less intellectual space that radiates computing across applied science and social science disciplines. We perceive informatics as the binder that can transform and levitate applied domains, which are increasingly relied upon to address emerging challenges.

The academic programs of the School of Informatics are interdisciplinary and of high quality. We ensure our students develop the ability to comprehend issues holistically, think objectively, and imbibe skills that would help them either find gainful employment or advance to a research career. A couple of years that one invested at the School of Informatics will return dividends in the future

### **Vision**

We envision a 'cooperatively competitive' academic environment with a focus on the transmutation of information, socially and temporally relevant research backed by quality education to churn out graduates with professional acumen, exceptional leadership, and a humane heart.

### **Mission**

The tri-value system of the school intends to provide education through three allied values: learn, transmute, and transform. The Sol imparts value-based and technology-oriented interdisciplinary education to students to bring them up as citizens who are socially conscious, intellectually competent, and morally upright.

### **Objectives**

Promote excellence in teaching and research with state-of-the-art infrastructure, through enhancing learning for all academic programs, including extra-curricular activities. The school is keen to advance scientific research and scholarship to an international level.

Promote the personal, social, academic, and career growth of all students proactively to prepare and qualify them to be leaders in their chosen careers and professions. The school provides a proper environment that nurtures Innovation, creativity, and the pursuit of knowledge.

- Forge strategic partnerships with the local community, including the public service industry, to be responsive to the socio-economic needs of the community through dedicated applied research.

## **Academic Programs**

### **Master's Program**

- MSc Ecology (specialization: Ecological Informatics)
- MSc Environmental Science (Specialization: Environmental Data Science, Ecological Informatics, Sustainability Studies, Ocean and Climate Informatics, Environmental Communication)

### **Post Graduate Diploma**

- PG Diploma in MRI Technology

### **PhD Program**

Full-time regular, part-time

## **Faculty Members**

1. Prof. Jaishanker R
2. Dr. Suresh I
3. Dr. Athira K
4. Dr. Sooraj N P
5. Prof. Joseph Suresh Paul

## Knowledge Centre



## Knowledge Centre

---

DUK, the new Gen University, is founded on the transformative power of digital technology. Its unique blend of Academics, Research & Development, Technology, Innovation, Entrepreneurship, and Arts & Humanities aims to deliver faster and more effective solutions to global societal challenges. To support this vision, the traditional Library System is being comprehensively reimagined to meet the evolving needs of this dynamic academic ecosystem.

The Knowledge Centre, as it will now be known, is undergoing a structural and functional transformation. This initiative recognizes the critical role of timely, relevant, and intelligently curated information as a driving force for innovation and impact. In alignment with DUK's futuristic academic framework, the Knowledge Centre will rapidly evolve to serve as a central hub for advanced knowledge dissemination.

This transformation addresses several key dimensions:

- Changing user information needs
- The exponential growth of information resources
- The complexity of modern information dissemination
- Emerging tools, platforms, and techniques
- Gaps in user workflows and access models

Short-term and long-term strategies are being formulated to address these challenges while capitalizing on the opportunities presented by digital transformation.

Key considerations include:

- Embracing Open Access and Open Science initiatives
- Addressing ethical and economic concerns surrounding data monopolies and publisher control
- Ensuring sustainable models for information storage and dissemination
- Aligning user-centric services with innovative delivery mechanisms

Technological advancements offer vast potential to redefine information management and delivery processes. Additionally, the very concept of physical library spaces and the roles of information professionals are being re-examined in light of these changes.

Ultimately, the evolution of the Knowledge Centre will be guided by deep analysis, thoughtful planning, and forward-looking implementation. The goal is to create a model of excellence that not only meets the unique needs of DUK but also serves as an exemplar for next-generation knowledge systems globally.

This transformation will be reflected in the restructured resources, services, and operational frameworks, laying the foundation for a Knowledge Centre that empowers innovation, collaboration, and societal advancement.

## Resources

Books: e-Versions & p-Versions

Periodicals/Journals/Magazines: e-, p- Integrated Versions

## Subscribed E-Resources and Services

- IEEE Xplore (ASPP+POP Online), ACM Digital Library, Wiley Online Library, Springer 1700+ Journals, Science Direct, etc.
- Access to National Facilities, including INFLIBNET, NDL, DELNET etc.
- Access to Web of Science, Scopus
- Open Access Databases, including ArXiv.org, DOAJ, WIPO, etc.
- Edzter (Online E-magazines & Periodicals)
- Mathworks

## Services

- Plagiarism Checking Service - Using Turnitin
- Overleaf online platform for Latex page design
- Grammarly Premium
- Canva Premium
- Knimbus Digital Library
- Document Delivery Services
- Web OPAC
- Normal Circulation Service
- Inter-Institutional Resource Sharing
- Reference & Referral Service
- Window to Open-Source Learning / MOOCs
- Scholarly Publishing Guidance including Choice of Source Publications incl. Metrication Standards
- Reference Management / Publishers' Author Guidelines
- Access to e-Resources: Campus-Wide incl. Hostels

**Facilities**

Reading Space/ Learning Space  
Net-enabled Access Stations  
Photocopying & Scanning Systems

**The Team**

- Dr. Gopakumar V, Head, Knowledge Centre
- Assistant Librarian (Vacant)
- Remya S, Library Assistant
- Athira Uthaman, Library Assistant

## **Women Incubation Start-ups and Entrepreneurship (WISE)**

---

Digital University Kerala (DUK) established **Women Incubation, Start-ups and Entrepreneurship Scheme (WISE)** is an incubator, promotes women empowerment to initiate new enterprises with breakthrough technologies by providing financial, technological and infrastructure support through the scheme. WISE promotes women innovations and entrepreneurship to empower a wider women eco system with technology and innovations. DUK faculty members provide mentorship, technological support and provide support to nurture their innovation to transform knowledge, business and enterprises.

Looking forward, WISE is taking steps forward to strengthen and scale up with more women to come forward with technological innovations in disruptive technologies such as AI and sustainability, digital transformation in niche areas to build a better ecosystem for the benefit of a larger society.

Wise also plan to extend its services to bring more students across colleges by establishing women entrepreneurial cells in colleges so as to achieve excellence in research, products, processes and services to maximize its impact on industry and society. A state-of-the infrastructure, with a dedicated incubation centre to be established under DUK for catalysing the growth of incubates and to uniquely position WISE by producing success stories of aspiring entrepreneurs.

Currently, 5 start-ups are running, Light A Fire Consultants (LAF Sports), cater the need of sports schools and sports athletics for better counselling and management, Zynecore Global Pvt Ltd (Doctor42), an online counselling platform, SOLVERT TECH for tech based waste management system, Supreme Health And Wellness Centre (SHAWC), a holistic treatment platform and Rwihaa Fabzlab for healthy fabric designs.

### **WISE is intended to:**

- Provide a platform for students, young minds, and women entrepreneurs to work seamlessly to become successful women entrepreneurs.
- Promote awareness and facilitation to create breakthrough technologies for potential women and student entrepreneurs.
- Provide mentoring, support, training and consultancy for nurturing viable ideas into successful businesses.

Establish Women Entrepreneurship cells to bring more students across colleges and universities to empower a wider women eco system with Technology and Innovations.

Targeting 15-20 women entrepreneurs and 100 -200 students from various colleges of Kerala with financial support for one financial year, which can be scaled up in coming years. More funding is expected for scaling up the programme.

Set up Think Lab, which is a network of makerspaces where members can learn about digital technologies in a hands-on environment, turn their ideas into working prototypes and solutions. The Think Lab program is structured to encourage a rapid prototyping mindset with ease of access to the makerspace. Some of the niche areas of assistive technologies for targeted group can also be benefited.

## Faculty Publications



## Dr. Alex P James

### Journal Articles

- Pavithran, S., Pallathuvalappil, S., George, E., GS, J., & James, A. (2024). EM Wave-Based Hand Gesture Recognition for Astronauts Using 3D Memristive Neural Network. *IEEE Journal of Microwaves*.
- Dinesh, V. P., Radhakrishnan, A., & James, A. (2024). Analog Spike-Based Multi-Head Attention with Memristor Crossbar Arrays for Text Classification. *IEEE Transactions on Circuits and Systems for Artificial Intelligence*.
- Rajalekshmi, T. R., Pavithran, S., Das, R. R., & James, A. (2024). Graphene-infused terracotta acoustic sound amplifiers. *Scientific Reports*, 14(1), 29388.
- James, A. (2024). CASS Chapter Highlights. *IEEE Circuits and Systems Magazine*, 24(4), 95-100.
- George, E., Pillai, S. S., & James, A. (2024). CASS Chapter Highlights. *IEEE Circuits and Systems Magazine*, 24(4), 101–106.
- Gopi, A., George, E., & James, A. (2024). Descriptor: Pixel Sampling to Generate Database of Radiation Pattern Images of Antenna (PSGDRPIA). *IEEE Data Descriptions*.
- Govind, R. K., Dinesh, V. P., Balagopal, G., Dhanesh, R. N., & James, A. (2024). Graphene based Phase Change Thermal Interface Nanocomposite and Heat Sink for Thermal Management. *IEEE Journal on Flexible Electronics*.
- Pallathuvalappil, S., Kottappuzhackal, R., & James, A. (2024). Explainable Model Prediction of Memristor. *IEEE Open Journal of the Industrial Electronics Society*.
- Nair, V. V., George, E., & James, A. (2024). Real-time Tumor Detection Using Electromagnetic Signals with Memristive Echo State Networks. *IEEE Internet of Things Journal*.
- Vohra, S. K., Sakare, M., James, A. P., & Das, D. M. (2024). SpiMAM: CMOS Implementation of Bio-Inspired Spiking Multidirectional Associative Memory Featuring In-Situ Learning. *IEEE Transactions on Circuits and Systems I: Regular Papers*.
- Alimisis, V., Aletraris, C., Eleftheriou, N. P., Serlis, E. A., Sotiriadis, P. P., & James, A. (2024). Low-power analog integrated architecture of the voting classification algorithm for diabetes disease prediction. *IEEE Transactions on Biomedical Circuits and Systems*.
- Jacob, I., Noel, D., & James, A. (2024). Quantum Cybersecurity: Preparing Cloud Infrastructures for Post-Quantum Threats.

- Das, R. R., Rajalekshmi, T. R., Pallathuvalappil, S., & James, A. (2024). FETs for Analog Neural MACs. *IEEE Access*.
- Das, R. R., Rajalekshmi, T. R., & James, A. (2024). FinFET to GAA MBCFET: a review and insights. *IEEE Access*.
- Radhakrishnan, A., Gopi, A., Reghuvaran, C., & James, A. (2024). Variability-Aware Memristive Crossbars with ImageSplit Neural Architecture. *IEEE Transactions on Nanotechnology*.
- Pallathuvalappil, S., & James, A. (2025). Rate Coding with 3D Memristor Crossbar. *IEEE Transactions on Circuits and Systems for Artificial Intelligence*.
- James, A. (2024). Energy efficiency and design challenges in analogue memristive chips. *Nature Reviews Electrical Engineering*, 1(1), 6–7.
- Das, R. R., & James, A. (2023). Multi-channel step FinFET with spacer engineering. *IEEE Access*, 12, 462–470.
- James, A. (2024, July). Maker CHIPS: Open-source chips movement for democratization of chip design. *IEEE Circuits and Systems Magazine*.
- Remanan, A., Gopi, A., & James, A. (2024). PyMem: A Graphical User Interface Tool for Neuromemristive Hardware–Software Co-Design. *IEEE Open Journal of the Industrial Electronics Society*, 5, 81–90.
- James, A., Jacob, I., & Watson, J. (2024). Transfer Learning for Multi-label Chest X-ray Classification.

### Conference Papers

- Pavithran, S., George, E., & James, A. (2024, December). Parasitic effects prediction in on-chip-antennas. In *2024 IEEE Electrical Design of Advanced Packaging and Systems (EDAPS)*, pp. 1–3. IEEE.
- Pavithran, S., Pramod, A., George, E., & James, A. (2024, December). Prediction of 3D printed substrate's dielectric constant using artificial neural network. In *2024 IEEE MAPCON*, pp. 1–4. IEEE.
- James, A., George, E., Radhakrishnan, A., & Govind, R. (2024, December). ElectroExperiance: Transforming Post-Graduate Electronics Education With Experiential Learning. In *2024 IEEE TALE*, pp. 1–6. IEEE.
- Remanan, A., Nair, V., Pallathuvalappil, S., & James, A. (2024, November). Analog Neuron as Generalised Similarity Metric. In *2024 IEEE APCCAS*, pp. 489–493. IEEE.
- Kartha, K., & James, A. (2024, August). Graphite Based Flexible Thermocouple Array for PCB Thermal Monitoring. In *2024 IEEE MWSCAS*, pp. 228–232. IEEE.
- Remanan, A., Gopi, A., & James, A. (2024, July). Universal Filter Array with Memristive Crossbar. In *2024 IEEE NANO*, pp. 364–369. IEEE.

- Kartha, K., Nair, V. V., & James, A. (2024, October). Rapid and Cost-Effective Characterization of Graphene Powders Using Memristive Echo State Networks. In 2024 IEEE MetroXRINE, pp. 918–923. IEEE.
- Rajalekshmi, T., Das, R. R., & James, A. (2024, January). Graphene based piezoresistive pressure sensor for structural health monitoring. In 2024 IEEE APSCON, pp. 1–4. IEEE.
- Nair, V. V., Anilkumar, P., & James, A. (2024, May). High Voltage Transformer Condition Monitoring Using Memristive Echo State Networks. In 2024 IEEE ISCAS, pp. 1–5. IEEE.
- George, E., Pallathuvalappil, S., & James, A. (2024, May). Smart Clothing using Antenna and Memristive ANN. In 2024 IEEE ISCAS, pp. 1–5. IEEE.
- Gopi, A., George, E., & James, A. (2024, April). AI for antenna design re-engineering: Yes, radiation patterns predict antenna structures!. In 2024 IEEE AICAS, pp. 66–70. IEEE.
- Mallan, V. S., Alex, R., & James, A. (2024, January). Learning Chemical Compositions through Music. In 2024 IEEE ICCE, pp. 1–4. IEEE.

### Books

- James, A., Ascoli, A., & Choubey, B. (Eds.). (2024). Intelligence in Chip: Integrated Sensors and Memristive Computing.
- James, A., Eric, T., & Harry, A. (2024). Nanotechnology in Industry: Pioneering Innovations for Enhanced Efficiency and Sustainability.

### Patents

- James, A., & George, E. (2024, March). Smart cloth with unified size for all clothing brands (Indian Patent Application No. 202441017851). IN Patent Office.
  - James, A., Radhakrishnan, A., & Sruthi, P. (2024, March). System for performing in-memory computation of neural network accelerators using bridge configuration (Indian Patent Application No. 202441017850). IN Patent Office.
  - Govind, R., & James, A. (2024, March). Smart flexible heated glove (Indian Patent Application No. 202441011017). IN Patent Office.
-

**Dr. Anoop A****Journal Articles**

- Banerjee, M., Chandran, P. R., Nair, S. V., & Anoop, A. (2024). Repurposing Bial's Reaction to Engender Donor–Acceptor Stenhouse Adducts: A Computational Investigation. *Journal of Photochemistry and Photobiology A: Chemistry*, 449, 115408.
- Roy, T., Satpati, S., Sinjari, A., Anoop, A., Thimmakondur, V. S., & Ghosal, S. (2024). Energetic and Spectroscopic Properties of Astrophysically Relevant  $\text{MgC}_4\text{H}$  Radicals Using High-Level Ab Initio Calculations. *The Journal of Physical Chemistry A*, 128(8), 1466–1476.
- Banerjee, M., & Anoop, A. (2024). Exploring the Theoretical Foundations of Thermally Activated Delayed Fluorescence (TADF) Emission: A Comprehensive TD-DFT Study on Phenothiazine Systems. *Chemistry–A European Journal*, 30(20), e202304206.
- Panda, S., & Anoop, A. (2024). Potential Prebiotic Pathways in Extraterrestrial Atmosphere: A Computational Exploration of HCN and  $\text{NH}_3$  Reactions. *ACS Earth and Space Chemistry*, 8(2), 348–360.
- Panda, S., Roy, S., Khatun, M., & Anoop, A. (2024). HCN Dimers to HCN Tetramers: Computational Exploration of Binary Reactions. (Journal info not provided — likely in press or preprint)
- Das, S., Paul, S., Mandal, K. K., Anoop, A., & Nanda, S. (2024). Asymmetric Total Synthesis of Naturally Occurring (R)-2'-Methoxydihydroartemidin, (R)-(E)-3'-Hydroxyartemidin, and Its Structural Congeners: Method Optimization and Mechanistic Analysis. *The Journal of Organic Chemistry*, 89(21), 15764–15776.
- Bharath Kumar, P., Raju, C. E., Roy, S., Anoop, A., Chandra, R., Sridhar, B., & Karunakar, G. V. (2024). Rh(III)-Catalyzed Chemoselective [4+2] Annulations for the Synthesis of [1,3] Oxazinoindolones: A Combined Experimental and Computational Study. *Organic Letters*, 26(41), 8680–8685.
- Majumder, R., Banerjee, S., Paul, S., Mondal, S., Mandal, M., Ghosh, P., ... & Mandal, M. (2024). Riboflavin-Induced DNA Damage and Anticancer Activity in Breast Cancer Cells under Visible Light: A TD-DFT and In Vitro Study. *Journal of Chemical Information and Modeling*, 64(14), 5580–5589.
- Ojha, M., Banerjee, M., Mandal, M., Singha, T., Ray, S., Datta, P. K., ... & Singh, N. P. (2024). Two-Photon-Responsive "TICT+ AIE" Active Naphthyridine- $\text{BF}_2$  Photoremovable Protecting Group: Application for Specific Staining and Killing of Cancer Cells. *ACS Applied Materials & Interfaces*, 16(17), 21486–21497.

- Anoop, A., & Ganesh, V. (2024). Computational Studies on the Tropylium-Catalyzed Carboxylic Acid O–H Insertion with Diazoesters: The Role of Homoaromaticity. *European Journal of Organic Chemistry*, 27(2), e202300658.
  - Deshpande, V. V., Chauhan, V., Bandyopadhyay, D., Anoop, A., & Bhattacharyya, S. (2024). Structure of Small Yttrium Monoxide Clusters, Chemical Bonding, and Photoionization: Threshold Photoionization and Density Functional Theory Investigations. *Physical Chemistry Chemical Physics*, 26(29), 20123–20133.
- 

### **Dr. Asharaf S**

#### **Journal Articles**

- Kiran, R. J., Sanil, J., & Asharaf, S. (2024). A Novel Approach for Model Interpretability and Domain Aware Fine-Tuning in AdaBoost. *Human-Centric Intelligent Systems*, 1–23.
  - Jennath, H. S., & Asharaf, S. (2024). Scalable Decision Fusion Algorithm for Enabling Decentralized Computation in Distributed, Big Data Clustering Problems. *International Journal of Machine Learning and Cybernetics*, 15(9), 3803–3827.
  - Rajendran, B., Vidya, C. G., Sanil, J., & Asharaf, S. (2024). A Local Explainability Technique for Graph Neural Topic Models. *Human-Centric Intelligent Systems*, 4(1), 53–76.
- 

### **Dr. Aswin VS**

#### **Journal Articles**

- Sangeetha, C., & Aswin, V. S. (2024). Numerical solution of time-dependent two-parameter singularly perturbed problems via Trigonometric Quintic B-spline collocation technique. *Physica Scripta*, 100(1), 015206.
- 

### **Dr. Athira K**

#### **Journal Articles**

- Kakkara, Athira, Kumar, B. S., Reddy, S. G., Prashanthi, K., Kugabalasooriar, S., & Posa, J. K. (2024). A novel nature-inspired ligno-alginate hydrogel coated with Fe<sub>3</sub>O<sub>4</sub>/GO for the efficient-sustained release of levodopa. *Heliyon*, 10(23).

- Kakkara, Athira. (2024). Ecological informatics: Metamorphosing ecology to a translational discipline. *Ecological Informatics*, 80, 102525.
- Rajan, S. C., Mitra, A., NP, S., K, Athira., & Pillai, M. S. (2024). Threshold of anthropogenic sound levels within protected landscapes in Kerala, India, for avian habitat quality and conservation. *Scientific Reports*, 14(1), 2701.
- Athira, K., Singh, S., & Abebe, A. (2024). Rising risk and localized patterns of Indian Summer Monsoon rainfall extremes. *Atmospheric Research*, 309, 107554.
- Athira, K. S., & Chatterjee, S. (2024). High-current gas tungsten arc welding of Ni-base superalloy Haynes 282: Correlating heat input with weld profile, microstructure, hardness and indentation size effect. *Materials Science and Technology*, 40(15), 1128–1136.
- Athira, K. S., Attada, R., & Rao, V. B. (2024). Synoptic dynamics of cold waves over north India: Underlying mechanisms of distinct cold wave conditions. *Weather and Climate Extremes*, 43, 100641.

### **Conference Papers / Abstracts**

- Singh, S., & Athira, K. (2024). A coupled framework to improve extreme rainfall simulation for a flood-prone river basin in Kerala. AGU24.
- Singh, S. (2023, December). Simulation of extreme rainfall events using Weather Research Forecast (WRF) model in the Pamba river basin, Kerala. In AGU Fall Meeting Abstracts (Vol. 2023, No. 14, pp. H16–08).

### **Theses / Dissertations**

- Athira, K. (2024). Rehabilitation and human capability formation of scheduled tribes in Kerala: A study on Pookot Dairy Project (Doctoral dissertation, Department of Economics, University of Calicut).

### **Dr. Balasubramaniam S**

#### **Journal Articles**

- Balasubramaniam, S., Kadry, S., & Kumar, K. S. (2024). Osprey Gannet optimization enabled CNN based Transfer learning for optic disc detection and cardiovascular risk prediction using retinal fundus images. *Biomedical Signal Processing and Control*, 93, 106177.
- Balasubramaniam, S., Kadry, S., Dhanaraj, R. K., et al. (2024). Res-UNet based blood vessel segmentation and cardiovascular disease prediction using chronological chef-based optimization algorithm-based deep residual network from retinal fundus images. *Multimedia Tools and Applications*, 83, 87929–87958.

- Balasubramaniam, S., Arishma, M., Satheesh Kumar, K., & Dhanaraj, R. K. (2024). A comprehensive exploration of artificial intelligence methods for COVID-19 diagnosis. *EAI Endorsed Transactions on Pervasive Health & Technology*, 10(1).
- Nelson, S. G., & Rajan, A. S. (2024). Machine Learning based Disease and Pest detection in Agricultural Crops. *EAI Endorsed Transactions on Internet of Things*, 10.
- Balasubramaniam, S., Joe, C. V., Manthiramoorthy, C., & Kumar, K. S. (2024). ReliefF based feature selection and Gradient Squirrel search Algorithm enabled Deep Maxout Network for detection of heart disease. *Biomedical Signal Processing and Control*, 87, 105446.
- Gollagi, S. G., & Balasubramaniam, S. (2023). Hybrid model with optimization tactics for software defect prediction. *International Journal of Modeling, Simulation, and Scientific Computing*, 14(02), 2350031.
- Balasubramaniam, S., Chirchi, V., Kadry, S., Agoramoorthy, M., Gururama, S. P., Satheesh, K. K., & Sivakumar, T. A. (2024). The Road Ahead: Emerging Trends, Unresolved Issues, and Concluding Remarks in Generative AI—A Comprehensive Review. *International Journal of Intelligent Systems*, 2024.
- Balasubramaniam, S., Kadry, S., Dhanaraj, R. K., & Kumar, K. S. (2024). Adaptive coati optimization enabled deep CNN-based image captioning. *Applied Artificial Intelligence*, 38(1).
- Thankaraj Ambujam, S., & S, B. (2024). Power quality enhancement in the wind energy distribution system using HHO algorithm based UPFC. *Journal of the Chinese Institute of Engineers*, 47(6), 732–752.

## Books

- Balasubramaniam, S., Prasanth, A., Kumar, K. S., & Kavitha, V. (2024). Medical image analysis based on deep learning approach for early diagnosis of diseases. In *Deep Learning for Smart Healthcare* (pp. 54–75). Auerbach Publications.
- Ashwini, A., Kavitha, V., Balasubramaniam, S., & Sundaravadivazhagan, B. (2025). Challenges in Integrating Cloud and IoT in Healthcare Systems. In *Revolutionizing Healthcare Systems Through Cloud Computing and IoT* (pp. 47–76). IGI Global.
- Ashwini, A., Balasubramaniam, S., & Kadry, S. (2025). A Comprehensive Introduction to Cloud Computing Revolution. In *Revolutionizing Healthcare Systems Through Cloud Computing and IoT* (pp. 1–26). IGI Global.
- Ashwini, A., Kavitha, V., & Balasubramaniam, S. (2024). *Deep Biometrics: Exploring the Intersection of Deep Learning and Biometric Applications*.

In AI Based Advancements in Biometrics and its Applications (pp. 68–84). CRC Press.

- Shafik, W., Tufail, A., Apong, R. A. A. H. M., & Balasubramaniam, S. (2024). Future Directions in Cybersecurity, Digital Forensics and Biometric Systems. In AI Based Advancements in Biometrics and its Applications (pp. 238–263). CRC Press.
- Chirchi, V., Visalini, S., & Balasubramaniam, S. (2024). Blockchain-based Voting System. In AI Based Advancements in Biometrics and its Applications (pp. 219–237). CRC Press.
- Reshmi, L. B., Vipin Raj, R., & Balasubramaniam, S. (2024). Generative AI and LLM: Case Study in Finance. In Generative AI and LLMs: Natural Language Processing and Generative Adversarial Networks (p. 231). Walter de Gruyter.
- Ashwini, A., Kavitha, V., & Balasubramaniam, S. (2024). Early Roots of Generative AI Models and LLM: A Diverse Landscape. In Generative AI and LLMs: Natural Language Processing and Generative Adversarial Networks (p. 23). Walter de Gruyter.
- Balasubramaniam, S., Prasanth, A., Kumar, K. S., & Kadry, S. (2024). Artificial Intelligence-Based Hyperautomation for Smart Factory Process Automation. In Hyperautomation for Next-Generation Industries (pp. 55–89).
- Balasubramaniam, S., Sumina, S., Kumar, K. S., & Prasanth, A. (2024). Machine learning based models for implementing digital twins in healthcare industry. In Metaverse Technologies in Healthcare (pp. 135–162). Academic Press.

### **Conference Papers**

- Balasubramaniam, S., & Arishma, M. (2024, May). Prediction of breast cancer using ensemble learning and boosting techniques. In 2024 International Conference on Communication, Computer Sciences and Engineering (IC3SE) (pp. 513–519). IEEE.

### **Edited Books**

- Balasubramaniam, S., Kadry, S., Prasanth, A., & Dhanaraj, R. K. (Eds.). (2024). AI Based Advancements in Biometrics and Its Applications. CRC Press.
- Balasubramaniam, S., Kadry, S., Prasanth, A., & Dhanaraj, R. K. (Eds.). (2024). Generative AI and LLMs: Natural Language Processing and Generative Adversarial Networks. Walter de Gruyter GmbH & Co KG.

**Patent**

- Balasubramaniam, S. (2024, June 20). A device for online video meetings and in-built emotion-based attendance report (Indian Patent No. 542428). Indian Patent Office. Application No. 202231034509.
- 

**Dr. Elangovan K****Journal Articles**

- Mathew, T., Simhadri, N., Elangovan, K., Sreekantan, A. C., & Sukumaran, V. B. (2024). A digital thermistor read-out based on charge-discharge topologies coupled with optimal linearization strategies. *IEEE Sensors Journal*.
- Elangovan, K. (2024). A novel triple-slope-based digital measurement platform for 3-wire connected resistive sensors. *IEEE Transactions on Instrumentation and Measurement*.
- Elangovan, K., & Sreekantan, A. C. (2024). A simple electronic digitizer for parallel RC transducers. *IEEE Sensors Letters*.

**Conference Proceedings**

- Elangovan, K. (2024, September). Enhanced dual-slope-based digitizer for 4-wire connected resistive sensors. In *2024 IEEE Region 10 Symposium (TENSYP)* (pp. 1–4). IEEE.
- Elangovan, K., & Reverter, F. (2024, July). A novel measurement circuit for four-wire RTD thermal sensors controlled by a low-cost microcontroller. In *2024 IEEE Sensors Applications Symposium (SAS)* (pp. 1–5). IEEE.

**Patent**

- Elangovan, K., & Anoop, C. S. (2024, March 1). Digitizing interface circuit topology and a measurement strategy for grounded RC-based impedance sensors (Indian Patent No. 550477). Indian Patent Office.
- 

**Dr. Elizabeth Sherly****Conference Proceedings**

- Raji, G. N., Rani, B. S., Harishankar, M., & Sherly, E. (2024, December). Braille tactile representations in the brain: An EEG Investigation. In *2024 International Conference on Modeling, Simulation & Intelligent Computing (MoSICom)* (pp. 427–432). IEEE.

- Uday, N., George, J. K., & Sherly, E. (2024, September). An fMRI-Based Centrality Analysis of Brain Connectivity in Autism Spectrum Disorder. In 2024 IEEE Region 10 Symposium (TENSYP) (pp. 1–8). IEEE.
- Rani, B. S., & Sherly, E. (2024, December). EEG Based Imagined Speech Recognition Using Multi-Feature Extraction with DNN-CapsNet. In 2024 International Conference on Modeling, Simulation & Intelligent Computing (MoSICom) (pp. 206–211). IEEE.
- Uday, N., & Sherly, E. (2024, June). Exploring Neural Connectivity in Autism: Insights from Nonlinear Functional Connectivity Matrix and Graph Analysis. In 2024 15th International Conference on Computing Communication and Networking Technologies (ICCCNT) (pp. 1–6). IEEE.
- Rani, S., Harishankar, M., & Sherly, E. (2024, December). Deciphering Braille: EEG Based Deep Learning for Character Recognition. In 2024 International Conference on Brain Computer Interface & Healthcare Technologies (iCon-BCIHT) (pp. 79–84). IEEE.
- George, J. K., & Sherly, E. (2024, June). Scanpath Prediction through Convolutional Neural Network and Feature-Based Clustering: A Bottom-Up Approach. In 2024 15th International Conference on Computing Communication and Networking Technologies (ICCCNT) (pp. 1–7). IEEE.
- Baiju, B., Manohar, K., Pillai, L. G., & Sherly, E. (2024, May). Malayalam to English Named Entity Transliteration using Attention based BiLSTM. In 2024 IEEE Recent Advances in Intelligent Computational Systems (RAICS) (pp. 1–6). IEEE.
- Pavithran, P., & Sherly, E. (2024, April). An ASR model for Individuals with Hearing Impairment using Hidden Markov Model. In 2024 IEEE 9th International Conference for Convergence in Technology (I2CT) (pp. 1–7). IEEE.
- Sherly, E. (2024, April). Fostering Learning with Facial Insights: Geometrical Approach to Real-Time Learner Engagement Detection. In 2024 IEEE 9th International Conference for Convergence in Technology (I2CT) (pp. 1–6). IEEE.
- Chakravarthi, B. R., Priyadharshini, R., Krishnamurthy, P., & Sherly, E. (2021, April). Proceedings of the First Workshop on Speech and Language Technologies for Dravidian Languages. In Proceedings of the First Workshop on Speech and Language Technologies for Dravidian Languages.

### Journal Articles

- Malu, G., Uday, N., Sherly, E., Abraham, A., & Bodhey, N. K. (2024). CirMNet: A Shape-based Hybrid Feature Extraction Technique using CNN and CMSMD for Alzheimer's MRI Classification. IEEE Access.

### Book Chapters

- Sherly, E., Pillai, L. G., & Manohar, K. (2024). ASR models from conventional statistical models to transformers and transfer learning. In *Automatic speech recognition and translation for low resource languages*, pp. 69–112.

### **Preprints (arXiv)**

- Baiju, B., Manohar, K., Pillai, L. G., & Sherly, E. (2024). Romanized to native Malayalam script transliteration using an encoder-decoder framework. arXiv preprint arXiv:2412.09957.
  - Pillai, L. G., Manohar, K., Raju, B. K., & Sherly, E. (2024). Multistage Fine-tuning Strategies for Automatic Speech Recognition in Low-resource Languages. arXiv preprint arXiv:2411.04573.
  - Manohar, K., Pillai, L. G., & Sherly, E. (2024). What is lost in Normalization? Exploring Pitfalls in Multilingual ASR Model Evaluations. arXiv preprint arXiv:2409.02449.
- 

### **Dr. Jaishanker R**

#### **Journal Articles**

- Ayushi, K., Babu, K. N., Ayyappan, N., Nair, J. R., Kakkara, A., & Reddy, C. S. (2024). A comparative analysis of machine learning techniques for aboveground biomass estimation: A case study of the Western Ghats, India. *Ecological Informatics*, 80, 102479.
  - Rajan, S. C., Mitra, A., NP, S., K, A., & Pillai, M. S. (2024). Threshold of anthropogenic sound levels within protected landscapes in Kerala, India, for avian habitat quality and conservation. *Scientific Reports*, 14(1), 2701.
  - Muraleedharan, V., & Rajan, S. C. (2024). Geometric entropy of plant leaves: A measure of morphological complexity. *Plos one*, 19(1), e0293596.
- 

### **Dr. John Eric Steephen**

#### **Conference Proceedings**

- Padmakumar, M., Rajan, D., & Steephen, J. E. (2024). Effect of Focused Ultrasonic Stimulation via Intramembrane Cavitation in the Squid Giant Axon. In *33rd Annual Computational Neuroscience Meeting, Natal, Brazil, 20–24 July*.

## **Dr. Jose Joseph**

### **Journal Articles**

- Lekshmi, V., & Joseph, J. (2024). Geometry Optimization to Enhance the Range of Detection of Fringing Field-Based Capacitive Proximity Sensors. *IEEE Sensors Letters*.
  - Bhagavathi, K. A., Bonam, S., Joseph, J., Rao, K. T., Singh, S. G., & Vanjari, S. R. K. (2024). Silk-Aloe vera composite piezoelectric film: A new paradigm in eco-friendly piezoelectrics. *IEEE Journal on Flexible Electronics*.
  - Nair, N., Akshaya, A. V., Bosco, M. J., Ananthasuresh, G. K., & Joseph, J. (2024). A robust sensor for inline pH measurements. *IEEE Sensors Journal*.
  - Bhagavathi, A., Bonam, S., Joseph, J., Singh, S. G., & Vanjari, S. R. K. (2023). Silk thin film-based triboelectric nanogenerators for energy harvesting applications. *IEEE Sensors Letters*.
  - Bonam, S., Bhagavathi, K. A., Joseph, J., Singh, S. G., & Vanjari, S. R. K. (2023). An ultra-flexible tactile sensor using silk piezoelectric thin film. *IEEE Sensors Journal*, 23(16), 18656–18663.
- 

## **Dr. Joseph Suresh Paul**

### **Journal Articles**

- AR, T., & Paul, J. S. (2024). Unveiling metabolic patterns in dementia: Insights from high-resolution quantitative blood-oxygenation-level-dependent MRI. *Medical Physics*.
- Datta, S., & Paul, J. S. (2024). Adaptive continuation based smooth  $\ell_0$ -norm approximation for compressed sensing MR image reconstruction. *Journal of Medical Imaging*, 11(3), 035003. <https://doi.org/10.1117/1.JMI.11.3.035003>
- Kurian, D., Hagberg, G. E., Scheffler, K., & Paul, J. S. (2024). A predictor–corrector phase unwrapping algorithm for temporally undersampled gradient-echo MRI. *Magnetic Resonance in Medicine*, 91(4), 1707–1722. <https://doi.org/10.1002/mrm.29707>
- Paul, J. S., Raghavan, S., & Kesavadas, C. (2024). Comparative analysis of quantitative susceptibility mapping in preclinical dementia detection. *European Journal of Radiology*, 178, 111598. <https://doi.org/10.1016/j.ejrad.2024.111598>

### Conference Papers

- Ibrahim, V., & Paul, J. S. (2024, July). A frequency domain network for hybrid-domain super-resolution MRI. In 2024 International Conference on Signal Processing and Communications (SPCOM) (pp. 1–5). IEEE. <https://doi.org/10.1109/SPCOM58946.2024.1234567>
  - Ibrahim, V., & Paul, J. S. (2024, October). A cross domain generative network for accelerated MRI. In 2024 IEEE International Conference on Image Processing (ICIP) (pp. 2865–2870). IEEE. <https://doi.org/10.1109/ICIP.2024.1234567>
- 

### Dr. K Satheesh Kumar

#### Journal Articles

- Balasubramaniam, S., Chirchi, V., Kadry, S., Agoramoorthy, M., Gururama, S. P., Satheesh, K. K., & Sivakumar, T. A. (2024). The road ahead: Emerging trends, unresolved issues, and concluding remarks in generative AI—A comprehensive review. *International Journal of Intelligent Systems*, 2024.
- Thumba, D. A., Asokan, K., Kumar, T. M., Ramamohan, T. R., & Kumar, K. S. (2024). Complex network-based multistep forecasting model for hyperchaotic time series. *Physical Review E*, 110(4), 044302.
- Sivan, D., Zafar, S., Rohit, R. V., Satheeshkumar, K., Raj, V., Moorthy, K., ... & Jose, R. (2024). Towards circularity of plastics: A materials informatics perspective. *Materials Today Sustainability*, 101001.
- Balasubramaniam, S., Kadry, S., Dhanaraj, R. K., & Kumar, K. S. (2024). Adaptive coati optimization enabled deep CNN-based image captioning. *Applied Artificial Intelligence*, 38(1).
- Balasubramaniam, S., Kadry, S., & Kumar, K. S. (2024). Osprey Gannet optimization enabled CNN-based transfer learning for optic disc detection and cardiovascular risk prediction using retinal fundus images. *Biomedical Signal Processing and Control*, 93, 106177.
- Devi, S. S., Saifudeen, N., Kumar, K. S., & Kumar, A. B. (2024). Does the microplastics ingestion patterns and polymer composition vary across the oceanic zones? A case study from the Indian coast. *Marine Pollution Bulletin*, 204, 116532.
- Kadry, S., Dhanaraj, R. K., & Manthiramoorthy, C. (2024). Res-UNet based blood vessel segmentation and cardiovascular disease prediction using chronological chef-based optimization algorithm based deep residual network from retinal fundus images. *Multimedia Tools and Applications*, 83(40), 87929–87958.

- Sivan, D., Satheesh Kumar, K., Abdullah, A., Raj, V., Misnon, I. I., Ramakrishna, S., & Jose, R. (2024). Advances in materials informatics: A review. *Journal of Materials Science*, 59(7), 2602–2643.
- Nelson, S. G., & Rajan, A. S. (2024). Machine learning based disease and pest detection in agricultural crops. *EAI Endorsed Transactions on Internet of Things*, 10.
- S, B., M, A., K, S. K., & Dhanaraj, R. K. (2024c). A comprehensive exploration of artificial intelligence methods for COVID-19 diagnosis. *EAI Endorsed Transactions on Pervasive Health and Technology*, 10. <https://doi.org/10.4108/eetpht.10.5174>
- Balasubramaniam, S., Joe, C. V., Manthiramoorthy, C., & Kumar, K. S. (2023b). ReliefF based feature selection and Gradient Squirrel Search Algorithm enabled Deep Maxout Network for detection of heart disease. *Biomedical Signal Processing and Control*, 87, 105446. <https://doi.org/10.1016/j.bspc.2023.105446>

### Conference Proceedings

- Vijesh, V., Kumar, K. N. S., Swapna, M. N. S., & Sankararaman, S. I. (2024e). Markov chain approach to rectifier circuits. *AIP Conference Proceedings*, 3037, 020012. <https://doi.org/10.1063/5.0196031>
- Reshmi, L. B., Mallika, M. C., Vijesh, V., & Kumar, K. S. (2024c). Chaotic time series forecast based on weighted state transition network. *AIP Conference Proceedings*, 3037, 020037. <https://doi.org/10.1063/5.0196080>

### Book Chapter

- Generative AI and LLMs. (2024b). In De Gruyter eBooks. <https://doi.org/10.1515/9783111425078>
- 

## Dr. Malu G

### Journal Articles

- Raj, V. A., & Malu, G. (2024). EnGesto: An Ensemble Learning Approach for Classification of Hand Gestures. *IEEE Access*.
  - Malu, G., Uday, N., Sherly, E., Abraham, A., & Bodhey, N. K. (2024). CirMNet: A Shape-based Hybrid Feature Extraction Technique using CNN and CMSMD for Alzheimer's MRI Classification. *IEEE Access*.
  - Amrutha Raj, V., & Malu, G. (2024). Gamnet: A Deep Learning Approach for Precise Gesture Identification. *Journal of Intelligent & Fuzzy Systems*, JIFS-219395.
-

### **Dr. Manoj Kumar TK**

#### **Journal Articles**

- Thumba, D. A., Asokan, K., Kumar, T. M., Ramamohan, T. R., & Kumar, K. S. (2024). Complex network-based multistep forecasting model for hyperchaotic time series. *Physical Review E*, 110(4), 044302.
  - Philip, S., Sherin, D. R., Kumar, T. M., Badisha Banu, T. C., & Roy, R. M. (2024). Molecular docking and simulation studies of some pyrazolone-based bioactive ligands targeting the NF- $\kappa$ B signaling pathways. *Molecular Diversity*, 28(3), 1459–1469.
  - Iyer, R. T., & Krishnan, M. T. (2024). Spatial prediction of soil micronutrients using supervised self-organizing maps. *Journal of Agriculture and Food Research*, 15, 101033.
- 

### **Prof. Md Meraj Uddin**

#### **Journal Articles**

- Surendran, R., Thomas, T., & Uddin, M. M. (2024). Optimizing malware detection with redundant sample filtering for efficient retraining. *Journal of Cyber Security Technology*, 1–22.
- Surendran, R., Uddin, M. M., Thomas, T., & Pradeep, G. (2024). Android malware detection based on informative syscall subsequences. *IEEE Access*.

#### **Conference Papers**

- Uddin, M. M., Surendran, R., & Thomas, T. (2023, November). A Data Flow-Based Approach for Classification and Risk Estimation of Android Apps. In *2023 IEEE International Conference on Recent Advances in Systems Science and Engineering (RASSE)* (pp. 1–6). IEEE.
  - Surendran, R., & Uddin, M. M. (2023, November). On impact of semantically similar apps in android malware datasets. In *2023 IEEE International Conference on Recent Advances in Systems Science and Engineering (RASSE)* (pp. 1–6). IEEE.
- 

### **Dr. Muthusankar Eswaran**

#### **Journal Articles**

- Sivasankarapillai, V. S., Sundararajan, A., Eswaran, M., & Dhanusuraman, R. (2024). Hierarchical porous activated carbon derived from *Callistemon viminalis* leaf biochar for supercapacitor and methylene blue removal applications. *ES Energy & Environment*, 24, 1124.

- Mari, E., Duraisamy, M., Eswaran, M., Sellappan, S., Won, K., Chandra, P., ... & Ponnusamy, V. K. (2024). Highly electrochemically active  $Ti_3C_2T_x$  MXene/MWCNT nanocomposite for the simultaneous sensing of paracetamol, theophylline, and caffeine in human blood samples. *Microchimica Acta*, 191(4), 212.
  - Maity, A., Siebels, M., Jana, A., Eswaran, M., Dhanusuraman, R., Janiak, C., & Bhunia, A. (2025). Bipolar Supercapacitive Performance of N-Containing Carbon Materials Derived from Covalent Triazine-Based Framework. *ChemSusChem*, 18(3), e202401716.
- 

### **Mr. Pradeep Kumar K**

#### **Preprint / Working Paper**

- Kalampukatt, P. K., Ghosh, A., & Kumar, V. D. (2024). Integrating Object Detection and Distance Estimation: A Comprehensive Review of Techniques and Applications. Available at SSRN SSRN 4984837.
- 

### **Dr. Preetam Mukherjee**

#### **Journal Articles**

- Afzal, Z., Ekstedt, M., Müller, N., & Mukherjee, P. (2024). Security Challenges in Energy Flexibility Markets: A Threat Modelling-Based Cyber-Security Analysis. *Electronics*, 13(22), 4522.
- Katsikeas, S., Buhaiu, A., Ekstedt, M., Afzal, Z., Hacks, S., & Mukherjee, P. (2024). Development and validation of coreLang: A threat modeling language for the ICT domain. *Computers & Security*, 146, 104057.

#### **Conference Papers**

- Ghosh, A., Albanese, M., Mukherjee, P., & Alipour-Fanid, A. (2024, July). Improving the Efficiency of Intrusion Detection Systems by Optimizing Rule Deployment across Multiple IDSs. In 21st International Conference on Security and Cryptography (SECRYPT 2024) (pp. 536–543). SciTePress.
- 

### **Dr. Radhakrishnan T**

#### **Journal Articles**

- Iyer, R. T., & Krishnan, M. T. (2024). Spatial Prediction of Soil Micronutrients using Supervised Self-Organizing Maps. *Journal of Agriculture and Food Research*, 15, 101033. <https://doi.org/10.1016/j.jafr.2024.101033>

---

**Dr. Sabu M Thampi****Journal Articles**

- Nair, A. S., Thampi, S. M., & Jafeel, V. (2024). A post-quantum secure PUF based cross-domain authentication mechanism for Internet of drones. *Vehicular Communications*, 47, 100780. <https://doi.org/10.1016/j.vehcom.2024.100780>
- V, I., & Thampi, S. M. (2024). Misinformation detection in social networks using emotion analysis and user behavior analysis. *Pattern Recognition Letters*, 182, 60–66. <https://doi.org/10.1016/j.patrec.2024.04.007>

**Books / Edited Books**

- El-Alfy, E. S. M., Thampi, S. M., Takagi, H., Piramuthu, S., & Hanne, T. (Eds.). (2015). *Advances in intelligent informatics*. Cham: Springer International Publishing.
- Applied soft computing and communication networks. (2024). In *Lecture notes in networks and systems*. <https://doi.org/10.1007/978-981-97-2004-0>

---

**Dr. Sherin D R****Journal Articles**

- Aswathy, M., Parama, D., Hegde, M., Dr, S., Lankalapalli, R. S., Radhakrishnan, K. V., & Kunnumakkara, A. B. (2024). Natural Prenylflavones from the Stem Bark of *Artocarpus altilis*: Promising Anticancer Agents for Oral Squamous Cell Carcinoma Targeting the Akt/mTOR/STAT-3 Signaling Pathway. *ACS Omega*, 9(23), 24252–24267. <https://doi.org/10.1021/acsomega.3c08376>
- Joseph, A. G., Biji, M., Murali, V. P., Sherin, D. R., Valsan, A., Sukumaran, V. P., Radhakrishnan, K. V., & Maiti, K. K. (2024). A Comprehensive Apoptotic Assessment of Niloticin in Cervical Cancer Cells: A tirucallane-type triterpenoid from *Aphanamixis polystachya* (Wall.) Parker. *RSC Medicinal Chemistry*, 15(10), 3444–3459. <https://doi.org/10.1039/d4md00318g>
- Vimalkumar, P. S., Sivadas, N., Murali, V. P., Sherin, D. R., Murali, M., Joseph, A. G., Radhakrishnan, K. V., & Maiti, K. K. (2024). Exploring apoptotic induction of malabaricone A in triple-negative breast cancer cells: an acylphenol phyto-entity isolated from the fruit rind of *Myristica malabarica* Lam. *RSC Medicinal Chemistry*. <https://doi.org/10.1039/d4md00391h>

- Philip, S., Sherin, D.R., Kumar, T.K.M. et al. Molecular docking and simulation studies of some pyrazolone-based bioactive ligands targeting the NF- $\kappa$ B signaling pathways. *Mol Divers* 28, 1459–1469 (2024). <https://doi.org/10.1007/s11030-023-10668-w>
- 

### **Dr. Sini V. Pillai**

#### **Journal Articles**

- Nair, A., Pillai, S. V., & Senthil Kumar, S. A. (2024). Towards emerging Industry 5.0—a review-based framework. *Journal of Strategy and Management*.
- 

### **Dr. Sinnu Susan Thomas**

#### **Journal Articles**

- S. S. Thomas et al., "Mitigating Bias in Bayesian Optimized Data While Designing MacPherson Suspension Architecture," in *IEEE Transactions on Artificial Intelligence*, vol. 5, no. 2, pp. 904-915, Feb. 2024, doi: 10.1109/TAI.2023.3274100.
- Thomas, S. S., Lamine, G., Palandri, J., Lakehal-Ayat, M., Chakravarty, P., Wolf-Monheim, F., & Blaschko, M. B. (2023). Mitigating bias in Bayesian optimized data while designing MacPherson suspension architecture. *IEEE transactions on artificial intelligence*, 5(2), 904-915.

#### **Conference Paper**

- James, T., & Thomas, S. (2024). Multi Objective Regionalized Bayesian Optimization via Entropy Search. In *OPT 2024: Optimization for Machine Learning*.
- 

### **Dr. Sooraj NP**

#### **Journal Articles**

- Rajan, S. C., Mitra, A., NP, S., K, A., & Pillai, M. S. (2024). Threshold of anthropogenic sound levels within protected landscapes in Kerala, India, for avian habitat quality and conservation. *Scientific Reports*, 14(1), 2701.
-

## **Dr. Sumit Datta**

### **Journal Articles**

- Kumar, S., Datta, S., Singh, V., Singh, S. K., & Sharma, R. (2024). Opportunities and challenges in data-centric AI. IEEE Access.
- Kapfo, A., Datta, S., Dandapat, S., & Bora, P. K. (2024). A wavelet subband based LSTM model for 12-lead ECG synthesis from reduced lead set. Biomedical Engineering Letters, 14(6), 1385–1395. <https://doi.org/10.1007/s13534-024-00412-0>
- Kumar, S., Datta, S., Singh, V., Datta, D., Singh, S. K., & Sharma, R. (2024). Applications, challenges, and future directions of human-in-the-loop learning. IEEE Access.
- Datta, S., & Paul, J. S. (2024). Adaptive continuation based smooth  $l_0$ -norm approximation for compressed sensing MR image reconstruction. Journal of Medical Imaging, 11(3), 035003-035003.
- Kumar, S., Pachori, R.B., Deka, B. et al. Opportunities and Challenges in Deep Compressed Sensing Techniques for Multichannel ECG Data Compression. SN COMPUT. SCI. 5, 1147 (2024). <https://doi.org/10.1007/s42979-024-03508-7>

### **Conference Paper**

- L. Hakeem, A. C J, S. Kumar and S. Datta, "Continual Learning for Video Action Recognition using Parameter Allocation," 2024 IEEE 21st India Council International Conference (INDICON), Kharagpur, India, 2024, pp. 1-5, doi: 10.1109/INDICON63790.2024.10958481.
  - D. Banik, A. C. J and S. Datta, "Early Detection of Age-Related Macular Degeneration Using Image Super-Resolution with Cycle-GAN," 2024 IEEE 21st India Council International Conference (INDICON), Kharagpur, India, 2024, pp. 1-6, doi: 10.1109/INDICON63790.2024.10958229.
  - R. K. Thondithara, S. Datta and M. J. Saikia, "ECG Synthesis from Reduced Lead Set Using Neural Networks for Wearable Healthcare," 2024 IEEE 21st India Council International Conference (INDICON), Kharagpur, India, 2024, pp. 1-4, doi: 10.1109/INDICON63790.2024.10958337.
  - A. C. J and S. Datta, "FISTA-NET: Compressed Sensing MRI Reconstruction Using Unrolled Iterative Networks," 2024 IEEE 21st India Council International Conference (INDICON), Kharagpur, India, 2024, pp. 1-6. 10.1109/INDICON63790.2024.10958349.
-

## **Dr. Suresh I**

### **Journal Articles**

- Martin, A. P., Dominguez, A. B., Baker, C. A., Baumas, C. M., Bisson, K. M., Cavan, E., Freilich, M., Galbraith, E., Galí, M., Henson, S., Kvale, K. F., Lemmen, C., Luo, J. Y., McMonagle, H., De Melo Viríssimo, F., Möller, K. O., Richon, C., Suresh, I., Wilson, J. D., . . . Yool, A. (2024). When to add a new process to a model – and when not: A marine biogeochemical perspective. *Ecological Modelling*, 498, 110870. <https://doi.org/10.1016/j.ecolmodel.2024.110870>
- Gopika, S., Lengaigne, M., Suresh, I., Izumo, T., Kwatra, S., Neetu, S., & Vialard, J. (2024). Assessing CMIP models' ability to detect observed surface warming signals related to climate change. *Journal of Climate*, 37(22), 6011–6027. <https://doi.org/10.1175/jcli-d-24-0102.1>
- Suresh, I., Vialard, J., Izumo, T., & Lengaigne, M. (2024). Role of intersecting equatorial and coastal waveguides near Sri Lanka on intraseasonal sea level variability along the West coast of India. *Journal of Geophysical Research Oceans*, 129(3). <https://doi.org/10.1029/2023jc020198>
- Sadhvi, K., Suresh, I., Lengaigne, M., Izumo, T., Penduff, T., Molines, J., Can, A. A., & Vialard, J. (2024). Intrinsic versus Wind-Forced great whirl Non-Seasonal variability. *Journal of Geophysical Research Oceans*, 129(2).

### **Conference Paper**

- Sadhvi, K., Lengaigne, M., Vialard, J., Danielli, V., Suresh, G., & Suresh, I. (2024, December). Latent Feedback Drives the Total Surface Feedback in the Earth System Models. In *AGU Fall Meeting Abstracts (Vol. 2024, No. 9, pp. B42E-09)*.

## **Dr. Tony Thomas**

### **Journal Articles**

- John, T. S., Thomas, T., & Emmanuel, S. (2024). Detection of evasive Android malware using EigenGCN. *Journal of Information Security and Applications*, 86, 103880. <https://doi.org/10.1016/j.jisa.2024.103880>

### **Preprints (arXiv / Online Resources)**

- Sp, R., Thomas, T., & Emmanuel, S. (2025). Cancelable Biometric Template Generation Using Random Feature Vector Transformations. arXiv preprint arXiv:2503.15648.

### Patent Filed/ Granted

---

SL No	Patentee	Topic	Status
1	Ms. Sruthi P	Smart Cloth With Unified Size For All Clothing Brands Application No. 202441017851	Granted
2	Dr. Alex P James Ms. Sruthi P Ms. Aswani A R	System For Performing In-Memory Computation Of Neural Network Accelerators Using Bridge Configuration Architecture Application No. 202441017850	Granted
3		System for Real-time Landmine Detection with On-chip Artificial Intelligence and Ground Penetrating Radar Application No: 202441043607	Filed
4		Detection of Landmine Using AI-based GPR System Application No: 202441043606	Filed
5	Dr. Alex P James Dr. Remya Govind	Smart flexible heated glove Application No. 202441011017	Filed
6	Dr. Balasubramaniam S.	A device for online video meetings and in-built emotion-based attendance report Application No. 202231034509	Filed
7	Dr.Elangovan K. Dr. Anoop, CS	Digitizing interface circuit topology and a measurement strategy for grounded RC-based impedance sensors Application No. 550477	Filed

## **Kerala Blockchain Academy**

---

Kerala Blockchain Academy (KBA), Centre of Excellence in Blockchain of Kerala University of Digital Sciences, Innovation and Technology was established by the Government of Kerala in 2018, with a vision to leverage blockchain technology for the public good. KBA was established as the first government-led Blockchain Academy in India. KBA is the first Indian academy to become an Associate Member and Official Training Partner of the Hyperledger Foundation under Linux Foundation, an umbrella project of open source Blockchains and related tools started by Linux Foundation in 2015.

KBA is also now officially recognised as a Certified Service Provider (CSP) for both Hyperledger Besu and Hyperledger Fabric networks. This distinction places KBA among a select group of pre-qualified professional service providers with proven expertise in deploying, implementing, and supporting LF Decentralized Trust projects.

KBA mainly has four verticals: Blockchain Powerhouse, which focuses on capacity building programs in Blockchain technology, including certification programs, R&D and consulting. Secondly, the Blockchain Garage which focuses on collaborative solution development, IP generation and entrepreneurship promotion. Distributed Lab, the third vertical, drives innovation through impactful research and development, fostering collaborative partnerships and creating cutting-edge tools. The Blockchain Startup Studio, another vertical, serves as a nurturing environment for emerging innovators and startups to build blockchain solutions. KBA is also a General Partner of R3 Consortium for Corda Blockchain and an Official Education Partner of Zilliqa Blockchain Network.

Kerala Blockchain Academy has established Kerala Blockchain Academy Innovation Club (KBAIC) in more than 70 member colleges to help students from academic institutions across the country to explore deep into the potential of Blockchain technology. KBAIC provides an opportunity to work closely with experts and experiment with the latest advancements in this domain. This will also help students to build their careers in the disruptive world of blockchain. Kerala Blockchain Academy currently offers eleven instructor-led classroom/virtual certification programmes and twelve online self-paced

programmes through which more than 40000 learners across 96 countries have been trained.

### **Programs of Kerala Blockchain Academy in the year 2024**

The major initiatives by Kerala Blockchain Academy were :

1. Development of a Learning Management System and Admission Portal for Sreenarayanaguru Open University.
2. Development of Blockchain based Secure Chain for securing exam marks for Kerala PSC.
3. Implementation of Blockchain-Powered System for Land Records Management (One Property Card Project) for Kerala State Revenue Department (consortium mode with KELTRON).
4. Design, Development and Deployment of Blockchain Applications on Hyperledger and Ethereum Frameworks for Bharat Electronics Limited.
5. Deployment of Certichain for Kerala University of Health Sciences.
6. Deployment of Certichain ver2.0 for KBA & Digital University Kerala.
7. Conducted 23 Instructor-led Training Programs and self-paced programs with 4469 Learner enrollments.
8. Conducted 37 special programs with 1956 participants.
9. Launched New Blockchain Program: SEG accredited Certified Blockchain Associate Program.
10. Implemented the PM AJAY Scheme in coordination with the SC Development Department of the Govt of Kerala.
11. Developed KBA Aquaponics DAO ecosystem as a sustainable blockchain solution for indoor farming.
12. Development of Open Source Tools: KBA developed open-source tools like AetherGuild, Fabrix, AetherLens, AetherPay, Aethereal, and AetherSight.

### **Hackathon : BlockHack 2024**

Organized BlockHack 2024, held from September 21-22, 2024, provided a platform for students and blockchain enthusiasts to experiment with and explore the Ethereum ecosystem. This event, conducted in collaboration with the Ethereum Foundation's Ecosystem Support Program, focused on Sustainable Development Goals (SDGs) as a core part of its project tracks, aiming to foster innovative solutions for the ecosystem's growth.

### **EthWalk : Enroute to Ethereum Network**

A two-day event, EthWalk-Enroute to Ethereum Blockchain, was hosted at the IIITM-K Campus, from May 24-25, 2024. As a precursor to DEVCON 2024 and part of the Road to Devcon: Southeast Asia event, it attracted 90 attendees. The event provided a beginner workshop on the Ethereum blockchain ecosystem and its enterprise adoption.

### **Translatathon**

Organized and served as the Indian hub for the Translatathon: Jnana Edition. This event was funded by ethereum.org, which is part of the Ethereum Foundation. KBA received the prize for the best translation, competing with others from around the globe.

### **Faculty Empowerment Conclave**

Conducted a Faculty Empowerment Conclave titled “The Web3 Revolution: Opportunities for Students and Educators” on 28th June 2024 at Integrated Start-up Complex, Kerala Startup Mission, Ernakulam & on 5th July 2024 at IIITM-K Building. The event showcased the job opportunities for students & the opportunities for the academic institutions for availing Blockchain Research Grants.

### **Road to Devcon**

On October 20, 2024, the Creators Call-Road to Devcon: South East Asia was successfully conducted. Funded by the Ethereum Foundation, the event featured a series of creative competitions: Sketch The Ethereum, Blockchain in Verse, Ethereum Chronicles, and Ethereum in Pixels designed to make the world of Ethereum more accessible to the general public.

### **Transitioning from Web2 to Web3 with Algorand**

The Kerala Blockchain Academy (KBA), in partnership with AlgoBharat, hosted a Web3 learning event, "Transitioning from Web2 to Web3 with Algorand," on July 6, 2024. The event, held at Park Centre, Technopark, was designed to help participants formulate startup ideas and find solutions using the Algorand blockchain. Sessions were led by Prof. Dr. Nikhil Varma and members of the Algorand team, providing valuable insights into potential startup concepts.

**Road2Impact 2024**

Conducted on August 10, 2024, the AlgoBharat's Road2Impact 2024 event featured tracks for developers and startups within the Web3 ecosystem. The winners were granted a four-month support program from the Algorand Foundation.

**Quadratic Funding**

With quadratic funding from the Ethereum Foundation's Devcon SEA CLR funding, a series of initiatives were launched to improve educational accessibility and foster community engagement. This support led to the development of the "Ethereum for Everyone", an open-source course and the creation of Aetherguild, an open-source tool. The project also included mentoring volunteers, conducting webinars, and offering courses to upskill a diverse range of learners.

**Developer Meetup & Workshop with Aelf Pte Ltd**

In collaboration with the Aelf blockchain, a developer meet-up and hands-on session was held at Park Centre, Technopark. The event featured Mohit Vasishta, the Research Lead at Aelf Blockchain, who moderated a hands-on tutorial by ChronoAI. The interactive session provided attendees with practical experience in smart contract development and deployment on the Aelf blockchain.

**DRDO Training**

Conducted a one week blockchain training for the officials of DRDO during 19th - 23rd August 2024 at IIITMK, Technopark. Officials from DLRL Hyderabad, INMAS Delhi, JCB Delhi & LRDE Bengaluru attended the training program.

**Devcon7:SEA**

At Devcon7: South East Asia, the Ethereum Foundation's premier global event held in Bangkok, Thailand, members from the KBA team were selected as a Devcon Scholar in the Builders category, receiving full funding for participation and also served as a mentor in the hackathon. Employees from the Kerala Blockchain Academy (KBA) represented the organization at the global event, solidifying its presence within the Ethereum ecosystem. Competition winners from KBA also attended, showcasing their achievements to an international audience.

### **EthIndia 2024 Mentorship**

At the EthIndia 2024 Hackathon, held from December 6th to 8th, 2024, in Bangalore, members from the KBA team served as mentors. They guided participants in exploring cutting-edge technologies within the Ethereum ecosystem, helping them to develop innovative solutions.

### **IIT Kanpur and IIT Goa Cohorts**

The Ethereum Foundation's Ecosystem Support Program provided funding through its Small Grants program for the development and delivery of the Ethereum Developer Program. This program was offered to aspiring blockchain developers from IIT Kanpur and IIT Goa, providing them with an in-depth understanding of blockchain and Ethereum architecture. Participants gained hands-on experience using Solidity to write Smart Contracts and develop Decentralized Applications (DApps) for real-life use cases.

### **Digital Identity & Verifiable Credentials by Danny Wong**

The Kerala Blockchain Academy conducted a session led by Enterprise Architect & Head of Global Blockchain at Allianz Technology, South East Mr. Danny Wong on "Digital Identity and Verifiable Credentials". Held at the IIITM-K Building on November 19, 2024, the session highlighted how to redefine trust and identity in the digital world. It covered the practical applications of verifiable credentials and their role in enhancing privacy and security.

### **Emergex Xinnovate Kerala 2024**

The Kerala Blockchain Academy (KBA), in association with Emergex, conducted a two-day hackathon, "Xinnovate Kerala 2024," focused on pioneering Web3 technology. Held at the IIITM-K Building, Technopark Phase 1, on July 13-14, 2024, the event was attended by 121 participants. A team representing KBA secured second place in two of the competition's tracks.

### **Webinars Conducted**

Insightful webinars from industry experts were conducted to help students understand the nuances of blockchain.

The sessions included: - "Understanding Data Availability in Blockchains with AVAIL," led by Robin Roy, Developer Relations at AVAIL.

- "The Future of Blockchain in Europe and Beyond," handled by Sherin Sebastian, Founder of BOC Advisory.

## **Admissions**

---

### **MSc/ MTech Program**

The selection to all MTech and MSc programmes of Digital University Kerala was conducted through a common admission process. Prospective students have to either (i) clear the Digital University Aptitude Test (DUAT) or (ii) possess a valid GATE/NET/JAM score in a relevant discipline.

For the MSc programs, GATE score holders with a valid score in relevant disciplines as on 1st April 2024 were exempted from taking the entrance examination. Interested UGC/NET/JAM qualified candidates in relevant disciplines were also exempted from taking DUAT for admission to MSc programs.

For the MTech programs, preference was given to the GATE-qualified candidates. The cut-off for the DUAT score for shortlisting was decided by the individual Schools on a yearly basis and can vary from one school to another. Their cut-off for the GATE score, NET, JAM and DUAT for shortlisting was decided by the individual Schools on a yearly basis. Separate rank lists were drawn up for reserved seats.

### **MBA Program**

The selection to the MBA programme of Digital University Kerala was conducted through a common admission process. Prospective students had to have a valid score in CAT (IIMs), GRE, CMAT (AICTE), KMAT (Kerala), XAT (XLRI), or NMAT (GMAC) on the basis of which they will be called for Group Discussion/Written Ability Test and interview, provided they have submitted the test score cards while submitting the application. Admission rank lists were prepared on the basis of an index score by the School. Separate rank lists were drawn up for reserved seats.

**PhD Program**

The applicants were shortlisted based on the DRAT exam score or valid GATE score. Those who have qualified NET/JRF or any other national fellowship exams approved by UGC in relevant disciplines were exempted from the DRAT exam. Appropriate relaxations in cut-off were applicable for OBC/SC/ST candidates. Statement of purpose shall be additionally required to be submitted for industry regular and part-time applicants. Appropriate weightage was given for work experience in the case of industry regular and part-time PhD applicants. The selection is based on the composite score prepared based on UGC guidelines and the criteria fixed by each School.

**PGDeG Program**

The entry-level requirement for the programme is a Bachelor's degree in any discipline with working knowledge of computer systems. Diploma / Certification in computer application will be an added advantage. Preference will be given to B.Tech / MBA / MCA degree holders.

Sponsored Government Officials – 15 seats (selection was done by the Kerala State IT Mission). 06 Officials from Autonomous institutions, Boards, Corporations, Universities, Public Sector Undertakings etc. under the State of Kerala. The selection was done by Kerala State IT Mission.

**Number of students admitted**

The classes for the First Semester of the new admissions 2024-2025 batch started with the Orientation programmes in August 2024. The enrolment details are given below.

**ADMISSION STATUS OF 2024 BATCH**

School	Programs	Sanctioned Strength	Applied	Allotted	Admission Cancelled	Current Strength
School of Digital Sciences	M.Sc. Data Analytics and Bio AI	20	83	45	2	9
	M.Sc. Data Analytics and Computational Science	60	190	117	14	40
	M.Sc. Data Analytics and Geoinformatics	20	43	25	1	12
	M.Sc. Computer Science with Specialization in Data Analytics	50	122	100	9	43
School of Computer Science and Engineering	M.Sc. Computer Science with Specialization in Cyber Security	90	242	126	18	45
	M.Sc. in Computer Science with Specialization in Machine Intelligence	45	108	65	8	17
	M.Tech in Computer Science and Engineering	90	86	32	6	9
School of Electronic	M.Sc. in Electronics	60	63	38	2	20

Systems and Automation	M.Tech Electronics Engineering	60	43	26	4	13
	M.Sc Applied Physics	20	119	34	5	14
School of Informatics	M.Sc. Ecology with Specialization in Ecological Informatics	20	,	32	6	6
School of Digital Humanities and Liberal Arts	MBA	30	226	104	25	31
	MBA WP	30	21	12	1	9
Total		595	1346	756	101	268

### Program Accreditations

SI No.	Title	School	Sanctioned Strength	Remarks
1	MSc Computer Science with specialization in Machine Intelligence	School of Computer Science and Engineering	45	UGC Approved
2	MSc Computer Science with specialization in Cyber Security		90	UGC Approved
3	MTech Computer Science and Engineering (Connected Systems and Intelligence, Artificial Intelligence, Cyber Security Engineering)		90	AICTE Approved
4	MSc Computer Science with specialization in Data Analytics	School of Digital Sciences	60	UGC Approved

5	MSc Data Analytics and Bio AI			UGC Approved
6	MSc Data Analytics and Geoinformatics		90	UGC Approved
7	MSc Data Analytics and Computational Science			UGC Approved
8	MSc Electronics (Intelligence Systems and Imaging, IoT and Robotics, VLSI Design and Artificial Intelligence)		60	UGC Approved
9	MTech Electronics Engineering (Artificial Intelligence-Hardware, Signal Processing and Automation, Artificial Intelligence-Robotics, Computational Imaging)	School of Electronic Systems and Automation	60	AICTE Approved
10	MTech Electronic Product Design (Flexible)		30	To be Offered
11	MSc Ecology with specialization in Ecological Informatics	School of Informatics	20	UGC Approved
12	Master of Business Administration (Business Analytics, Digital Governance, Digital Transformation, Finance, Human Resources, Information Security Management, Marketing, Operations, Systems, Technology Management)	School of Digital Humanities and Liberal Arts	30	UGC Approved
13	PGDeG		40	
14	PhD		--	UGC Approved

## Placement Report 2024

---

### Companies Visited

The placement season of 2024 at Digital University Kerala continued to build on the momentum of previous years, attracting several reputed companies from diverse sectors. This year, top organizations such as TCS, EY, H&R Block, Nissan Digital, Cleareye.ai, Data Beat, SunTec, Tata Elxsi, Techolution, Chubb, Quest Global, Litmus7, NeST, OLA Battery IC, NewBiom Labs, ThinkBio and Innovation Incubator participated in the recruitment drive, offering a wide range of roles across domains like Data Science, Cybersecurity, AI/ML, Business Analytics, Finance, and Engineering.

The increasing presence of such leading firms reaffirms the university's commitment to aligning its academic programs with the evolving demands of industry, and its growing stature as a preferred talent hub in the digital and emerging technology space.

### Placement Activities

To enhance students' preparedness for the corporate world, the Training and Placement Cell (TPC) conducted an array of capacity-building initiatives throughout the academic year. These included:

- Resume-building workshops
- Industry-led career talks and webinars
- Aptitude and coding training sessions
- Mock interviews and group discussions
- Soft skills and communication training
- Domain-specific skill development programs

Students were also exposed to current industry practices and expectations through guest sessions by corporate leaders, enabling them to align their skillsets with real-world requirements. These structured initiatives significantly contributed to improving placement outcomes and student confidence.

- ❖ *Placement Rate (of eligible students): ~61%*
- ❖ *Number of Companies Visited: 51*
- ❖ *Top Roles Offered: Data Analyst, Cybersecurity Analyst, Digital Engineer, Business Analyst, Software Developer*

**Conclusion**

The 2024 placement season at Digital University Kerala reflected the institution's sustained commitment to academic excellence and professional readiness. With a diverse range of companies recruiting and over half of eligible students already placed, the placement drive was marked by noteworthy progress in both quality and participation. The university's dynamic curriculum, coupled with continuous industry engagement and comprehensive placement support, continues to create a robust talent pipeline that caters to the evolving demands of the digital economy. The strong placement outcomes underscore Digital University Kerala's growing reputation as a premier institution fostering innovation, skill development, and impactful careers.

**Events**  
**@**  
**Digital University Kerala**



## Events at Digital University Kerala

---

### JANUARY 2024

#### **75th Republic Day Celebration at DUK**

DUK commemorated the 75th Republic Day with a spirited celebration on January 26th at 9:00 AM. Honourable Vice Chancellor Prof. Saji Gopinath proudly unfurled the national flag, followed by a security staff parade. Student Council Secretary Mr. Nithin K.S. guided everyone present in the solemn recitation of the national pledge. The occasion resonated with insightful speeches from Honourable Registrar Dr. A. Mujeeb, Prof. K. Pradeep Kumar, and Student Council representative Miss Meenakshi A.K. Prof. Md. Meraj Uddin, Chairman of Student Affairs, expressed heartfelt gratitude before the joyous distribution of sweets to students, staff, and faculty, concluding a day filled with national pride and unity.

#### **Workshop on Quality Processes and CMMI Standards**

Centre for Digital Innovations and Product Development (CDIPD), a Centre of Excellence under DUK, conducted a transformative workshop on "Quality Processes and CMMI Standards" from January 11th to 13th, 2024, at Hotel Lake Palace. The theme of the workshop was to sensitize the team on the significance of adopting quality processes in achieving organizational goals. The workshop also focused on fostering team collaboration, improving communication, and thereby enhancing the overall team effectiveness. The first day commenced with an enriching Session on Agile Project Management taken by Brajesh C. Kaimal, Co-founder, and Director, Experion Technologies (P) Ltd, followed by a power-packed session by Ms. Fincy Yousuff, Vice President for Growth, Equipo Health, who took the participants to the realm of Agile Methodologies through Gamification. Second day, the sessions delved into the aspects of Quality Processes and CMMI Standards which were taken by experts Mr. Santhosh Kurup, Professor of Practice, School of Digital Humanities and Liberal Arts, DUK and Mr. Balamurali L, MR & Head Quality and Testing, SFO Technologies (P) Ltd. Session providing an overview on CI/CD Pipeline Integration Process was handled by Mr. Amal K J, QC and Delivery Manager, Data Analytics Wing, DUK. The third day started off with an enriching session on "AI & Gen AI in Action: Potential Opportunities" by the Respected Dean of Research, Dr. Manoj Kumar T. K. To invoke the path towards creative thinking and fostering an environment of innovation, the session on "Design Thinking" was taken by our esteemed Honourable Vice Chancellor, Prof.SajiGopinath. A formal concluding session followed, which was

graced by esteemed dignitaries, including Honourable Vice-Chancellor Prof. Saji Gopinath, Registrar Prof. Mujeeb A., Dean Research Prof. Manoj T. K., and Director CDIPD Prof. Ajith Kumar R.

### **Hosted a Science Lecture at Digital University as a part of Global Science Festival 2024**

"Global Science Festival Kerala, a comprehensive science event featuring not only the main exhibition but also a series of science lectures, seminars, and other programs, seeks collaboration with Digital University to enhance its impact in the city. An enlightening talk by Dr. Robert Potts, an educator and researcher in Creative Digital Design at The School of Digital Arts at Manchester Metropolitan University. The date for the programme was 16th January 2024.

Dr Robert Potts is an educator and researcher in Creative Digital Design at The School of Digital Arts at Manchester Metropolitan University. Working with many pioneering learning institutes and organizations, Rob contributes to applied research into design processes concerning education, technology, and place with a specific interest in design leadership, research through design and collaborative innovation. He applies design-led approaches in across-domain way, sometimes as creative director, consultant, ethnographer, or documentarian to explore issues of learning, leading, and organising. As part of the Global Science Festival Kerala, scheduled from January 15th, 2024, his talk will be of great value to the academic community at Digital University."

### **DUK Outreach Program with 19 Arts and Science Colleges, Kerala**

"Digital University Kerala conducted an outreach program, a symposium in collaboration with 19 Arts and Sciences Colleges across different districts in Kerala in the month of January 2024, led by Dr. Christie Thomas Cherian, Admission Chair at Digital University Kerala. Members of the admission committee from five schools participated in the symposium and delivered talks on various topics related to digital technologies and data analytics.

The committee members included Dr. Christie Thomas Cherian (Admission chair), (School of Electronics), Dr. Sooraj N P (School of Informatics), Dr. Aswin V S (School of Digital Science), Dr. Shanujas V, (School of Digital Humanities and Liberal Arts), and Dr. Abhishek Kaushik (School of Computer Science).

Faculties from different schools included Prof. Satheesh Kumar and Dr. Sini V Pillai (School of Digital Humanities and Liberal Arts), Prof. Anoop V S (School of Computer Science), Dr. Shamjid P (School of Digital Science), and Mr. Nikhil P also participated and delivered talks."

### **PGCSBM Batch 3 Final Networking Session and Examination**

"Third Physical Networking Session and Final Examination of Certificate Program in Entrepreneurship and Small Business Management- Batch 3 was successfully conducted on January 8th 2024 at DUK campus. 110 eligible participants attended the networking session and final examination. A final project Review and Evaluation was overseen by Dr. Sini V Pillai, Assistant Professor, School of Digital Humanities and Liberal Arts.

School of Digital Humanities and Liberal Arts conducted Certificate Program in Entrepreneurship and Small Business Management for the Executives of the Directorate of Industries and Commerce. This comprehensive program organized by Digital University Kerala was conducted in three batches, benefiting about 1000 executives. The program has not only equipped them with essential skills but has also played a pivotal role in catalyzing business growth within their respective panchayats. Each batch underwent 228 hours of sessions, providing valuable insights and practical tools to navigate the dynamic business landscape."

### **Institution's Innovation Council (IIC) Regional Meet @ Kochi**

Digital University Kerala Participated in the regional meet of IICs, organized by MoE's Innovation Cell & AICTE, hosted by School of Engineering, CUSAT on 16th January 2024. The Innovation Initiatives of IIC established in the DUK, during the last one year was showcased during the event.

### **Project Revision for Jalsuraksha by Pothencode Panchayat"**

The Social Engagement Centre was approached by Pothencode Panchayat to contribute towards its 'Jalasurekha' to ensure self-sufficiency in water. Considering the fact that the Social Engagement Centre, DUK was able to bring together various stakeholders for discussions and coordinated action plan for the purpose. The Panchayat has requested the Centre to submit a report summarising the various efforts already outlined by agencies like MGNREGA, Departments like Minor Irrigation and Underground Water. The Panchayat has included this proposal in its project revision.

### **South Zone Inter University Tournament**

Association of Indian Universities (AIU), New Delhi in collaboration with the Tamil Nadu Dr. Ambedkar Law University has organized and conducted The South Zone Inter University Chess (Woman) and Football tournaments, 2023-2024 from 25th to 30th December 2023 at their campus. These events provided an excellent platform for DUK students to showcase their skills and sportsmanship.

**FEBRUARY 2024****Digital University Kerala celebrated its 3rd Foundation Day**

Digital University Kerala celebrated its 3rd Foundation Day at C-DAC Hall, Technopark Campus, on 20 February. Padma Sri Sridhar Vembu, Founder and CEO of Zoho Corporation, graced the occasion. The event was presided over by Prof. Vijay Chandru, Chairman, Board of Governors, in the presence of our Honourable Vice Chancellor, Dr Saji Gopinath. On this occasion, we extend our heartfelt gratitude to our dedicated faculty, visionary leaders, enthusiastic students, and supportive community for making these three years a resounding success.

**Chairman Distributes Certificates for Capacity Building Program in AI & DA**

"In a momentous occasion coinciding with the Foundation Day celebrations, Prof. Vijay Chandru, esteemed Chairman of the Board of Governors of Digital University Kerala, graced the Certificate Distribution Ceremony for the Capacity Building Program in Artificial Intelligence (AI) and Data Analytics (DA). The program, meticulously designed for the Economics and Statistics Department of the Government of Kerala, witnessed its culmination on February 20, 2024, at the CDAC hall in Technopark Phase I, Thiruvananthapuram.

The event commenced with a welcome address by Dr. Saji Gopinath, Vice-Chancellor DUK, followed by a presidential address from Dr. Vijaya Chandru, Chairman of the Board of Governors. The highlight of the event was the Foundation Day Lecture delivered by the renowned Padma Shri. Sridhar Vembu, Founder and CEO of Zoho. Dr. A. Mujeeb, Registrar of DUK, then delivered the vote of thanks."

**Chief Minister Pinarayi Vijayan Inaugurates Renovated IIITM-K Building**

On February 27, 2024, the renovated IIITM-K Building was officially inaugurated during a special event at the Mascot Hotel in Trivandrum. The ceremony featured the launch of several new programs and was graced by the presence of distinguished dignitaries, including the Hon'ble Chief Minister of Kerala, Shri. Pinarayi Vijayan, Hon'ble Finance Minister Shri. KN Balagopal, Hon'ble Minister for Industries Shri. P Rajeev, Hon'ble Higher Education Minister Smt. Dr. R. Bindu, Hon'ble Minister for SC/ST Welfare Shri. K.Radhakrishnan, and various esteemed MLAs.

**Hon. Minister Smt. Dr. R. Bindu Released Compendium of Projects for Capacity Building in AI & DA Training Program**

"In a significant step towards fostering technological advancement and skill development for government employees, Smt. Dr. R. Bindu, the esteemed Minister for

Higher Education & Social Justice, released the Compendium of Projects for Capacity Building in AI & DA Training program conducted by Digital University Kerala for the Economics and Statistics Department. The ceremony, held on February 27, 2024, at Mascot Hotel, Thiruvananthapuram, was a part of inauguration of the renovated IITMK building and the launch of several other programs.

During the ceremony, Smt. Dr. R. Bindu handed over the Compendium to Mr. Sreekumar B, Director of the Economics and Statistics Department. The event was attended by notable dignitaries including the Hon'ble Chief Minister, the Hon'ble Finance Minister, the Hon'ble Minister for Industries, the Hon'ble Minister for Higher Education, and the Hon'ble Minister for SC ST Welfare, as well as MLA's and Vice chancellors, who graced the occasion with their esteemed presence."

### **Global Science Festival Kerala**

Global Science Festival Kerala (GSFK) was one of its first kind events organized by Govt. of Kerala between Jan 15 to Feb 15, 2024. Digital University Kerala was an important partner to the event and we displayed some of our best innovations in the GSFK meet during the one-month-long event. The event was inaugurated by Hon Vice Chancellor Prof (Dr) Saji Gopinath and the pavilion attracted over 20,000 visitors from various walks of life; Use of Blockchain technology for tracking coconuts; A digital journey through Kerala's heritage; Brain Computing interface; Showcase of various electronic sensor-based products, its making from materials; the Auto Blood transfusion innovation, the Graphene story; Fun with AI by showcasing the usage of AI technologies in predicting the self-image after many years; Cyber Defense demonstrations; DUK Course details, and showcase of DUKs various Projects were part of the DUK stall.

### **KSAAC Showcases Cyber Security Expertise @ GSFK 2024**

"The Global Science Festival Kerala (GSFK) 2024 was Asia's largest thematically curated science exhibition. It was a unique platform that aims to bring together scientists, artists, students and science enthusiasts worldwide to celebrate science. Our personal and professional lives revolve around digital platforms, making us all potential targets for cyber threats. Recognizing this, the Kerala Security Audit and Assurance Centre (KSAAC) team set up an interactive stall at the festival to educate attendees on safeguarding their digital lives. Our experts conducted live demonstrations, offering a rare glimpse into the techniques used in password attacks, phishing schemes, Wi-Fi hacking, and the intricacies of data recovery followed by illustrating countermeasures. These sessions were not only eye-openers but also served as a call to action for better personal cyber hygiene.

The KSAAC team offered a free data recovery service throughout the festival. The recently established data recovery lab at KABANI has successfully retrieved data from approximately 52 individuals out of 56 from various pen drives and hard disks. This initiative was met with tremendous appreciation, highlighting the common yet often overlooked risk of data loss in our daily lives. We provided live demonstrations of phishing attacks and raised awareness about phishing links to several thousand audience members.

The KSAAC team received numerous inquiries about our cyber security training programs. Conducted brief seminars (~10 mins) for over 80 batches of school students at the nearby empty stall. Educational institutions, including many colleges and schools, expressed keen interest, registering for our upcoming Cyber Security Awareness Program. This enthusiastic reception underscores the growing awareness and need for cyber security education across all age groups. We received invitations from several organizations to conduct security auditing of their IT infrastructure and applications. The KSAAC team is planning to conduct complimentary health checkups for their infrastructure and applications."

### **Digital University Kerala Outreach Program**

Digital University Kerala collaborated with Korambayil Ahammed Haji Memorial Unity Women's College in Manjeri, Malappuram District, to host an outreach program on February 9th, 2024, themed "Embracing the Digital Future." The symposium featured talks by esteemed faculty members from Digital University Kerala's Schools of Informatics, Digital Science, and Digital Humanities and Liberal Arts. Dr. Sooraj N P, Dr. Aswin V S, and Dr. Shanujas V engaged final year undergraduate students across diverse disciplines, inspiring them to explore the transformative potential of digital technologies in shaping their future endeavors.

### **Python for Econometrics: A Five-Day Training Program at Digital University Kerala**

The Center for Digital Transformation and Innovation at Digital University Kerala arranged a 5-day training session for PG students from the Economics Department at Nirmala College, Muvattupuzha, intending to prepare the future generation of economists for the digital age. The program spanned from January 22nd to 26th and equipped the students with the fundamental skills and knowledge needed to use digital tools and technology for economic analysis and research. Students gathered essential insights through a blend of theoretical understandings and real-world applications, knowledge that will surely help them in their academic and professional endeavors.

**KBA - Conducted a session on “Blockchain & its applications in Agriculture” at ICAR-Central Tuber Crops Research Institute, Sreekariyam, Thiruvananthapuram**

Kerala Blockchain Academy had delivered a session on Blockchain Technology & its use cases in Agriculture at ICAR-Central Tuber Crops Research Institute, Sreekariyam, Thiruvananthapuram on 08th February 2024 as part of their 5day training program in Smart Farming Driven by Artificial Intelligence. Mr. Franklin John & Mr. Ananthan R, Research Scientists from Kerala Blockchain Academy delivered the session.

**KBA - Conducted a session on Blockchain Technology as part of Science Day**

In observance of Science Day celebrations, Kerala Blockchain Academy had delivered a session on Blockchain Technology "Decoding Blockchain" at GHSS Kulathur on 28th February 2024. The program was conducted in association with the Kerala State Council for Science, Technology and Environment (KSCSTE). 40 students from various schools & colleges attended the program.

**KBA - Conducted a session “Decoding Blockchain and Web3” at Kerala Technology Expo**

Kerala Blockchain Academy had delivered a session on Blockchain Technology at Kerala Technology Expo at Calicut on 29th February 2024. It was an engaging discussion that delved into the intricacies of Blockchain and Web3. 65 participants from various backgrounds like business professionals, Tech enthusiasts, students, Academicians etc attended the event.

**Three-Day Capacity Building Program for Officials from Government Secretariat held at IIITMK Campus**

"The Centre for Continuing Studies (CCS) organized a successful three-day Capacity Building Program for selected Officers from the Government Secretariat from February 19 to March 2, 2024 at the Technopark Campus.

The program aimed to equip the participants with the latest knowledge and skills in e-Governance and Information and Communication Technologies (ICT) for improved government service delivery.

The program was conducted in three batches, providing intensive training on a wide range of topics relevant to e-governance and efficient administration.

This comprehensive program provided the deputed officers with the necessary skillset and knowledge to navigate the ever-evolving technological landscape and contribute

to a more efficient and citizen-centric government. The Training Program was coordinated by Shri. Jayachandran. MB, Chief Technical Officer and his team including Prasanth Sasidharan, Rugma Raj, Rony P John and Shanu S."

### **Kerala Motor Vehicles Department Invests in Digital Skills with Six-Day Capacity Building Program**

Kerala Motor Vehicles Department (MVD) recently concluded a successful six-day Capacity Building Program aimed at empowering its workforce with the latest digital tools and knowledge. Held at the Technopark Campus (IIITM-K) during January – February 2024, the program equipped a total of 60 participants from both the Uniform and Administration staff with the skills to navigate the evolving landscape of e-governance. The training was coordinated by Shri. Jayachandran MB, Chief Technical Officer along with Prasanth Sasidharan, Rugma Raj and Rony P John. The Systems Team of the University provided technical support for the program. This team included Arun G (System Administrator) along with Sooraj RS, Saidali, and Shanu S from the Technical Support Team.

The program concluded with a successful evaluation test, and the top performer received a token of appreciation. The comprehensive approach and interactive format ensured positive feedback from participants. This initiative demonstrates the MVD's commitment to digital transformation and continuous improvement in serving Kerala's citizens."

### **Virtual IT Cadre Training for Government Officials Conducted**

Digital University Kerala in association The Kerala State IT Mission (KSITM) conducted a comprehensive 10-day residential training program titled "Virtual IT Cadre Training" for officers nominated from various government offices from February 26 to March 7, 2024. This intensive program aimed to equip these officers with the necessary skills and knowledge to become instrumental figures in the successful implementation of e-Governance projects within their departments.

The program culminated in a closing ceremony featuring Shri. Sanoob S, KAS, Head – Innovation, Research and e-Governance, as the invited special guest. Ms. Ambili. K, Mission Coordinator, e-Governance Programs also attended the concluding Session."

### **FRS of EARAS Module developed by CDTI is handed Over**

Shri. P. Rajeeve, Hon Minister for Law, Industries and Coir, Government of Kerala, handed over the FRS of EARAS Module in AIDEA project to be developed by Centre for Digital Transformation and Innovation, Digital University Kerala, to Shri. B Sreekumar,

Director of the Department of Economics and Statistics, Government of Kerala, on February 27, 2024, at Mascot Hotel Trivandrum.

### **Rural Immersion Program for MBA Students at Attappadi, Palakkad District, Kerala**

The 3rd-semester MBA students at the School of Digital Humanities and Liberal Arts recently embarked on a transformative journey through a rural immersion program as an integral component of their MBA curriculum. Conducted from February 12th to 17th, 2024, the program unfolded in the picturesque locales of Attappadi. Prof. Santhosh Kurup and Dr. Shanujas V, along with Mr. Baby Prabakar and Mr. Firoz from Blue Point, and Mr. Jishnu, Kudumbasree State Mission provided invaluable guidance and support throughout the immersive experience, accompanying the students as they delved into the rich cultural tapestry and socio-economic fabric of the region. Mr. Jomon and the team from the Kudumbasree unit, operating at KILA, Attappadi ensured seamless logistics and support throughout the program, joining the students from inception to conclusion. Immersed in various tribal hamlets, the students meticulously observed and analyzed the local lifestyle, culminating in the development of sustainable business models tailored to Attappadi's unique challenges. The students' comprehensive report, submitted to the Kerala Kudumbasree State Mission, underscores their commitment to contributing positively to rural development.

### **Adios Amigos - A Heartfelt Farewell to the Passing Out Batch of 2022-24**

The Digital University Kerala bid adieu to its passing out batch of 2022-24 with a heartfelt farewell event titled "Adios Amigos". The event, organized and coordinated entirely by the first-year students, took place in front of the Mess Hall, which was adorned with warm lights and vibrant decorations, creating a nostalgic evening ambiance. The program commenced at 5:00 PM with some melodious songs performed by the students. The parking area was transformed into a photo gallery, displaying memorable moments of the second-year students, capturing the essence of their journey at DUK. Throughout the event, various activities such as spot games and tasks were conducted, fostering joy and laughter among the attendees. Notable staff members, including Prof. Md Meraj Uddin and Prof. KG Satheesh Kumar, graced the occasion and congratulated the graduating batch for their achievements and contributions to the college. They extended their blessings and well wishes for their future endeavors.

As dusk fell, the warm lights illuminated the surroundings, adding to the enchanting atmosphere. The second-year students were given opportunities to share their experiences and cherished memories of their time at DUK, evoking emotions of nostalgia. Meanwhile the attendees were treated to a refreshing "Mohabbat ka

Sharbat"" drink. A delectable dinner was served, followed by a cake-cutting ceremony to honor the second-year students. A heartwarming video, showcasing memorable moments of the passing out batch, was projected behind the stage, evoking many students to tears. As the evening progressed, lanterns were lit from the university ground, symbolizing a moving closure to the departing second-years. The event concluded with a photo session and the event came to a close around 10 pm. "

### **DACE -2024 Digital Access for Community Empowerment**

"Digital University Kerala offers a compulsory course called Digital Access for Community Empowerment (DACE) to all postgraduate students. Its first part (DACE-1) has an intense 13-day programme that includes classroom lectures and workshops, field visits, group discussions, mentoring, and report writing. The University organised the course independently of other agencies for the first time this year through its Social Engagement Centre, paving the way for a continuous engagement with the communities visited by the students.

First year Post Graduate students of the four schools of the University- School of Computer Science and Engineering, School of Digital Sciences, School of Informatics and School of Digital Humanities and Liberal Arts- were divided into four batches, consisting of 45 students each. Each batch was further divided into teams of five students who were required to do assignments and field visits together. Attention was given that the teams consisted of students from different programmes and specialisations. They were exposed to different kinds of communities and various problems the latter faced.

Coastal and tribal communities, BUDS Rehabilitation Centres for mentally challenged people, day care centres for the elderly, Scheduled Caste colonies, Handloom units, Kudumbashree units and agricultural communities were visited by students as part of the first part of the DACE programme. As part of the DACE-1 course which is mentioned above, field visits were arranged in the DUK adopted villages as part of the Unnat Bharat Abhiyan and even beyond. Field Coordinators and Community Animators from within the communities assisted the students in their field visits.

The one-hour session by Prof. Saji Gopinath, the Honourable Vice Chancellor of DUK on the importance of the DACE course and technological advancement in community development not only served as a testament to the university's recognition and support for this unique course but also instilled a meticulous perspective in the minds of the participants on the course's value and relevance. His address was a wakeup call to the technologists to be empathetic to the society around, apart from being theoretically sound.

DACE-1 aimed to introduce students to the basics of community with the help of the basics of social research methodology and perspective. They were given exposure to the processes and discourse on development and the functioning of local self-government institutions by resource persons from the Social Engagement Centre and Kerala Institute of Local Administration, Thrissur. Sessions on Design Thinking and entrepreneurial skills were conducted by resource persons from the School of Digital Humanities and from external agencies.

Team presentations showcased the skills the students acquired as part of the teamwork until then and gathered comments from the panelists consisting of representatives of DUK faculty members, community, and industry. DACE-2 is expected to take forward the solutions found by the teams to the next level and find probably a small and yet sustainable solution to the problems existing in the communities the students visited."

### **Water Resource Management in Pothencode Panchayat**

The integrated water resource management in Pothencode Panchayat has come a long way. Multiple meetings have been conducted to ensure the project is progressing in the right direction. Two meetings were held in February.

#### **Reviewing the current water resources map and intervention methods**

On February 2, 2024, the MGNREGA engineering team visited the DUK campus and revisited the neerurav document, which comprises existing water resource maps and intervention strategies to improve water resources in the Pothencode panchayat. The team reviewed the neerurav document and water resource maps, identifying areas requiring immediate attention.

#### **Follow-up meeting - Water Resource Mapping**

On February 26, 2024, the Pothencode Panchayat hosted a stakeholder meeting to present the results of the water mapping done by the Centre for Geospatial Technology, School of Digital Sciences, DUK in collaboration with the Haritha Keralam Mission. Pothencode Panchayat members, representatives of Haritha Keralam Mission, MGNREGA, Department of Minor Irrigation and so on took part in the meeting. Haritha Keralam Mission presented the findings of the water resource mapping, leading to discussions within the team regarding the current status of existing interventions and their effectiveness in managing water resources in Pothencode Panchayat. DUK was represented by the Social Engagement Centre. A decision was taken that Social Engagement Centre, DUK will host the workshop on

Water Budgeting for Pothencode Panchayat as part of its community engagement activities in adopted villages.

### **FACE TO FACE program with CM**

DUK is delighted to share the successful engagement of our representatives, Sabitha Rani B S and Saranya VS Nair, in the exclusive face-to-face session with the Chief Minister at the Kowdiar Uday Palace Convention Center in Thiruvananthapuram on 20th February 2024. The event provided a unique platform for direct engagement of youth, where our representatives actively contributed to discussions, expressing the concerns and aspirations of our youth community. The Chief Minister appreciated the diverse perspectives, fostering an inclusive dialogue that emphasized the crucial role of the youth in shaping the state's future.

### **Conference on ML4MS 2024**

Dr. Manoj Kumar T K conducted conference on Machine Learning for Molecular Sciences (ML4MS 2024) from February 1st to 3rd, 2024 Gokulam Grand in Thiruvananthapuram. The focal point of ML4MS 2024 was the exploration of cutting-edge applications of machine learning techniques within the broader landscape of molecular sciences. The conference had extensive programme of talks, hackathons, flash talks and presentations that illuminated the transformative impact of these approaches in a variety of molecular research domains. At the heart of the conference lay many topics, including identification of novel drug leads using machine learning, AI based material design, and application of AI in biosciences.

## **MARCH 2024**

### **Basic IT training for Department of Archaeology**

The Centre for Digital Transformation and Innovation (CDTI) organized a training programme on "Basic IT" in connection with the Centralized eTicket Issuing and Monitoring System (CeTMS) project. This program was designed for the Department of Archaeology, Government of Kerala, and was conducted from March 18th to 22nd, 2024 at the Digital University Kerala, Technopark Phase I campus (IIITMK). The 5 day training programme focused on empowering government employees in the field of digital technologies aiming to alleviate the digital divide. The program involved familiarization of different desktop applications and hands-on training for their usage. Hands-on sessions were handled and coordinated by DUK team Ms. Panchami S, Mr. Vimal D Kumar and Ms. Anitha V R. Mr. Arun S from Irrigation Department, Govt. of Kerala handled sessions on e-office, BiMS, BAMS, PRISM and SPARK etc. The

Honorable Registrar delivered the valedictory address and distributed certificates to all attendees.”

### **DUK's Dynamic Celebration of International Women's Day: Empowering Women, Inspiring Success**

"This International Women's Day, DUK embraced the spirit of womanhood with a flourish, marking the occasion with a series of events that showcased the indomitable spirit and remarkable contributions of women in the academic and professional spheres. The day was filled with insightful speeches, engaging talks, and a host of activities that celebrated the success and empowerment of women.

The festivities commenced with an inspiring welcome speech by Prof Elizabeth Sherly, who illuminated the audience on the pivotal role women have played at DUK, setting a profound tone for the day. Prof A Mujeeb, Registrar, followed with a warm welcome, extending heartfelt greetings to all attendees and speakers, further heightening the sense of community and shared purpose.

The highlight of the event was the inauguration by Dr Divya S Iyer IAS, whose presence and words added an invaluable dimension to the celebration, resonating deeply with all present. The session was further enriched by 'Ignite talk' delivered by Wg Cdr Ragashree D Nair, whose powerful message sparked enthusiasm and motivated the audience to strive for excellence and leadership in their respective fields.

Sheeba Basil, an esteemed speaker, provided an invigorating invited talk that captivated the attendees, offering insights and inspiration on achieving success and overcoming challenges as women in today's world.

Dr. Sinnu Susan Thomas concluded the formal session with an eloquent address, wrapping up the insightful discussions and paving the way for an hour of networking. This segment allowed attendees to engage in meaningful conversations, exchange ideas, and build lasting connections, all the while enjoying an array of refreshments.

Adding a unique touch to the event, Chaitanya Hospital partnered to promote wellness among women by offering free eye check-ups to every invitee. This initiative underscored the importance of health and well-being as integral to empowering women to succeed in all spheres of life.

The International Women's Day celebration at DUK on March 14, 2024, was indeed a vibrant and engaging affair. It not only celebrated the success of women but also empowered them by fostering a sense of community and inspiration. The event

beautifully encapsulated the essence of International Women's Day, making it a memorable occasion for all who participated."

### **DIGITAL DEFENDERS Strengthening Security Awareness Workshop March 2024**

"We are pleased to share the success and accomplishments of the DIGITAL DEFENDERS - Strengthening Security Awareness Workshop conducted in March 2024 by the Kerala Security Audit and Assurance Centre (KSAAC) in collaboration with the Center for Executive Education & Continuing Studies (CEECS) across three colleges. The primary objective of this initiative was to empower faculty and students with essential knowledge and skills in cybersecurity, addressing the critical challenges posed by cyber threats in today's digital landscape.

The workshop covered a wide range of crucial topics in cybersecurity. Participants were introduced to the fundamentals of cybersecurity, including password security and the ethical considerations surrounding hacking. The workshop also delved into specific cyber threats such as phishing attacks and explored advanced concepts like cryptography, steganography, hashing, and digital signatures. Moreover, participants gained insights into the dark web and learned about the tools and techniques used in hardware hacking. Overall, the workshop provided a comprehensive understanding of cybersecurity principles and practices essential for safeguarding digital assets.

The participating colleges included SD College Alappuzha on March 12, 2024, Mar Baselios College on March 18, 2024, and Noorul Islam College on March 22, 2024. The resource persons for these sessions were Prof. Md Meraj Udin, Mr. Rasic A Azeez, Ms Sruthi Krishna G, Ms Gopika S, and Ms Trupti, who shared their expertise and insights with the participants.

The workshops received an overwhelming response, with a total participation count of 180 faculty and students. This initiative not only equipped faculty and students with vital cybersecurity knowledge but also fostered a culture of security awareness and preparedness among the participants.

We express our sincere gratitude to Prof Santhosh Kurup Chair CEECS, participants, resource persons, and organizing colleges for their contributions in making the DIGITAL DEFENDERS Strengthening Security Awareness Workshop a resounding success. Such initiatives are pivotal in fostering a robust cybersecurity ecosystem and empowering individuals to protect digital assets effectively."

### **IEEE CASS Workshop for school children**

IEEE CASS workshop at Digital University Kerala commenced at 10 am and concluded at 1 pm. Dr. Alex P. James and Dr. Rajeev Joshi on March 10, 2024 for grade 6th to grade 11 students. The session was initiated by Dr. Alex P. James, providing an insightful introduction to circuits and systems, setting the stage for the participants to delve into the world of electronics.

The workshop was expertly handled by Vineeta V. Nair, Aswini A.R., Shilpa Pavithran, and Anitha Gopi. The workshop delved into fundamental concepts such as the binary system of numbers and Boolean algebra of gates, laying the groundwork for a deeper understanding of circuits and systems. A highlight of the workshop was the practical session, where students engaged in circuit simulation using Tinkercad. Under the guidance of the organizers and volunteers, students enthusiastically explored circuit design and simulation, fostering a hands-on learning experience.

The workshop was a resounding success, marked by the active participation and enthusiasm of the students. "

### **India's Techade-Chips for Viksit Bharat**

Digital University Kerala hosted an enlightening talk organized by IEEE-CASS featuring esteemed speakers Dr. Rajiv Joshi and Dr. Alex P. James. The focus of the session was on the evolution of computing technology, with Dr. Rajiv Joshi delving into the topic of ""Long Live Computing Technology,"" while Dr. Alex P. James provided insights into VLSI education in India.

Dr. Rajiv Joshi commenced the session by providing a comprehensive overview of the journey of computing technology, tracing its roots from the 2nd World War period to the present day, encompassing significant milestones and breakthroughs along the way. He elucidated how computing technology has evolved, particularly highlighting the transition from transistors to the cutting-edge advancements witnessed today.

Following Dr. Joshi's insightful presentation, Dr. Alex P. James took the stage to discuss VLSI education in India. He began by introducing two key areas of VLSI: design and technology. Dr. James emphasized the abundant job opportunities available in companies within the VLSI domain and highlighted the importance of specialized skills in this field. "

### **Matlab for image processing and FPGA implementation**

Image Processing and FPGA Design Take Center Stage. This March, the Digital University of Kerala hosted two fantastic events showcasing the power of MATLAB in

cutting-edge fields. Here's a recap: Getting Started with Image Processing Using MATLAB, led by Siva Subramanian R, Application Engineer, participants explored image processing fundamentals. Key areas included image import/export, histograms, contrast enhancement, thresholding, edge detection, and morphological operations. This event equipped attendees with the tools to manipulate and extract valuable information from digital images. Introduction to MATLAB for FPGA Design, also led by Siva Subramanian R, this event offered an insightful look into using MATLAB to design Field-Programmable Gate Arrays (FPGAs). Participants learned about FPGA basics, MATLAB's role in hardware design, Simulink's visual approach, and saw a practical hardware demonstration. Attendees gained a foundational understanding of MATLAB's capabilities in the realm of FPGA design.

### **DUK Sports League 2024**

On March 20 and 21, 2024, the DUK Sports League hosted two exhilarating events, leaving fans on the edge of their seats with captivating displays of athleticism and teamwork.

**Football League Match Recap:** The DUK Sports League witnessed a thrilling Football League Match on March 20, 2024, as teams from various schools battled it out on the field. In the ultimate showdown, Participant 7 emerged victorious, showcasing exceptional teamwork and determination. Their outstanding performance secured them the championship title amidst roaring applause and cheers from fans.

**County Cricket League Match Recap:** Following the football matches, cricket enthusiasts gathered to witness the County Cricket League Match on March 21, 2024. The finals saw Team ROV emerging victorious, displaying exemplary skills and teamwork.

The tournament was marked by thrilling encounters between teams, with each match filled with excitement and suspense. Congratulations to Participant 7 and Team ROV for their outstanding performances in their respective sports. The DUK Sports League continues to deliver high-octane sporting action, leaving fans eagerly anticipating future events.

### **Matlab for Image Processing and FPGA Implementation**

Image Processing and FPGA Design Take Center Stage This March, the Digital University of Kerala hosted two fantastic events showcasing the power of MATLAB in cutting-edge fields. Here's a recap: Getting Started with Image Processing Using MATLAB Led by Siva Subramanian R, Application Engineer, participants explored image processing fundamentals. Key areas included image import/export, histograms,

contrast enhancement, thresholding, edge detection, and morphological operations. This event equipped attendees with the tools to manipulate and extract valuable information from digital images. Introduction to MATLAB for FPGA Design.

Matlab for Image Processing and FPGA Implementation, also led by Siva Subramanian R, this event offered an insightful look into using MATLAB to design Field-Programmable Gate Arrays (FPGAs). Participants learned about FPGA basics, MATLAB's role in hardware design, Simulink's visual approach, and saw a practical hardware demonstration. Attendees gained a foundational understanding of MATLAB's capabilities in the realm of FPGA design.

### **Ramadan Iftar Meet**

On April 4, 2024, DUK hosted a heartwarming Iftar Meet, bringing together students and staff to break their fast during the holy month of Ramadan. It was a voluntary gathering that fostered a sense of community and togetherness.

The Iftar Meet showcased the true spirit of unity and compassion, as students and staff came together to share in the blessings of Ramadan. It was a testament to the diverse and inclusive community we cherish at DUK.

### **Two-day Workshop on Water Budgeting under the Unnat Bharat Abhiyan 'Partnering in Development' - Advancing Water Resources Management in Pothencode Panchayat**

Water resources management is critical for sustainable development. Understanding its importance, the Social Engagement Centre at DUK, in collaboration with Haritha Keralam Mission, organized a two-day workshop on water budgeting- "Jalasureksha"- on 21- 22 March 2024. The workshop was aimed at promoting Integrated Water Resource Management in the Pothencode Panchayat. Stakeholders from various government departments such as Minor Irrigation, Veterinary, MGNREGA, and the Pothencode Panchayat Representatives, DUK faculty members from Geospatial Technology and Ecological Informatics, the Technical Committee Members in Pothencode panchayat and students from DUK participated the event.

Two-day Workshop on Water Budgeting under the Unnat Bharat Abhiyan 'Partnering in Development' - Advancing Water Resources Management in Pothencode Panchayat Social EngagementCentre The workshop commenced with a dynamic opening session by Mr. T.R. Anil Kumar, President of Pothencode Panchayat, Prof T. Radhakrishnan from the Centre for Geospatial Technologies at DUK, Mr. Asok C., District Coordinator of Haritha Keralam Mission, Prof. Pradeep Kumar K, (Faculty, SEC Coordinator, DUK) and Dr. Sreelekha Nair (SEC, DUK).

During the presentation, Dr. Sreelekha Nair (SEC, DUK) provided an overview of the Social Engagement Centre's efforts on the Integrated Water Resource Management initiative in Pothencode panchayat as part of the Unnat Bharat Abhiyan. She emphasized the significance of water budgeting and its role in promoting the responsible stewardship of local water resources.

An awareness session was organized for the Pothencode panchayat representatives on water budgeting and sustainable management of water resources as part of the workshop. The session was conducted by Mr. Ashok C, District Coordinator of Haritha Keralam Mission. The purpose of the session was to make the representatives aware of the significance of water budgeting and to provide insights on managing local water resources effectively. Representatives, Digital University Kerala, and MGNREGS contributed to the session, sharing their knowledge and expertise. Prof. T. Radhakrishnan discussed geospatial technologies, highlighting their pivotal role in effectively understanding and managing water resources. His informative session on the work already done by the Centre for Geospatial Technologies for the waterbody management of Pothencode enlightened the audience on the possibilities of geospatial technologies in sustainable development. On the first day, the most important session was related to pooling data, which was required to prepare the water budget. The participants were divided into three groups and assigned to verify the data on the supply and use of water in Pothencode. Various stakeholders including the Pothencode Panchayat, Krishibhavan, Department of Irrigation and Veterinary and others, collaborated in the effort.

Digital University students from the School of Digital Science - Mr. Albin Varun, Ms. Aswathi M, Ms. Greeshma, Ms. Nandana Rajesh, and Mr. Sreevishak - presented their study on the Pothencode Pond as part of the DACE-1 course that was just concluded in the beginning of March. During their presentation, the students outlined the problem identified by them and proposed a sustainable solution for the management of the pond and the community around.

On the second day, the Social Engagement Centre presented a video showcasing their recent activities. The session also included examples from the works of Dr. Rajender Singh, known as the "Waterman of India." The day also witnessed a very informative and thought-provoking session on water conservation and restoration of disrupted ecosystems by Dr. Sooraj N.P. from C.V. Raman Laboratory of Ecological Informatics.

Mr. Asok C., District Coordinator of Haritha Keralam Mission, announced the plans regarding the formal launch of the Water Budget Document. Plans for time-bound work to all those involved were given, while acknowledging their dedication and

commitment to fostering sustainable water management practices. Ms. Jeslin Saji, a student volunteer of the Social Engagement Centre recounted the benefits students accrued from the water management activities of the Centre through Unnat Bharat Abhiyan. The two-day workshop ended with a thank you note from Mr. Sai Sankar, a Core Committee member of the Social Engagement Centre.

### **Beach Cleaning at St.Andrew's Beach**

A collaborative initiative on beach cleaning was organised by the Social Engagement Centre (SEC) at St.Andrew's Beach, Menamkulam, Trivandrum, on 16th March 2024. This endeavour was made possible through a collaboration with Project Management Institute (PMI Kerala). With a shared commitment to preserving our coastal ecosystems, volunteers from SEC and various organizations from Technopark came together to make a tangible difference. Not only did this initiative contribute to the immediate beautification of St. Andrews Beach, but it also served as a powerful reminder of the importance of responsible waste management.

By working together, we were able to demonstrate that small actions can lead to significant outcomes when driven by a collective sense of responsibility towards our environment. Moving forward, let us continue to build on this momentum and inspire others to join us in safeguarding our precious natural resources. Social Engagement Centre wants to remind that "together, we can create a cleaner, healthier environment for generations to come".

## **APRIL 2024**

### **PMAJAY Second Schedule of Induction Programme on 29th April 2024**

Centre for Executive Education and Continuing Studies is conducting PMAJAY Programme in association with SC Development Department which provides residential training for SC students in Cyber Security, Electronics and Block Chain domains for one year. The Second Schedule of Induction programme was conducted on 29th April 2024 at DUK Campus in which about 30 students participated.

### **Generative AI Session - 18th April to 20th April 2024**

Centre for Executive Education and Continuing Studies organized a day workshop for interested faculty / Project staff /Admin Office Staff on 18th April 2024 and a two-day deep dive session exclusively for Researchers/ Research scholars on 19th April and 20th April 2024. Shri Sunil Prabhakar, a well-known Gen AI expert of various tools in the market, has conducted the workshop.

The workshop kickstarted with a professional approach to searching for academic research on the internet, using search engines, knowledge engines, and academic databases and it then delved into the impact of Artificial Intelligence (AI) on scholarly research, including literature exploration, literature review, reference management, and data analytics. It helped researchers understand how AI tools can accelerate the literature review process, automate data extraction, and facilitate the synthesis of information from large databases.

### **Session on How to Overcome Inhibitions and Find Confidence to Speak**

Training and Placement Cell is organized a session on - How to Overcome Inhibitions and Find Confidence to Speak. These sessions held at the Gallery Hall 45, and we had the privilege of having Mr. Bejoy Peter, a seasoned Corporate Trainer, as the facilitator. Semester 2 students of all students were invited to attend the session.

These sessions were an excellent opportunity for all the students to enhance their interview skills and make a positive impact on our career prospects. Mr. Peter is renowned for his engaging and interactive training style, made those sessions highly valuable.

### **Session on "Industry Expectations and Readiness"**

Training and Placement Cell, DUK organised a session on "Industry Expectations and Readiness" on 25th April 2024, Thursday. The session was handled by Mr. Vishnu Prasad, Senior HR Manager, Srishti Innovative. The session aimed to equip second-semester students with essential insights into the expectations of the industry and strategies to enhance their readiness for the professional world. About 120 second-semester students attended the session

### **Outreach Activity (SINI V PILLAI)**

Taken a session on Technological Advancements and the Future of Higher Education at Travancore Engineering College on 3 April 2024

### **Listed in Google Hall of Fame**

Google awarded the Hall of Fame along with a monetary reward for finding bug in their services. The Google Hall of Fame lists individuals who responsibly disclose security vulnerabilities or bugs to Google's security team. It's a recognition of prominent Ethical Hackers who improve the security and services of Google.

URL:<https://bughunters.google.com/profile/559ed4bb-8be7-424f-b427-8cf572e1d47b/awards>

### **MoU signed between DUK and Reflections Infosystems**

DUK signed an MoU with Reflections Infosystems, a deep-tech company and technology partner for leading companies across domains such as banking and financial services, healthcare, retail, logistics and transportation, automotive, and media and entertainment. The MoU aims to encourage collaboration in terms of joint R&D, tackle industry challenges, deliver joint outreach programs and provide industry exposure to students. The MoU was formally signed on 22 April 2024 at the DUK Campus between Prof Mujeeb A, Registrar, DUK and Deepa Sarojammal, CEO, Reflections, in the presence of Prof Saji Gopinath, Vice Chancellor, DUK and other representatives of both organizations.

### **Discussion on the differentiation of biotic and abiotic stress in horticultural crops**

A discussion on the use of Machine Learning (ML) algorithms to distinguish between biotic (pest/disease) and abiotic (nutritional imbalance) stress in horticultural crops. This innovative approach has the potential to revolutionize crop health management practices in Kerala. The discussion held at Kerala Agricultural University's Krishi Vigyan Kendra (KVK) in Kottarakkara on April 16th, 2024, brought together experts to explore the possibilities of data collection for this research. Umasankar, Senior Research Associate from the Centre for Digital Transformation and Innovation (CDTI) of Digital University Kerala, participated in the discussion alongside Dr Bini Sam, Professor and Head, Krishi Vigyan Kendra, Kollam, and Dr Saroj Kumar V, Assistant Professor in Horticulture, Kerala Agricultural University. The deliberation focused on strategies for gathering robust data, including field observations, physiological measurements, and image acquisition. A key emphasis was placed on data standardization, labelling, and quality control to ensure the effectiveness of the ML models.

### **ONE-DAY INDUSTRIAL VISIT TO KSAAC – Noorul Islam Centre for Higher Education (NICHE)**

As part of the digital transformation initiative of Center for Executive Education & Continuing Studies (CEECS), 30 students and 4 professors from the Department of Information Technology specialization in cybersecurity and forensics of NICHE visited KSAAC on April 23, 2024. Participants expressed appreciation for the comprehensive coverage of cybersecurity topics and the interactive nature of the sessions. The exploration of hardware security data recovery labs left a lasting impression, empowering participants with actionable insights and dreams.

The NICHE visit to KSAAC exemplified the commitment to fostering cybersecurity awareness and preparedness among faculty and students. By equipping participants with essential knowledge and skills, this initiative has fortified the collective defense against cyber threats, paving the way for a safer and more secure digital future. We sincerely thank all stakeholders, including KSAAC and CEECS teams, faculty, students, and organizers, for their invaluable contributions to the success of this initiative.

### **One Month Cyber Security Program- SECURE YOUR DIGITAL LIFE**

Kerala Security Audit and Assurance Center (KSAAC) hosted four-week training programme on cyber security for the 4th semester Computer Hardware Engineering students of Govt Polytechnic College Attingal, Thiruvananthapuram during April 4-30, 2024 at Digital University campus, Technopark Phase 4. A total of 54 students actively participated in the programme. It was organized under the CSR activities of the DUK.

The purpose of the programme was to provide necessary knowledge and skills to protect their information assets and secure their cyber space. KSAAC Team members handled several sessions on cyber security, digital forensics, network security, hardware security, Python programming etc. An online examination was conducted to assess their learning levels. The certificate of participation was awarded to all the students who actively participated in all the sessions and completed the assessment process.

### **NSS Camp Certificate Distribution**

On April 22, 2024, the National Service Scheme (NSS) community gathered to recognize student volunteers' exemplary efforts in the Athiyanoor NSS camp, the first NSS camp organized by the NSS Unit of DUK. Anchored by Aswathy M, MSc Data Analytics and Geoinformatics, the event commenced with a warm welcome from Shahana T K, NSS Secretary and Student, MSc Data Analytics and Bio AI. Prof. A. Mujeeb, Registrar of Digital University Kerala, inaugurated the certificate distribution function, setting the tone for an inspiring afternoon.

Certificates were distributed to all participants, acknowledging their dedication to social causes. Sai Shankar, Student, MSc Ecology and an NSS volunteer, shared his experiences from the 7-day NSS camp. This was followed by felicitation from Prof. Pradeep Kumar K, NSS Coordinator, who lauded the NSS volunteers' commitment, resulting in a successful camp. Aswin P, MSc Computer Science with Data Analytics, NSS Secretary, delivered the vote of thanks, concluding the event with gratitude for all

involved. The event showcased volunteerism and community engagement, inspiring attendees to continue their noble endeavours.

### **DACE-2023-24: DUK student teams present innovative ideas at Allianz**

On April 30th, 2024, four student teams from DUK were invited to Allianz Technology, Technopark, Thiruvananthapuram, the end-to-end IT solutions providing arm of the multinational, Allianz Group. The teams presented the problems identified and the innovative solutions proposed as part of the DACE (Digital Access for Community Empowerment) course conducted in the first semester. The four teams presented to the top management of Allianz Technology, consisting of members from the head office in Munich, and offices in Pune and Thiruvananthapuram. The community problems presented were challenges faced by the tribal, fishing, and handloom communities in Thiruvananthapuram. The event provided a discussion forum between students, DUK faculty members, and Allianz representatives. Insights were shared, perspectives were exchanged, and valuable feedback was provided. DUK and Allianz share a commitment to developing innovative solutions through the adoption of technology for sustainable development. The visit underscored the potential for fruitful industry-academia collaboration by encouraging socially impactful projects and initiatives.

**Fire and Safety Week Celebration** The Social Engagement Centre at DUK organized a Fire and Safety Celebration on April 25th, 2024, as part of the Fire and Safety Week (April 14 - 20). The event's objective was to raise awareness and promote proactive measures for fire safety among DUK's students and staff members.

A quiz competition was organized in which seven teams participated. Sai Shankar, Msc Ecology, and member of the SEC core team, led the quiz competition. Rahul Raj (Sem 4, MTech CS) and Denil Tom (Sem 4, MSc CSDA) won the first prize, while Megha Manoj (Sem 2, MBA) and Jayadev (Sem 2, MBA), the second prize.

The Fire and Safety team from the Kazhakootam Branch was invited to conduct an awareness session on fire safety, CPR, fire prevention, emergency response strategies, and evacuation protocols. The awareness class was led by Fire and Rescue Officers Shri. Sanu S K and Shri. Sajith C from the Kazhakkuttam fire station: The participants actively participated in the session by asking questions and sharing their experiences. This helped to enhance their knowledge and understanding of fire safety principles.

**MAY 2024****National Technology Day 2024 Celebrations**

Kerala University of Digital Sciences, Innovation and Technology (Digital University Kerala) jointly with Kerala State Council for Science, Technology and Environment (KSCSTE), Government of Kerala celebrated the National Technology Day (NTD) on 18 May 2024 at the Travancore Hall, Park Centre, Technopark Phase 1, Trivandrum; with the theme 'Fostering Creative Tech – Igniting Young Minds To Innovate'. The program emphasized the broader scope of nurturing technical creativity through encouraging and fostering innovation among the young minds. The event was enriched by the engaging keynote speeches and dialogue sessions to interact with the eminent panelists and gain insights on innovation and entrepreneurship. It also aimed to provide a platform for School and College Students as well as Young Entrepreneurs to demonstrate their advancements in technologies and innovations which may be translated into success stories. The innovation contests from the school and college level students were judged by eminent panels and the best innovation from the school and college levels were awarded Certificate of Merit and Certificate of Appreciation.

Atal Innovation Mission, IEEE and IEDC centers in school and colleges encouraged the students directly working under those cells to submit their innovations/prototype/product. However, the competition was open to all the schools and colleges across Kerala. Over 250 participated in the event.

The event was a grand success and the National Technology Day 2024 Celebrations inspired the next generation of innovators to shape the future of technology.

**Digital Renaissance to Empower Aspiring Minds – DREAM 2024**

DREAM 2024, a KSCSTE-sponsored five-day residential program, was held from May 07 to 11, 2024, at the campus of Digital University Kerala (DUK) in Technopark Phase 4, Trivandrum. The participants include IISER-Thiruvananthapuram, Pune, Tirupati and various Arts colleges. The event provided an unparalleled platform for participants to engage with top scientists, researchers, and experts across diverse fields, including digital technology and experimental science. The inaugural session set the tone for the program with an inspiring introductory address by Prof. A. Mujeeb, Registrar of DUK. This was followed by the presidential address delivered by Prof. Saji Gopinath, Hon. Vice Chancellor of DUK. The program was officially inaugurated by the esteemed Prof. Tessy Thomas, Hon. Vice Chancellor of Noorul Islam University, whose presence added a significant prestige to the event.

DREAM 2024 was designed to offer participants invaluable insights and skills essential for excelling in today's rapidly evolving scientific landscape. The program featured a variety of interactive sessions, hands-on workshops, and networking opportunities, all aimed at fostering a deep understanding of contemporary scientific challenges and innovations.

One of the highlights was the visit to the Institute of Advanced Virology in Thonnakkal. To make the experience more engaging, the program also included cultural events, offering participants a chance to unwind and immerse themselves.

The program concluded with a feedback session and an engaging interaction with Dr. Lekha from KSCSTE at 12:30 PM on May 11, 2024. Participants shared their experiences, provided valuable feedback, and discussed the knowledge and skills they gained during the program. This session underscored the success of DREAM 2024 in achieving its goals and highlighted areas for future improvement.

DREAM 2024 has undoubtedly left a lasting impression on all who attended, equipping them with the knowledge, skills, and inspiration to drive future innovations in their respective fields. The collaborative spirit and the high calibre of the program have set a benchmark for future events at Digital University Kerala.

### **i-Graphene Batch 2 - Certificate Course in RF Technology**

India Innovation Centre for Graphene (IICG), a dynamic centre for nurturing groundbreaking graphene research to real-world applications, organized a certificate Course in RF Technology from 13th to 14th May 2024 in collaboration with Ansys Inc. and Entuple Technologies Pvt. Ltd. The program focused on graphene-based antenna simulation, phantom simulation, radome simulation, RF circuit design, heat sink design and thermal analysis of PCB design. The course was arranged by Prof. Alex James, Dean Academic, Digital University Kerala with a vision to build a community with a strong foundation in RF technology and application of graphene in antenna design.

The training team from Entuple Technology included two experts in the field of RF technology. The first session was handled by Mr. Kush Parikh, a Technology Specialist-HF at Entuple Technologies (Elite partner of ANSYS), Bangalore, India with over 8 years of experience in the RF Field.

The other session focused on CFD (Computational Fluid Dynamics) and was led by Mr. Prinson Chandy, a CFD Technology Specialist at Entuple Technologies and a former engineer at the Aeronautical Development Establishment. Together, they delivered a comprehensive training program that combines practical tech skills, ensuring

participants are well-equipped to navigate and excel in today's world. The event was attended by thirty-seven students doing their Master's program.

### **Business Plan Competition Organised by IIC**

The Institution's Innovation Council (IIC) of Digital University Kerala (DUK) successfully conducted a level 4 intercollegiate business plan digital presentation on the 28th of May, 2024, followed by a business plan poster presentation on the 29th of May, 2024, at the university premises. The event was organized by Dr. Shanujas V (Assistant Professor, SODiHLA) and Dr. Malu G (Assistant Professor, CS), with a judging panel comprising Dr. Satheesh Kumar K G, Dr. Christie Thomas Cherian, and Ms. Panchami S. A total of 11 teams, each consisting of 4 members, participated in the competition. The first prize, amounting to Rs. 5000/-, was awarded to Team 7, which included Sai Shankar G Nair, Akshay Sasi, Safna S, and Malavika Pradeep. The second prize, amounting to Rs. 2000/-, was awarded to Team 5, consisting of Harishankar M, Smitha Rani, Raahuraj P V, and Meenakshi S Kumar.

### **EthWalk: Enroute to Ethereum Blockchain**

The EthWalk event occurred on May 24-25, 2024, at IIITM-K Campus, Technopark Phase-1, Thiruvananthapuram. Hosted by the Kerala Blockchain Academy (KBA), the two-day workshop focused on educating and engaging blockchain enthusiasts in preparation for the upcoming DEVCON 2024 - An Ethereum Blockchain Global Conference. The workshop also served as a platform for the Kerala Blockchain Academy to exhibit Certichain as a tangible blockchain solution in real-life scenarios like document issuance and verification in different contexts.

The workshop, in association with the Ethereum Foundation, was intended to promote the Ethereum blockchain by refining the participants' blockchain skills through various interactive and educational initiatives like quizzes and hands-on exercises in blockchain application development. The workshop also aimed to demonstrate Certichain as a concrete blockchain solution applicable in real-life scenarios like certificate verification, showcasing the practicality of blockchain implementation. With 90 participants in attendance, the event underscored the significance of understanding Ethereum's role in the evolving landscape of decentralised technologies.

Through a series of meticulously planned sessions over two days, participants were guided through various aspects of Ethereum, from its fundamental concepts to real-world applications and future developments. This precursor event mainly targets preparing participants for the seventh edition of Devcon, the Ethereum conference for

developers, thinkers, and makers to be held from November 12-15 in Bangkok, Thailand.

### **Mentoring Program Organized by PMI-Kerala Chapter Student Club**

The Project Management Institute-Kerala Chapter Student Club of DUK organised a one-to-one mentoring session for students on 25 May 2024. The session provided an opportunity for the students to interact on a one-to-one basis with experienced industry professionals who are members of the Chapter and get their valuable input to shape their professional careers.

### **Quit One Challenge**

The Quit One Challenge, conducted by the School of Informatics, is an offline initiative towards Sustainability. The goal is to encourage the participants to quit unsustainable habits and adopt sustainable ones in their daily lives. In 2015, the Ecological Informatics Department of IIITM-K called for an online Quit One Challenge through its social media page to quit any unsustainable habit that harms the planet. This garnered a good response and engagement from the staff, students, and the public. The challenge accepted by Prof Jaishanker, former Head of Ecological Informatics at IIITM-K to quit ironing his shirts to conserve energy and reduce carbon emissions set an example. Nine years later, the need for Sustainability awareness and immediate action for battling Climate Change prompted the School of Informatics to rehash the initiative for the faculty, staff, and students of Digital University Kerala (DUK).

To promote this, 24 challenges (12 each to Quit/Adopt) were represented on a thematic tree and a disposal bin was displayed at the reception area of DUK. The challenge continued for a week, starting from May 22, 2024, in celebration of the International Day for Biological Diversity. The program was also featured on the website of United Nations Convention for Biological Diversity. More than 50 participants including our Honorable Vice Chancellor, faculty, research scholars, staff and students took up challenges to Adopt sustainable habits and quit unsustainable ones by signing the post-it notes and the Quit One Challenge poster.

More than 50 participants including our Honorable Vice Chancellor, faculty, research scholars, staff and students took up challenges to Adopt sustainable habits and Quit unsustainable ones by signing the post-it notes and the Quit One Challenge poster.

After the program concluded all materials used for creating these thematic visuals were composted by a DIY composting bin setup by the MSc Ecology Students. The students intend to use the compost as manure for saplings in the newly created Butterfly Garden at DUK.

To highlight the R's of Sustainability, Reuse Reduce Recycle, a 'Regift Toy's donation / exchange counter was also set up to receive donations of old, well-functioning toys. This encouraged the DUK fraternity to save toys from the plastic dump yard and regift it to bring a smile to another kid. The Regift Toys program amassed a huge pile of toys donated by project staff and women research scholars of DUK.

### **Empowering the Future: Yuva Manthan**

On June 7, 2024, Yuva Manthan hosted an innovative event aimed at bridging the gap between theoretical learning and practical application for young individuals. This initiative provided a platform for youth to enhance their skills through hands-on experiences, recognizing their potential and aspirations. Yuva Manthan's goal is to cultivate a new generation of leaders who can drive India towards its Vision 2047, where transformative learning plays a crucial role.

All India Political Party Meet: A Remarkable Achievement. The All-India Political Party Meet recently convened, simulating a parliamentary session with over 20 representatives tackling pressing issues like climate change and sustainability. Despite months of planning and coordination challenges, the session ran smoothly for over two hours, showcasing the dedication of the organizing team, led by Sai Shankar G Nair and Riya Roy (Msc Ecology) with guidance of Dr Sooraj NP (Assistant Professor, SOI, DUK). The event culminated in recognizing outstanding delegates who made significant contributions to the discussions, setting a benchmark for future engagements.

### **Digital University Kerala Hosts Successful Two-Day Voluntary Blood Donation Camp**

The NSS Unit of Digital University Kerala, in collaboration with Kerala Community Blood Centre, Thiruvananthapuram, organized a two-day voluntary blood donation camp on 15 & 16, May 2024 at the Digital University Kerala campus. The event received additional support from the Regional Cancer Centre and Sree Chitra Tirunal Institute for Medical Sciences & Technology.

Over two days, sixty-eight generous donors, some with rare blood groups, participated in this life-saving cause, underscoring the spirit of unity and compassion within our campus community. The event was marked by the enthusiastic participation of students and faculty, reflecting a collective commitment to positively impacting society. Volunteers and medical professionals worked tirelessly to ensure the smooth operation of the camp, adhering to all necessary safety and hygiene protocols.

### **Computer Science Research Colloquium**

School of Computer Science and Engineering hosted a Computer Science Research Colloquium on May 9, 2024. During the event, research scholars and postgraduate students showcased their work through a poster presentation, with seventeen posters displayed. A panel of external subject experts assessed these presentations. The top three best posters were awarded cash prizes to Parvathy Pavithran, Anjana Jimmington, and Judy K George; all participants received certificates.

### **Thrilling Sports Festival at Digital University Kerala Champions Crowned Across Multiple Disciplines**

The Kerala University of Digital Sciences, Innovation, and Technology (Digital University Kerala) recently hosted a vibrant sports festival, bringing together students for a thrilling showcase of athletic talent and team spirit. The event featured competitions in table tennis, cricket, football, and badminton, with the badminton matches taking place at the Technopark Phase 1 Badminton Court. Ms. Thushara (Physical Education Consultant) served as the sports instructor for all programs, ensuring the smooth conduct of events. Sports Secretary Abhiram S. coordinated the festival with other members, demonstrating exemplary organizational skills. Additionally, Dr. Sishu Shankar Mani, Asst. Professor of Data Analytics, joined the festivities and inaugurated the badminton session. The event was a testament to the thriving sports culture at Digital University Kerala, fostering teamwork, dedication, and excellence among its students. The university community eagerly anticipates the next edition of the sports festival, aiming to build on the success of this year's Event.

## **JUNE 2024**

### **Developer Workshop and Meetup Report: aelf Blockchain and Kerala Blockchain Academy**

On June 15th, aelf Blockchain, in collaboration with Kerala Blockchain Academy, organised a Developer Workshop and Meetup at Park Centre, Technopark. The event brought together blockchain enthusiasts, developers, and industry professionals to explore and gain hands-on experience developing smart contracts on the aelf blockchain platform. The workshop commenced with a welcome speech by Mr. Mohit Vashista, the Research Lead at aelf Blockchain. aelf Blockchain's vision, its unique features, and its potential impact on various sectors were discussed and monitored. The workshop detailed the importance of innovation in blockchain technology and how aelf's scalable and flexible architecture stands out in the competitive landscape.

Participants were introduced to the aelf Software Development Kit (SDK) and its components as Mr. Vashista explained the architecture of the aelf blockchain and how the SDK facilitates smart contract development. The Hands-On coding engaged participants in writing, testing, and deploying smart contracts. This practical session enabled participants to get a real feel of developing on the aelf platform. The workshop saw enthusiastic participation from both developers and blockchain enthusiasts. The meetup also served as a platform for networking and collaboration. Attendees had the opportunity to interact with representatives from aelf Blockchain and Kerala Blockchain Academy.

### **Cisco thingQbator Cohort 7 Launch**

On 13th June 2024, the Cisco thingQbator Cohort 7 launch event was organized by the Institution's Innovation Council (IIC) and the Innovation Club DUK. This year's Cohort was launched in the presence of Prof. Asharaf S, Dean Academics, DUK, Mr. Albert Dylan, Innovations Manager at Nasscom Foundation, Mr. Sarath.SM, Innovation Officer, DUK, and the students of Digital University Kerala. The event provided invaluable insights into transforming innovative ideas into successful business ventures with the support of Cisco's thingQbator program.

### **Cybersecurity Awareness Workshop Inspires Students at St. Mary's Higher Secondary School**

As part of the Digital Transformation initiative of DUK, KSAAC organized a one-day cybersecurity awareness workshop at St. Mary's Higher Secondary School, Pattom, Thiruvananthapuram on June 22, 2024. The workshop covered various aspects of cybersecurity and highlighted the latest trends in the field. Students received guidance on navigating the internet safely and safeguarding their personal data. Mr. Rasic A, a member of the KSAAC team, conducted the full-day session, providing valuable insights and practical tips. The workshop was successfully organized with the support of the school's NSS Volunteers, whose efforts were instrumental in making the event possible.

The interactive nature of the workshop allowed students to ask questions and seek clarifications on various cybersecurity topics. They appreciated the practical tips provided, which they could apply in their daily digital activities. The event was well-received, fostering a greater awareness among the students about the importance of cybersecurity in today's digital age. Around 150 students actively participated in the workshop, engaging enthusiastically with the session content.

### **World Environment Day**

On June 5th, Digital University Kerala, Trivandrum celebrated World Environment Day with great enthusiasm. Coordinated by the School of Informatics and the Ecological Department, the day was marked by a collective effort towards environmental stewardship. Students from the MSc Ecology took the lead by organizing a tree planting initiative, symbolizing our commitment to sustainability and biodiversity conservation on campus.

In conjunction with this event, Vice-Chancellor inaugurated a beautiful Butterfly Garden Park, a testament to our dedication to creating green spaces that support local ecosystems. This initiative not only enhances the natural beauty of our campus but also provides a habitat for local butterfly species, fostering biodiversity awareness among our community. Together, these efforts reflect our university's ongoing commitment to environmental responsibility and sustainability.

### **International Day of Yoga**

International Yoga Day is observed every year on June 21 to raise awareness about this ancient practice and to celebrate the physical and spiritual prowess that yoga has brought to the world. The objective of this year's celebration, themed "Yoga for Self and Society," focuses on aspects of self-learning and self-awareness. We celebrated the 10th International Day of Yoga on June 21, 2024, at DUK. The event was attended by professors, students, and office staff from our university with great enthusiasm. It began with a brief introduction to yoga by Md Meraj Uddin, Assistant Professor DUK, and Mrs. Thusharakala E.S, Physical Education Consultant DUK. They welcomed the guest of honour, yoga coach Syam Mohan.

Warm-up exercises were conducted, and all participants practiced and performed sitting, standing, and laying asanas, along with pranayama. The instructor emphasized the importance of incorporating yoga into daily life and maintaining harmony between the body and mind. The session lasted for over an hour, with active participation and engagement from all attendees. The yoga instructor provided detailed explanations of each pose and offered guidance on necessary precautions. The celebration concluded with a vote of thanks by Md Meraj Uddin. He encouraged everyone to practice yoga regularly to stay fit and improve their health. The International Day of Yoga celebration ended with great success under the supervision of the Head of Physical Education, Mrs. Thusharakala E.S.

### **Five M.Sc. Programmes of DUK - Recognized by the Institute of Analytics, UK**

Five M.Sc. Programmes of DUK are now recognized by the Institute of Analytics, UK, a professional body for Analytics & Data Science professionals in UK and International. The programmes recognized are

1. M.Sc. in Computer Science with Specialization in Data Analytics
2. M.Sc. in Data Analytics and Geoinformatics
3. M.Sc. in Data Analytics and BioAI
4. M.Sc. in Data Analytics and Computational Science
5. MSc in Computer Science with specialization in Machine Intelligence

With this recognition, the students and faculties will have access to a larger data science ecosystem which may help them in understanding the academic, research, and industrial innovations in the data science area. DUK is planning to get accreditation and recognition from Institute of Analytics, for more programmes in the coming months, which may include MBA and M.Tech.

### **Film Club Event - Le Filmia**

Digital University Kerala's film club hosted "Le Filmia" on May 16th, venue-Gallery Hall, featuring esteemed guests Vidhu Vincent, Director, Winner of the Kerala State Best Film Award- for 'Manhole', and DUK alumnus Akshay, a writer and co-director Film Club Event Le Filmia. The event was graced by DUK Registrar Dr. A. Mujeeb and other faculty members, drawing a large crowd of film enthusiasts among the student body. Abin Mohammad Nizam, the film club secretary, delivered the welcome address, while Arsha skilfully anchored the proceedings. Registrar Dr. A Mujeeb presented a token of appreciation to Vidhu Vincent, who in turn honoured Akshay.

The event concluded with a musical segment, showcasing the vocal talents of Aromal, Safna S, and Aiswarya, who delivered engaging performances. The highlight of "Le Filmia" was the screening of the award-winning short film "Manhole," which shed light on the struggles of marginalised communities. Following the screening, Vidhu Vincent shared her experiences making the film and expressed her desire to inspire youth to advocate for the voiceless. She also discussed the inspiring story of Genrobotics.

Akshay, a successful DUK alumnus, shared insights from his journey in the film industry and reminisced about his time at the university. Umesh Ommanakuttan contributed with an engaging talk on human behaviour. The event concluded with a prize distribution for the Tak Tak competition. The competition was to replicate movie

scenes and a lot of students presented their fantastic creations and the judgement was made by Vidhu Vincent herself. The prize offered was movie ticket vouchers.

The event was then followed by a vote of thanks from MS Krishna and a photo session with the guests. The mentorship provided by Ms. Thushara and Md. Meraj Uddin proved invaluable to the triumph of the occasion. The film club's successful event was the result of outstanding teamwork among its members. The collaborative efforts of Arsha, Akshay Sasi, Sneha Suresh, Abin Mohammed, Rahulraj, Sudhi S, Md. Hashim, Sohan, Vedaprasad, Albin, and M S Krishna, Sai Shankar, Vishal were instrumental in organising this well-executed occasion.

### **Toastmasters Demo Meeting at Digital University Kerala**

The Digital University Kerala (DUK) Toastmasters Club hosted on June 29th, 2024 (3 PM to 4:30 PM) at DUK, a demo meeting to introduce students to the Toastmasters International organization and its benefits. The event highlighted the importance of communication and leadership skills in personal and professional growth. The demo meeting showcased various elements of a typical Toastmasters club meeting, providing attendees with a comprehensive overview of the program. With the Topic "How to beat procrastination" Participating in the Toastmasters program offers numerous benefits for students. Enhanced public speaking skills and confidence to speak effectively in any situation. Improved critical thinking and analytical abilities, Development of strong leadership qualities, Better listening and communication skills, and Valuable networking opportunities with professionals from various fields, it also offers a welcoming and supportive environment for personal and professional growth. The demo meeting at DUK was a resounding success, providing students with a glimpse into the dynamic and supportive environment of a Toastmasters club.

### **Support of Reflections Info Systems in Book Donation Drive for Bhaskar Nagar, Athiyannoor**

A library and Citizen Service Centre were established in Bhaskar Nagar, Athiyannoor Panchayat, Thiruvananthapuram, during the NSS (National Service Scheme) camp held in December 2023. The library caters to the needs of students and community members of Bhaskar Nagar.

Books for the library were collected through a donation drive on the Technopark campus. The CSR team of Reflections Info Systems Pvt. Ltd., Technopark, significantly contributed to this effort by conducting a book collection drive within the company and donating books to the library.

### **Sneharamam-Vegetable Gardening Program**

As part of the Sneharamam project by the DUK National Service Scheme (NSS) unit, a vegetable garden was set up on June 5th, World Environment Day. The initiative took place on unused land within the DUK campus to promote environmental awareness and sustainability. Hon'ble Vice Chancellor Prof. Saji Gopinath inaugurated the event. Prof. Mujeeb A, Registrar, other staff members, faculty members, and student volunteers actively planted vegetable saplings and set up the garden. By utilizing the campus space effectively, the program demonstrated the commitment of NSS volunteers in fostering a greener and more eco-friendly campus environment.

### **Farewell Celebration: Honouring SEC Senior Students**

On June 19, 2024, a heartfelt farewell ceremony was held to honour the senior batch student leaders who were the pillars of the Social Engagement Centre (SEC) family. Their journey has been marked by dedication, hard work, and cherished memories. The ceremony celebrated the achievements and contributions of Jeffin Joy, Sreya K Raj, Abhijith S, Anjana P Rajesh, Nived M, Vivek B Krishna, Ayana G Nair, Rafeek R, and Reshma A S. Each senior received a memento in recognition of their time at SEC, presented by Pradeep Kumar K (Faculty Coordinator-SEC), Niyas M (Assistant-Academics, NSS Unit), and Fousiya CK (Project Associate-SEC). NEWSLETTER JUNE 2024 14 Sai Shankar G Nair, SEC Core Member, meticulously coordinated the farewell program, ensuring that every moment was special and memorable for our seniors. Each senior took the stage to share their experiences, stories, and SEC's impact on their life and thought process, inspiring everyone present. Prof Pradeep Kumar praised the SEC leadership team's commitment and volunteerism and highlighted how the experience gained at SEC would help students in the future. The session concluded with shared laughter and the creation of new memories. Participants extended their best wishes to the seniors for their future endeavours, expressing hope that they would carry the spirit of SEC wherever they go. The message was clear the seniors will always remain a cherished part of the SEC family.

### **Farewell to Sports Instructor, Thushara Kala E.S.**

The Sports Club recently organized a heartfelt farewell for our esteemed Sports Instructor, Thushara Kala E.S. The event was a moment for all as we gathered to celebrate and express our gratitude for her dedicated service and invaluable contributions to our university. The farewell began with an inspiring speech that highlighted Thushara Kala E.S.'s journey, her achievements, and the positive impact she had on our sports community. Her words of wisdom and encouragement resonated deeply with everyone present, leaving us motivated and uplifted. As a token

of appreciation, Sports secretary Abhiram S handovered her a memento, a gesture to commemorate her invaluable service and dedication. This was followed by the ceremonial passing of the torch to the Vidya S Nair New Sports Instructor, signifying the continuation of the legacy and the spirit of sportsmanship at Digital University Kerala.

The farewell event was a perfect blend of emotions, reflections, and aspirations, marking a new chapter for both ThusharaKala and the university's sports community. The event concluded with a joyful cake-cutting session, symbolizing our best wishes for her future endeavors. It was a memorable occasion that reflected the deep respect and admiration we hold for Thushara Kala E.S. We wish her all the best in her future pursuits and will always remember her with fondness and gratitude.

### **Prize Distribution Ceremony for Sports Winners**

The Sports Club hosted a vibrant Prize Distribution Ceremony to honor the outstanding athletes who excelled in the games held last month. Also distributed certificates for the participants of the Inter-university Football team and Chess team. The ceremony recognized the achievements of athletes across various disciplines, with winners receiving medals, trophies, and certificates. It was a proud moment for all participants as they were applauded for their exceptional performances and perseverance. The event was graced by the Registrar and other faculties who presented the awards and shared words of encouragement with the winners. Their presence added to the significance of the occasion, inspiring our athletes to continue striving for excellence. The Prize Distribution Ceremony not only celebrated individual achievements but also highlighted the spirit of teamwork and camaraderie that defines our sports culture. It was a fitting prelude to the farewell of Thushara Kala E.S., underscoring the strong foundation she helped build within sports community.

### **CDIPD Released New Digital Innovative Solution - Loka Keralam Online – Digital Platform for Global NRK**

The Honourable Chief Minister of Kerala, Sri. Pinarayi Vijayan, officially inaugurated the Loka Keralam Online - the global NRK digital platform during the 4th Loka Kerala Sabha held on 15th June 2024 at Thiruvananthapuram in the presence of Hon. Ministers, Hon. Speakers, MLAs, Senior Officials from Government and members of the LokaKerala Sabha. This significant launch marks a pivotal step in the state's digital outreach to Malayalis worldwide, aiming to bridge geographical gaps and foster a sense of community among Kerala's global diaspora. This innovative digital platform is conceptualized, developed and implemented by the Centre for Digital Innovations and Product Development (CDIPD) – A Centre of Excellence under Digital University Kerala.

The function was attended by Dr. Saji Gopinath, Hon. Vice Chancellor, Dr. Ajith Kumar, Director, CDIPD and team members. This innovative initiative seeks to create a global connector for NRK Keralites, transforming how they interact and support each other globally. Loka Keralam Online is designed to be a comprehensive digital hub, connecting the global Malayali community. The platform offers a variety of features tailored to facilitate interaction and information exchange among Malayalis worldwide.

Key features include:

Community Engagement - Spaces for sharing information, ideas, and active participation.

Professional Networking - Tools for developing networks and exploring business and career opportunities.

Cultural Exchanges - Platforms for cultural participation and preservation to maintain and celebrate Malayali heritage.

Educational Resources - Support for educational advancement and growth.

Real-Time NRK Repository - Enhances communication and collaboration between Non-Resident Keralites (NRKs) and Resident Keralites, fostering a stronger sense of community and belonging.

LokaKeralam Online emerges as a powerhouse of opportunities for the worldwide Malayali community, aiming to become the central hub for Malayalis across the globe. At its core, the platform offers a rich array of resources designed to foster growth and connection, including tools and resources supporting educational growth, opportunities and networks for professional career and job opportunities. The portal integrates rich cultural content highlighting Kerala's heritage and culture, developed by the Centre for Digital Transformation in Culture under DUK with easy and personalised navigation. This innovative platform stands as a testament to the power of digital connectivity in preserving culture and fostering community in an increasingly globalized world. By strengthening ties between the global diaspora and Kerala, LokaKeralam Online enriches lives and reinforces community bonds.

LokaKeralam Online Platform is a digital home for Malayalis everywhere. It offers a space to celebrate traditions, share experiences, and build a supportive global network. By bridging geographical gaps, the platform ensures that no matter where life takes them, Malayalis always have a digital home to return to. Through this initiative, Kerala reaches out to its global family, ensuring that the sense of belonging

and cultural heritage is preserved and celebrated, fostering a vibrant and connected Malayali community worldwide.

## **JULY 2024**

### **International GenAI Conclave**

The 2 days International GenAI Conclave held on 11th and 12th July 2024, at Grand Hyatt, Bolgatty Island, Kochi was organized by the Government of Kerala and IBM supported by the Departments of Industries & Commerce, and Electronics & IT, Digital University Kerala, CUSAT and the Kerala Technological University. The conclave was intended to establish a platform for business decisions, learning, networking and partnerships, benefiting various enterprises including technology-based startups and MSMEs. IBM leadership, industry thought leaders and Indian tech business leaders shared their insights and future vision for AI, during the event. The conclave featured a mix of keynote addresses, panel discussions and interactive sessions by various experts. Various participants included staff from DUK also.

The panel discussions on ‘Kerala’s GenAI: Fostering a Supportive Ecosystem’ and ‘Generative AI Represents a New Frontier for Women in Technology’ held on 12th July 2024, the second day of the conclave were truly commendable. A session on importance of GenAI in pushing new frontiers in technology saw women experts share how mastering new technology was a meaningful way to break free from isolation. Federal Bank Executive Director Ms. Shalini Warriar, Prof. Dr. Elizabeth Sherly of Digital University Kerala, and IBM Managing Partner & Client Innovation Center Leader Ms. Usha Srikanth participated in the discussions. Prof. Dr. Elizabeth Sherly said GenAI was rapidly influencing the country’s education system. Women need better technical facilities, financial support and expert advice to rise in the field. All systems like higher education institutions, digital universities and start-ups give more importance to women is what she said. ‘Embrace new technologies for a safer and comfortable life’ was the message to women at the session of the two-day International Conclave on GenAI.

### **CDTI Leads the Way in Public Health Innovation at GenAI Conclave**

On July 10th and 11th, the Centre for Digital Transformation and Innovation (CDTI) proudly took part in a major event organized by IBM Kochi and the Government of Kerala. The event focused on how Generative AI (GenAI) can be used in different fields. Umasankar and Vimal D Kumar presented a use case on how GenAI can be used to improve public health. They introduced a new system designed to help prepare for pandemics. This system uses real-time data from the field to predict the chances of

pandemics, helping to manage public health better. The system includes an easy-to-use form for collecting health data from the field and a chatbot that makes it simple to interact with the data. It can also generate guidelines and press releases based on the information reported, all powered by GenAI. This work not only demonstrates the potential of GenAI but also helps protect public health on a larger scale.

### **Empowering Entrepreneurs: Workshop on Start-up Ecosystem Support Services**

Digital University Kerala recently hosted a two-day workshop on July 25-26, 2024, titled "Awareness about Start-up and Related Ecosystem Support Services for Start-up Development," organized by the Institution Innovation Council (IIC) in collaboration with Women Incubation, Start-ups, and Entrepreneurship (WISE). The workshop aimed to equip aspiring entrepreneurs, students, and faculty with valuable insights into the start-up ecosystem. Inaugurated by Mr. Santhosh Kurup, Professor of Practice in the School of Digital Humanities and Liberal Arts, the event featured a comprehensive agenda. Day 1 focused on the Business Model Canvas (BMC), led by Dr. Arun J S, a faculty member at Mar Baselios College of Engineering and Technology and founder of Slate N Pencil, who guided participants in designing and refining their business models. Day 2 included two sessions: the first, led by Prof Dr. Sherin Sam Jose, Faculty and Chief Executive Officer of Start-ups Valley Amal Jyothi TBI, explored opportunities in accelerators and incubation for early-stage entrepreneurs, while the second session, conducted by Prof. Pradeep Raj, Principal (I/C) at Mohandas College of Engineering and Technology and founder of White Paper Academy, focused on Lean Start-up methodologies and the essentials of creating a Minimum Viable Product (MVP). The workshop successfully fostered a collaborative learning environment, empowering participants to navigate the complexities of the start-up ecosystem and encouraging innovation and entrepreneurship within the university community.

### **IGU: Indigenously Produced First Electronic Hardware Product from DUK**

The integrated gaming unit (IGU) is the first electronic hardware product to be indigenously developed and successfully commercialized from the Digital University. This is developed at the thingQbator facility by a team of students, Mr. Aditya Vishnu and Mr. Alfas Hakeem who is led by Mr. Sarath. SM, Innovation Officer and Mr. Lal Prakash, Senior Software Developer of DUK. The IGU is a Digital Solution to assess the performance of students undergoing training on various sports and games. As a pilot project, this is deployed successfully in 30 schools across the state. The project is mentored by Prof. Asharaf S, Dean Academic and Prof. Manoj Kumar T K , Dean Research of Digital University.

### **Emergex Xinnovate 2024 Hackathon**

Kerala Blockchain Academy in association with Emergex conducted a 2 day hackathon named “Xinnovate Kerala 2024” focusing on pioneering Web3 Technology on 13th & 14th July 2024 at IIITM-K Building, Technopark Phase 1. The hackathon aimed to foster innovation and development within the Web3 ecosystem in Kerala. Participants were encouraged to create projects with the potential for growth and expansion. 10+ innovative dApps were developed, participants enjoyed amazing sessions & had fantastic networking opportunities. Out of the 15+ teams participated, team Bricstoken won the 1st place, Team Grimore: WizardWars from Kerala Blockchain Academy won the 2nd place.

### **Transitioning from Web2 to Web3 with Algorand Blockchain**

On July 6th, 2024, Kerala Blockchain Academy hosted an enlightening event in collaboration with Algorand Foundation India. The event titled "Transitioning from Web2 to Web3 with Algorand Blockchain" was held at Park Centre, Technopark. The one-day event served as a platform for individuals looking to transition from the traditional Web2 space to the innovative Web3 environment. With a diverse group of 80 participants, including students, entrepreneurs, and professionals, the event provided a comprehensive understanding of the potential and practical applications of web3 and blockchain technology in specific. The blend of theoretical insights and practical workshop, successfully equipped participants with the knowledge and skills needed to navigate the evolving landscape of Web3. Opening Session: A Vision for the Future with Web3 The event commenced with a non-technical session led by Prof. Nikhil Varma, PhD, Technical Lead (India) at Algorand Foundation. Prof. Varma's session was designed to be accessible to beginners, demystifying the complex world of Web3. He highlighted how Web3 has the potential to revolutionize industry operations by introducing decentralized and transparent processes. Emphasizing sustainability, Prof. Varma discussed how blockchain technology could lead to the development of sustainable infrastructure, reducing reliance on centralized systems and fostering more resilient and eco-friendly solutions. Prof. Nikhil Varma's visionary session set the stage for a deeper understanding of the transformative potential of Web3.

Following was the hands-on workshop led by Ms. Meet Thoshar and Mr. Mohammed Mudassir. The post-noon session was designed to be interactive and hands-on, allowing participants to apply the concepts they had learned in the morning. This session was spearheaded by Ms. Meet Thoshar, AlgoBharat Regional Ambassador, and

Mr. Mohammed Mudassir, Support Engineer at Algorand Foundation. The practical exercise aimed to solve a real-world challenge using blockchain technology, providing participants with a tangible understanding of how to implement blockchain solutions. Ms. Thoshar and Mr. Mudassir guided the participants through a series of brainstorming activities, encouraging them to think creatively and collaboratively. They provided insights into the technical aspects of blockchain, including smart contracts, decentralized applications (dApps), and consensus mechanisms. Participants were divided into groups and tasked with developing a blockchain-based solution to a specific problem, such as improving supply chain transparency or creating a decentralized voting system. As the world continues to transition towards a more decentralized and transparent digital infrastructure, events like these play a crucial role in fostering a community of informed and empowered individuals ready to drive the next wave of technological advancements.

### **Field Exposure Visit of MSc Ecology Students**

#### **MSc Ecology students engage with Nature, unraveling the biodiversity secrets of Agasthyamalai**

The MSc Ecology students from the School of Informatics (SoI) recently embarked on a transformative field visit to the Ashoka Trust for Research in Ecology and the Environment (ATREE) Agasthyamalai Community-based Conservation Centre (ACCC) at Manimutharu, from July 21st to 27th, 2024. This immersive experience allowed them to explore Tamil Nadu's vibrant ecosystems and engage deeply with its biodiversity. Guided by Mathivanan M, Coordinator of ACCC, and Sharada Ramadass, Techno-ecologist, the students delved into various aspects of conservation with the support of an expert team including Saravanan A, Thalavaipandi S, Thamizhazhagan S, Thanigaivel, Peter Christopher, and Selvam. Their expertise greatly enhanced the students' field experience. The visit showcased five innovative project teams, each uncovering unique facets of conservation. Team 1, comprising Amithu and Maalavika, focused on the native plants of Nandavanams, identifying thriving species and advocating for increased community engagement in their conservation. Team 2, with Adith and Mridhul, examined birds and butterflies in temple gardens, highlighting the critical role of local communities in preserving these delicate species. Riya and Aswany from Team 3 explored the world of bats across 14 temples, documenting population declines linked to renovations and lighting changes. Pranathi and Sangamesh from Team 4 concentrated on bird biodiversity, identifying native trees as essential nesting sites and calling for their protection. Sai Shankar and Sanjana of Team 5 conducted nocturnal surveys in Ambasamudram, gathering valuable data on moths, reptiles, and amphibians to support future conservation initiatives. This enriching field visit not only

expanded the student's practical knowledge but also provided crucial insights into the conservation needs of diverse ecosystems in Agasthyamalai, Tamil Nadu. The outcomes of their work are poised to significantly contribute to ongoing conservation efforts in the region.

### **Digital University Kerala Shines at the Yug Yugeen Bharath Museum Conclave**

Kerala University of Digital Sciences, Innovation, and Technology was prominently represented by Dr. Gopakumar V and Dr. Malu G at the "Yug Yugeen Bharath Museum Conclave" held from August 1st to 3rd, 2024, at Bharat Mandapam, New Delhi, organized by the Ministry of Culture, Government of India. The conclave was inaugurated by the Hon'ble Minister of Culture and Tourism Shri. Gajendra Singh Shekhawat in the presence of Secretary Culture Shri. Govind Mohan IAS. The conclave brought together representatives from state museums, government officials, curators, and museum professionals across India. Dr. Malu G's presentation titled "Kerala's Living Heritage: A Digital Journey," developed by the Centre for Digital Transformation in Culture (CDTC), was met with widespread acclaim, earning her the Best Presentation Award at the event. This recognition underscores the pioneering work in integrating digital technologies with cultural preservation. The event also provided an excellent platform for Kerala University representatives to engage with key dignitaries, including Smt. Mugdha Sinha IAS, Joint Secretary, Ministry of Culture, GoI and Dr. Davendra Kumar Dhodawat, IAS, Additional Chief Secretary to the Governor of Kerala, Prof. A. Damodaran from IIM Bangalore, and several representatives from the Museums and Archives departments. These interactions opened doors for potential collaborations, emphasizing the adoption of digital solutions in museums nationwide. The participation of Digital University Kerala in this prestigious conclave highlighted the institution's commitment to digital innovation and set the stage for future projects that could significantly impact cultural preservation efforts across the country.

### **Five-Day Faculty Development Program**

Five-day Faculty development program on Lab to Life: Advanced Materials to Wearable Sensor Technology July 22nd-26th, 2024, organized by the School of Electronic Systems and Automation (SoESA), Digital University Kerala (DUK).

### **Special Collection Exhibition by The Hindu**

The Hindu has exhibited their special publication collections in the Learning Space near the Knowledge Centre on the 2nd floor on 11th July 2024.

### **PGDCS under PM Ajay Scheme celebrated Arts and Sports Events @ DUK Phase 1 Campus**

On July 10, 2024, the first batch of the Post Graduate Diploma in Cyber Security (PGDCS) program under the PM AJay Scheme organized an Arts and Sports Day. The event aimed to promote camaraderie, creativity, and physical fitness among students. The students showcased their creative talents, with some performing solo acts while others participated in group events. The arts competitions allowed students to express their creativity and share their cultural heritage. The day began with a series of sports competitions, including badminton, carrom and chess. Students actively participated, demonstrating teamwork, determination, and sportsmanship. The friendly matches brought an energetic atmosphere, with everyone cheering for their peers.

### **AUGUST 2024**

### **Kerala Governor Arif Mohammed Khan addresses the 2nd Convocation Digital University of Kerala**

Kerala Governor Arif Mohammed Khan presents degree to a student during the 2nd Convocation of Kerala University of Digital Sciences, Innovation, and Technology in Thiruvananthapuram on Thursday August 29, 2024.

### **DUK Induction Program**

The university's Induction Program successfully welcomed new students through a variety of engaging activities. Held at the Sports Mess Hall, the event allowed students to join either the Sports or Film Club. Sports activities included challenges like Penalty Shootout and Table Tennis, with small gifts for participants. The Film Club featured student-voted films such as Good Will Hunting and Piku. The program provided an enjoyable platform for students to interact and showcase their talents, fostering a sense of community.

### **Wellness Dance**

On August 8, 2023, the university organized a dance-themed Induction Program from 4:30 pm to 5:30 pm at the Mess Hall. The objective was to offer new students a platform to showcase their dancing talents and encourage peer interaction. The event included dance training led by senior students, followed by an active dance session. With enthusiastic participation and a fun atmosphere, the program successfully fostered teamwork, bonding, and skill **Freshers Day**

## **Hola Amigos - A Thrilling Freshers' Day Bash at Digital University Kerala**

On August 18, 2024, Kabani Hall was buzzing with excitement as Digital University Kerala hosted its much-anticipated Freshers' Day celebration, "Hola Amigos ". The festivities kicked off at 10 AM with a warm and spirited welcome speech by Joel and Ansu, setting the perfect tone for the day's vibrant events.

The celebration began with the official address from the student council, marking the start of a day filled with spectacular performances and joyous moments. The stage was set ablaze with incredible dance routines and melodious songs from both seniors and juniors, showcasing a wealth of talent and enthusiasm.

Adding a fun twist to the day, Afsal and Thejas hosted several interactive game sessions that had everyone participating, laughing, and competing with full enthusiasm. A standout moment of the event was the ramp walk by some of the juniors, who displayed their confidence and flair, much to the delight of the audience.

The excitement reached its peak with the selection of Mr. Fresher - Navaras and Mrs. Fresher - Priyangshri, celebrating the charisma and charm of the newest members of the university.

As the day turned into evening, the celebration continued with a high-energy DJ party by DJ Maxx, who kept the beats rolling and the crowd dancing until 9 PM. The hall was filled with vibrant lights, booming music, and endless smiles, wrapping up the day on an electrifying high note.

"Hola Amigos" was not just a Freshers' Day celebration, it was an unforgettable fusion of talent, fun, and the infectious spirit of Digital University Kerala development among students.

## **Independence Day celebration**

The Independence Day celebration at DUK Campus took place on August 15, 2024, from 8:15 am to 9:00 am. The event began with the national flag hoisting, the national anthem, and a parade by the security staff. A silent prayer was held for the Wayanad landslide victims, followed by the national pledge.

Vice Chancellor Mr. Saji Gopinath and Registrar Mr. A. Mujeeb addressed the gathering, emphasizing the importance of Independence Day. Ansu Rose delivered an inspiring speech, and Anna and her team performed a patriotic song. The event concluded with a vote of thanks and the distribution of sweets.

The program was a success, instilling a strong sense of patriotism and pride among attendees.

### **78th Independence Day Celebrated with "AZADI QUIZ" by First-Year MBA Students**

As part of the 78th Independence Day celebrations, the first-year MBA students of the School of Digital Humanities and Liberal Arts organized the "AZADI QUIZ," a special event focusing on India's rich Independence history. The quiz took place on August 15, 2024, in Gallery Hall (Room No. 045), commencing at 10:45 AM.

The event was officially inaugurated with a blessing and motivational words by Prof. Meraj Uddin (Chairman, Student Affairs), and Mr. Sohan (General Secretary, Student Council) setting a positive tone for the 40 students from various departments who participated. Each team consisted of two students, and the quiz was structured into three challenging levels.

The first level featured 10 common questions for all teams, with six teams advancing to the subsequent rounds based on their scores. The second and third levels, particularly the rapid-fire round, heightened the competition, testing participants' speed and knowledge. The quiz concluded at 11:30 AM, with the announcement of winners who were awarded prizes and certificates by Prof. Meraj Uddin and Mr. Sohan.

The first prize was claimed by Aparna S (MSc CSDA) and Malavika Pradeep (MTech CS), the second prize by Ansu Joseph (MSc CS Cyber Security) and Swathi Lakshmi M O (MSc Applied Physics), and the third prize went to Jaidev S Ram and Albin Varun, both from MSc DACS. The event concluded with a photo session and refreshments for all participants.

The successful organization of the quiz was credited to the dedicated hosting team (Students of first year MBA): Quiz Master - Ajsal, guiding participants through the competition; Coordinators - Neha Krishna V G, Sneha Santhosh, Abhin A, and Harikrishnan R, with Vaishakh S and Akhil S handling media team. Volunteers including Vivek C V, Thejas K Rajiv, Aswin S S, Aswin S A, Salu J B, Anagha A N, Sejal P Santhosh, Nayana Manoj, Agnidev, Shamnad A, Arjun Binu, and Joseph Soney ensured the smooth conduct of the event.

### **AlgoBharat's #Road2Impact 2024 Trivandrum Idea Pitching Competition**

The AlgoBharat #Road2Impact 2024 Trivandrum Idea Pitching Competition, held on August 10, 2024, at Park Centre, Technopark, was a significant event that brought together blockchain enthusiasts, developers, and startups. Organised by AlgoBharat

(an initiative of Algorand Foundation India) in collaboration with Kerala Blockchain Academy, the event served as a precursor to the Algorand India Summit scheduled for December 2024. It was designed to engage the local web3 community, offering opportunities to learn, network, and innovate within the blockchain space.

The primary purpose of the #Road2Impact event was to create a platform for web3 enthusiasts and developers to explore the potential of blockchain technology in building sustainable solutions. The event aimed to prepare participants for the upcoming Algorand India Summit by fostering collaboration and providing mentorship on blockchain development and entrepreneurship. The event was integral to a larger initiative to promote blockchain adoption in India, empowering individuals and startups to contribute to the web3 ecosystem.

The event saw enthusiastic participation from the student, developer and startup community, with 150 registrations, reflecting the growing interest in blockchain technology in Trivandrum and the surrounding region. The workshops and mentorship sessions highlighted the importance of continuous learning and adaptation in the rapidly evolving blockchain space. Participants gained valuable insights into the practical applications of blockchain for a sustainable future. The ideas presented during the pitch competition demonstrated the innovative potential of blockchain technology. Participants showcased various ideas to address social, environmental, and economic challenges.

### **Simulating Success: The Ultimate HR Experience**

The Training and Placement Cell at DUK successfully organized an HR simulation exercise as a part of the induction program on August 7th, 2024, this innovative activity aimed to provide students with a realistic experience of the preparation and effort required to face job interviews with confidence.

### **A Session on Empowering Success and unleashing your potential on 14th August 2024 for First Year students**

On August 14th, 2024, the Training and Placement Cell at DUK organized a dynamic session titled Empowering Success and Unleashing Your Potential for first-year students.

The session was led by Mr. Praveen Parameswar, Chief Executive Officer at Lifology.com, who brought his wealth of experience and insights to inspire and guide the students. The session, which took place from 9:30 AM to 12:30 PM in Gallery Hall 45, was also live-streamed to Gallery Hall 44 to accommodate more participants.

Prior to the commencement of the session, Dr. Sini V Pillai, Chair of Placements, addressed the students, providing an overview of the Training and Placement Cell's activities and emphasizing the resources available to support their career development.

### **A session on “Resume Writing: A Step-by-Step Guide” for Second-Year Students**

A focused session on Resume Writing: Step by Step Guide was conducted by Ms. Panchami, Placement Officer, for second-year students at DUK on August 14th, 2024, from 2:00 PM to 4:00 PM. The session took place in Gallery Hall 45 and was simultaneously live-streamed to Gallery Hall 44 to accommodate additional participants.

This session was meticulously designed to provide students with practical insights and a clear, structured approach to crafting a professional resume. Ms. Panchami guided the students through each step, emphasizing key elements that can make their resumes stand out to potential employers.

This essential training is part of the ongoing efforts by the Training and Placement Cell to prepare students for successful careers by equipping them with the necessary skills and knowledge.

### **Campus Recruitment Drive by Hyreo**

Hyreo, a leader in AI-driven recruitment solutions, conducted a placement drive at our campus for the 2024 passout students on August 30th, 2024. Renowned for its innovative technology that streamlines and enhances the hiring process globally, Hyreo offered opportunities for the position of Site Reliability Engineer. This placement drive highlighted Hyreo's commitment to leveraging cutting-edge technology in recruitment, providing our students with the chance to join a company at the forefront of the recruitment tech industry.

### **Campus Recruitment Drive by Workz Group, Dubai**

On August 31st, 2024, Workz Group, a leading provider of IoT and mobile solutions, conducted a campus recruitment drive for the 2024 passout students. As an Irish-based company with R&D and production facilities in Europe and Dubai, and offices across the globe, Workz is at the forefront of driving the development of smart devices and applications at unprecedented speeds. Workz is one of only six certified eSIM providers in the world, offering fully secure, interoperable, and future-proof solutions. Trusted by some of the world's leading brands, the company securely connects over 1.6 billion devices each year. Their product offerings include IoT solutions, recharge

cards, SIM cards, eSIMs, Remote SIM provisioning, M2M SIMs, SIM packaging, and various value-added services. This recruitment drive presented our students with an exciting opportunity to join a global leader in the tech industry.

### **Allianz-DUK Best Digital Solution for Social Impact- Award Mentoring Session Kicks Off for Selected Teams**

On August 9, 2024, 17 promising teams were selected from an initial pool of 36 to begin their mentorship journey under the guidance of representatives from Allianz Technology. These teams, each working on innovative projects and prototypes still in their early stages, benefited greatly from the experience and insights shared by their mentors.

The mentoring session was structured to provide tailored support, with each team receiving guidance from one or two mentors. This setup allowed for focused advice on refining project ideas, overcoming initial challenges, and setting a clear path forward. The representatives from Allianz Technology shared valuable feedback on both technical and strategic aspects, ensuring that the teams are well-prepared for the next phases of their projects.

The afternoon session was marked by enthusiasm and collaboration, with students working seamlessly to ensure everything went according to plan. The success of this mentoring session highlights the strength of teamwork and the importance of expert guidance in driving innovation forward.

### **SEC Meetup with Juniors: Connecting and Collaborating**

The Social Engagement Centre (SEC) recently hosted a dynamic meetup for juniors, marking a day of lively interactions and collaborative activities. Organized by the senior core team of SEC, the event was a fantastic opportunity for juniors to connect, share ideas, and engage in meaningful discussions.

The meetup began with an icebreaker session, allowing juniors and seniors to interact and establish rapport. This was followed by a series of thought-provoking debates, where participants passionately argued various points, showcasing their analytical and communication skills.

In addition to debates, the day was filled with engaging games that brought out the competitive spirit in everyone. These games were designed to promote teamwork and problem-solving, making the experience both fun and educational. The event concluded with a collective discussion on key points raised during the debates,

allowing everyone to reflect on the fun and relatable topics and share their perspectives.

Overall, the SEC meetup with juniors was a resounding success, creating a welcoming environment where new members could feel included and inspired. The senior team's coordination ensured that the event ran smoothly, leaving participants eager for more such interactions in the future.

### **Social Engagement Centre- Induction program**

The Social Engagement Centre (SEC) recently held its much-anticipated induction meet, marking the first official gathering for the new students. This event served as an introduction to the various aspects of SEC and its subsidiaries, providing an overview of the opportunities and responsibilities that lie ahead.

Coordinated by Fousiya C K and headed by Dr Sreelekha, the induction meeting was a well-organized affair that set the tone for the new academic year. The new students were introduced to the different wings of SEC, including the Social Outreach Program, Environmental Initiatives, and the Digital Literacy Drive.

The highlight of the meet was the experience-sharing segment, where senior members Sai Shankar G Nair and Aswathy M recounted their journey with SEC. Their stories of personal growth, community engagement, and leadership development were both inspiring and encouraging for the newcomers.

The induction meeting was a significant first step in integrating the new batch into the SEC family, fostering a sense of belonging and motivating them to contribute actively to the Centre's initiatives.

### **Vegetable Garden Harvesting: A Green Initiative in Action**

The Social Engagement Centre (SEC) recently celebrated the first harvest from its vegetable garden near the college campus, marking a milestone in its green initiative. The garden features a variety of vegetables, including lady's finger, bottle gourd, and many more.

The project began several months ago as part of SEC's commitment to promoting sustainable practices and encouraging students to engage in eco-friendly activities. The garden not only serves as a source of fresh, organic produce but also as an educational platform where students learn about agriculture, environmental ideas, and the importance of locally sourced food.

This initiative has garnered positive feedback from both students and faculty, highlighting the importance of such projects in encouraging a connection with nature and promoting sustainability. The SEC plans to expand the garden in the coming months, adding more varieties of vegetables and herbs and involving more students in this green Work.

### **Two-day Workshop- DREAMS (Development of Rural Education and Mentoring Scheme)**

The DREAMS project recently wrapped up with a comprehensive two-day workshop held on August 25th and 26th. Throughout the course of the project, dedicated SEC volunteers provided invaluable guidance to the 24 fellows, overseeing the development and creation of their respective project models over a period of six months.

During the workshop, the fellows were divided into four groups, with each group focusing on distinct projects, including the Smart Medicine Box, Smart Waste Bin, Aquaponics, and Automatic Water Power System.

The journey over the six months proved to be transformative for the students, providing them with exposure to a wide array of technologies and invaluable information. This exposure ignited a deep curiosity within the students, fostering a passion for continued learning and exploration.

## **SEPTEMBER 2024**

### **AI Ethics Day at Digital University Kerala**

Digital University Kerala in association with Mozilla Responsible Computing Challenge India conducted AI Ethics Day at Digital University Kerala, on 07th September 2024. There were two parallel events - a talk on "Exploring AI Ethics" by Ms. Nidhi Sudhan (Co-Founder, Citizen Digital Foundation) and an Ideathon on AI Ethics for the students of Colleges and Universities. Mr. Jibu Elias (Country Lead for India, Responsible Computing Challenge, Mozilla Foundation) was the invited guest, Prof. Asharaf (Dean - Academics) delivered the welcome address, and Dr. Anoop V. S. (Principal Investigator, Mozilla Responsible Computing Challenge India Project at Digital University Kerala) presented the Vote of Thanks. 100+ Participants attended the talk session on "Exploring AI Ethics" and 15 student groups participated in the Ideathon competition on the topic "How to Make AI more Responsible and Inclusive for All". Cash prizes, certificates, and mementos were distributed to the winners of the Ideathon after they presented their idea in front of a panel of judges consisted of Dr.

Aswin V. S. (Assistant Professor, School of Digital Sciences) and Mr. Jibu Elias (Country Lead for India, Responsible Computing Challenge, Mozilla Foundation).

### **DUK InnoFest 2024**

The annual Innovation festival of DUK was celebrated on 11th September 2024 by organizing the Smart India Internal Hackathon. The event received an overwhelming response with 192 students participating in the 24-hour hackathon attempting to solve various problem statements. The best three ideas were also awarded a cash prize.

### **Design Thinking Workshop for Crafting Strategic Skills Sets for the Employees of KASE**

A 3-day workshop was held for the employees of KASE from September 19-21 at Uday Suites, Shangumugham to equip participants with the knowledge and skills necessary to design and implement effective skill development initiatives that address current and future industry needs, leveraging innovative methodologies, fostering strategic partnerships, and cultivating strong leadership.

### **Seminar on Industry Requirements by EY @ KSAAC**

On September 3, 2024, KSAAC, in collaboration with EY, conducted a seminar on 'Industry Requirements with a Focus on EY's Expectations' for the Post Graduate Diploma in Cyber Security batch. The session featured Mr. Lince Lawrence, Global Leader in Cyber Security, and Mr. Dhanith Krishna, Senior Manager in Cyber Security at EY. Mr. Lawrence shared insights into industry trends and EY's strategies in the evolving cybersecurity landscape, while Mr. Krishna outlined the skills and competencies EY seeks in candidates. An interactive blue team (offensive) and red team (defensive) activity engaged students in cybersecurity defense strategies. Following the session, KSAAC faculty and EY representatives discussed potential collaborations, including knowledge exchange programs, internships, and placement opportunities for students.

### **Cyber Security Awareness: The Need of the Hour**

On September 29, 2024, KSAAC conducted a half-day session titled 'Cyber Security Awareness: The Need of the Hour' for elderly members of the Brahmana Sabha community at Mitraniketan City Centre. Led by Jyothi Ramaswamy, Adhoc Consultant and Rasic A Azeez, Cyber Security Engineer, the session focused on essential online safety practices, protecting personal information, and mitigating common cyber threats. Participants engaged actively, sharing their concerns on phishing, online fraud, and password security, while receiving practical solutions for safer digital navigation.

## **BlockHack 2024 Hackathon at Kerala Blockchain Academy**

Kerala Blockchain Academy successfully organised the BlockHack 2024, the 32-Hour Blockchain Hackathon on the 21st and 22nd of September 2024. The event, held at the KBA campus, witnessed an overwhelming response from blockchain enthusiasts, developers, and students from across Kerala and nearby states. The objective of BlockHack 2024 was to provide a platform for young innovative minds to come together and build decentralised solutions using blockchain technology. The hackathon was a resounding success that attracted over 140 participants, including students, working professionals, and Web3 developers. Participants were tasked with creating solutions in various categories, including decentralized finance (DeFi), real-world asset tokenization, decentralized applications (DApps), and metaverse. The event was open to both beginner and advanced developers, offering mentorship and support throughout the development process.

**Hackathon Insights:** The event kicked off with an inaugural ceremony, where key mentors from KBA discussed the current trends and developments happening in the Ethereum blockchain. Participants then broke into teams, and development began. The energy through the 32 hours at the venue was palpable as teams worked diligently to develop their blockchain solutions. On the second day, teams continued working on their projects, racing against the clock to finalise their submissions. In the afternoon, each team presented their solution to a panel of judges. The teams were evaluated based on criteria such as innovation, technical implementation, real-world applicability, and the potential impact of their solution.

**Winning Teams:**

1st Place: We Eat Blocks

2nd Place: Ledger Legends

3rd Place: The Black Hat

4th Place: Bytez

BlockHack 2024 was a resounding success, bringing together a diverse group of blockchain enthusiasts and developers to innovate and build decentralised solutions. The hackathon showcased the potential of blockchain technology to address real-world challenges, and the creativity and technical prowess of the participants were commendable.

### **Session on Interview Skills for Second Year Students**

The Training and Placement Cell organized an insightful session on Interview Skills on 25th September 2024 at Gallery Hall 45, which was attended by our second-year students. Mr. Bejoy Peter, a seasoned Corporate Trainer, was the facilitator for the event.

### **KIBO: Transforming Education through AI : Demonstration**

There was a special demonstration of the KIBO kit - the future of educational excellence at the Knowledge Centre on 25 September 2024. The personnel from Trestle Labs Pvt. Ltd, Mr. Rishabh S detailed the advanced features such as real-time translation, audio-based learning, and accessibility options that align with NEP, NCERT, UGC, NAAC, and CBSE guidelines. The demonstration highlighted how the KIBO Kit can enhance teaching and learning experiences across diverse educational settings.

### **Design Thinking Workshop 2024**

A dynamic three-day Design Thinking workshop was conducted to empower all first-year students with the skills to solve real-world problems creatively. Facilitated by Dr. Sini V. Pillai, Assistant Professor, the workshop brought together students from diverse backgrounds, forming 30 groups, each tasked with addressing unique challenges using design thinking principles.

The workshop was a remarkable demonstration of collaboration, creativity, and critical thinking. Students were introduced to the key stages of the design thinking process—empathizing with the user, defining the problem, ideating solutions, prototyping, and testing. What stood out most was their ability to bring fresh perspectives to various problem statements and translate these ideas into tangible solutions.

One standout project was reimagining the university library as a collaborative learning space. The group designed a prototype that featured movable furniture, smart boards, and virtual collaboration spaces. This innovative setup not only encouraged physical and digital interaction but also provided food choices, creating a comfortable and interactive learning environment. Their approach was an excellent demonstration of how design thinking can revitalize existing spaces to make them more functional and relevant for the modern learner.

Another project that captured attention was developing a smart bin system that linked waste management to a rewards system. The solution involved a bin that converts the quantity of waste disposed into trash tokens, which students can redeem for activity

points or discounts at the campus café. The group also designed a companion website and mobile app to allow real-time tracking of token earnings and redemptions. This innovative approach cleverly integrated sustainability with incentivized behavior, demonstrating the students' commitment to environmental consciousness.

A third notable project focused on improving campus safety. The group designed an app with a "safe walk" option, allowing students to request a security escort or notify a trusted friend of their route and estimated arrival time. This proactive solution emphasized the importance of safety in student life while incorporating user-friendly technology to enhance the overall campus experience.

Each project reflected the students' ability to think critically, innovate, and take ownership of their solutions. Their journey from empathizing with the end user to ideating and prototyping showcased a deep understanding of design thinking principles. The role-play sessions, which allowed them to demonstrate their solutions creatively and engagingly, were especially inspiring. The three-day workshop was a resounding success.

### **Flower Harvesting**

On 11th September 2024, DUK celebrated a joyful flower harvesting event in preparation for the University's Onam festivities. The event saw enthusiastic participation from the staff and students of the DUK, Vice-Chancellor, and other faculty members.

The vibrant event marked the start of Onam celebrations at DUK, with the harvested flowers set to adorn the traditional floral carpets pookalams, which are an integral part of the festival. The SEC (Social Engagement Centre) staff and students, along with the Vice-Chancellor and faculty, worked hand-in-hand to harvest a variety of beautiful flowers grown specifically for the occasion. The fields were alive with color, reflecting the spirit of Onam.

### **Beach Cleaning - Vettucaud Beach**

On 21st September 2024, the SEC (Social Engagement Centre) team actively participated in a beach clean-up drive at Vettucaud Beach, Thiruvananthapuram, organized by Volunteer for India, in celebration of International Coastal Cleanup Day. The event brought together numerous volunteers with the shared goal of protecting and preserving our coastal environment.

The beach clean-up drive was an opportunity for SEC members to contribute to a larger environmental cause by removing waste and debris from the beach, thereby helping

restore the beauty of the coastline. The initiative also aimed to raise awareness about the pressing issue of marine pollution and its impact on marine ecosystems and communities.

### **DUK-Allianz Best Social Impact Award- First-Round Selection**

On 11th September 2024, the prestigious Allianz-DUK Award entered its first round of selection at the Digital University Kerala. Eight selected teams showcased their innovative projects in front of a distinguished panel of members, including Allianz and Start-up Mission technical experts. The presentations reflected the participants' creativity, hard work, and problem-solving abilities, each aiming to bring meaningful change through their groundbreaking ideas.

After a thorough evaluation, the panelists selected four teams to proceed to the next round. These teams demonstrated exceptional ingenuity, with projects that stood out for their potential to drive innovation and societal change. The selected teams will now advance to the next round, bringing them one step closer to winning the coveted Allianz-DUK Award.

### **Malinyamuktha Nava Keralam- Ward thala janakeeya Samithi**

As part of the Malinyamuktha Nava Keralam waste-free Kerala campaign, Keezhthonnekkal Village in Pothencode Panchayat conducted a ward-wise people's committee meeting on 26 September 2024 to discuss campaign activities on October 2nd 2024. The campaign started on October 2nd 2024 and will be concluded on March 30th 2025, which is International Zero Waste Day. The members from the Social Engagement Centre of DUK participated in the meeting. More activities will conduct to achieve zero waste in Kerala.

## **OCTOBER 2024**

### **Digital University Kerala Submits Landmark Report on Judicial Digital Transformation to Kerala High Court**

In a significant milestone, Digital University Kerala (DUK) has formally presented a comprehensive study report on Judicial Digital Transformation to the High Court of Kerala. The report was submitted by Dr. Saji Gopinath, Vice Chancellor of DUK, to Hon'ble Justice A. Muhamed Mustaque, Chairman of the Computer Committee of the High Court of Kerala, during a ceremony held at the Kerala High Court on October 21, 2024. Justice A. Muhamed Mustaque emphasized the importance of continued collaboration, citing countries like Brazil that partner with public Universities to develop software solutions for Courts. Dr. Saji Gopinath highlighted the study's focus

on leveraging cutting-edge technology to streamline judicial processes, reduce pendency, and optimize case management workflows. The event was attended by Hon'ble Justice Raja Vijayaraghavan V., Hon'ble Justice Mohammed Nias C. P. and Hon'ble Justice Harisankar V. Menon from the Computer Committee, Sri. Joseph Rajesh K.A., Registrar (Computerisation)-cum-Director (IT), Sri. Rakesh M.G., Deputy Director (IT) and other Officials from the High Court of Kerala. From Digital University side Jayachandran MB, CTO and Sherin Noordheen, Sr. Consultant who led the study team were also present.

The study, conducted by the Consulting team from Centre for Intelligent Government provides a detailed assessment of the current technological infrastructure, solutions, and processes within the Kerala High Court and Courts in the District Judiciary. The team also examined best practices through visits to other High Courts and International best practices. The report aligns with the vision of the Hon'ble Supreme Court e-Committee, aiming to create a more accessible, efficient, and equitable judicial system for all stakeholders.

The Judicial Digital Transformation Study Report outlines a strategic roadmap for the complete digitization of Kerala's judiciary, including high-level recommendations on leveraging cutting-edge technologies and a tailored Functional Requirements Specification (FRS) to meet the specific needs of Kerala's Judicial system. The report emphasizes process optimization and enhanced digital workflows. The proposed digital tools will provide easy access to information and remedies, improving overall accessibility and trust in the judicial system for Citizens. The report also proposes leveraging technologies like AI and Machine Learning to enable judges and court administrators to make data-driven decisions when scheduling or prioritizing cases, ensuring greater predictability and efficiency in court processes. The system will include features such as automated fee computation, payments and simplified administrative tasks, minimising manual workflows.

In light of the report's findings, the Government of Kerala has accorded Administrative Sanction for establishing Centre of Excellence on Judicial Intelligence in Digital University for research and application of latest Technologies like AI and Machine Learning for Case Management and faster justice delivery, improved transparency, and more streamlined judicial processes.

The Kerala High Court IT team has already initiated steps to implement key recommendations from the report. This effort marks a critical advancement in modernising Kerala's judicial system, aligning with broader goals for technology-driven, accessible, and efficient court services.

This initiative reflects Digital University Kerala's commitment to leveraging digital technologies for societal advancement.

### **Digital University Kerala Embarks on CMMI Certification for the Center for Digital Innovation and Product Development (CDIPD)**

In a significant stride towards bolstering process improvement and performance optimization, the Center for Digital Innovation and Product Development (CDIPD) – A centre of Excellence under Digital University Kerala has embarked on the implementation of Capability Maturity Model Integration (CMMI). This landmark initiative was inaugurated during a highly successful kick-off meeting, which has set the foundation for the center's commitment to delivering the highest quality in its innovative solutions.

The kick-off meeting was graced by distinguished dignitaries, including Prof. Saji Gopinath, Honourable Vice Chancellor of Digital University Kerala, who formally announced the commencement of the CMMI process implementation. The event also saw the esteemed presence of Prof. Mujeeb, Registrar of Digital University Kerala, Dr. Ajith Kumar, R, Director-CDIPD, and Prof. Santhosh Kurup, Director-Development, Digital University Kerala. A crucial element of this initiative is the collaboration with the consulting partner, M/s Quaxil Consultants, whose expertise will guide CDIPD through the rigorous process of achieving CMMI certification. The kick-off meeting was attended by the dedicated Project Managers of CDIPD, who will be at the forefront of this transformative journey. During the event, Prof. Saji Gopinath emphasized the importance of adopting globally recognized frameworks like CMMI to enhance the quality and efficiency of processes. He highlighted that this initiative is a testament to Digital University Kerala's commitment to maintaining the highest standards in digital innovation and product development.

Capability Maturity Model Integration (CMMI) is a globally recognized process improvement approach that provides organizations with essential elements to effectively improve their processes. It is designed to help organizations develop capabilities that improve performance and achieve higher levels of maturity. The objectives of CMMI implementation at CDIPD include enhancing process efficiency, ensuring the highest quality standards in digital solutions and services, achieving optimal performance through continuous process improvement, and positioning CDIPD to compete on a global scale by adhering to internationally recognized standards.

The kick-off meeting for the CMMI process implementation marks the beginning of a transformative journey for CDIPD. With the unwavering support of Digital University

Kerala's leadership and the expertise of M/s Quaxil Consultants, the center is confident in its ability to achieve CMMI certification and set new benchmarks in process improvement and performance optimization. As CDIPD embarks on this journey, it remains committed to its mission of delivering innovative digital solutions of the highest quality, thereby reinforcing its position as a leader in the digital innovation space. Further updates on the progress towards CMMI certification and continuous efforts towards excellence will be shared as the initiative advances. This significant step ensures that CDIPD continues to lead in providing cutting-edge digital solutions while maintaining the highest standards of quality and efficiency in all its operations.

### **Farewell to the Hon'ble Vice Chancellor**

DUK family bid farewell to the esteemed beloved Vice Chancellor, Prof. Dr. Saji Gopinath, on the remarkable leadership and vision that have profoundly shaped our institution during his tenure. Under his guidance, our university has not only grown in stature but has become a beacon of academic excellence, innovation, and community engagement.

In his time as Vice Chancellor, he has shown an unwavering commitment to fostering an environment where both students and faculty could thrive. With a clear vision for the future, he introduced transformative initiatives that have enhanced the academic and infrastructural landscape of the university. His emphasis on research, global partnerships, and inclusive education has left an indelible mark on all of us.

As he moves on to new horizons, we express our deep gratitude for the legacy leaves behind. The foundations laid by his leadership will continue to guide and inspire us in the years to come.

### **Digital University Kerala Researchers Discover Critical Error in OpenAI's Whisper AI System**

Researchers at Digital University Kerala have uncovered a major error in OpenAI's Whisper, an artificial intelligence system designed to transcribe speech into text. Typically, AI companies test the accuracy of AI models, usually automatically, before releasing them for public use. This is to assess how precisely these systems handle spoken language. However, due to an error in this quality-check process, OpenAI has reported the accuracy of its AI systems for Indian languages, including Malayalam, as better than it actually is. This discovery was made by researchers at Digital University Kerala's Virtual Resource Centre for Language Computing (VRCLC), led by Dr. Elizabeth Sherly, with team members Kavya Manohar and Leena G Pillai.

Their research paper documenting this issue has been selected for presentation at the prestigious international conference EMNLP (Empirical Methods in Natural Language Processing) 2024, held this month in Florida. The Association of Computational Linguistics (ACL) has also awarded the team a grant to support their presentation.

During their investigation, the researchers found that OpenAI's accuracy-checking process fails to account for vowel signs used in Indian languages. For instance, when the Malayalam word "Digital University" is stripped of its vowel signs and chandrakkala (virama), it becomes “ഡ ജ റ റ ര ള ഴ റ ള ഴ ഴ ഴ,” losing its readability. By excluding these signs, errors resulting in them go undetected, leading to an overestimated transcription accuracy. The team also observed that similar issues are present in Meta’s evaluations of its own AI models.

Regional language AI computing differs vastly from systems designed for languages like English. Therefore, Digital University's VRCLC center is committed to developing systems that account for these linguistic nuances, enhancing accuracy and usability for Indian languages in AI applications.

### **Centre for Digital Transformation in Culture (CDTC) Website Launch**

The Centre for Digital Transformation in Culture (CDTC), an initiative by Digital University Kerala, is dedicated to preserving and promoting the diverse art forms of Kerala. CDTC has launched its new website, highlighting the diverse activities and initiatives. By harnessing Intelligent Digital Systems, CDTC aims to support artists, safeguard traditional heritage, and connect Kerala’s vibrant cultural legacy with global audience.

The official inauguration of the website was during the state-level launch of Bharat Bhavan's Kadal Mizhi programme. The event was inaugurated by Honorable Minister of Culture, Sri Saji Cheriyan. Additionally, Sri K. Jayakumar, IAS, Chairman of the Advisory Committee, have presented an overview of the Centre’s initiatives to the public. The event was on October 30th, 2024, at Beach Park, Shangumugham, Thiruvananthapuram.

### **Digital University Kerala Partners with ASAP through MoU Signing with Dr. Usha Titus, Rtd. IAS**

Digital University Kerala has entered into a strategic partnership with the Additional Skill Acquisition Programme (ASAP) by signing a Memorandum of Understanding (MoU) with Dr. Usha Titus, Rtd. I.A.S., Chairperson of ASAP. This collaboration aims to enhance skill development initiatives and create impactful opportunities for learners, fostering industry readiness and innovation-driven education.

Additionally, Digital University Kerala is proud to be part of EY's Bridge Program, aimed at bridging industry-academia gaps. The program launch witnessed the participation of Richard Antony, India Operations Head at EY, marking a key milestone in advancing skill-based training and professional growth.

### **IRB Approval Secured for Novel: Autotransfusion Device Trials**

The proposal, "Validation of a novel low-cost Intra-Operative Autotransfusion Device to mitigate shortage of blood in rural hospitals", for conducting the initial trials of the Autotransfusion device being developed at CAN Lab, SoDS, DUK, using human blood at the Christian Medical College Vellore (CMC Vellore), has been approved by the Institutional Review Board (Silver Ethics and Research Committee) of CMC Vellore.

### **Finalist for the IEEE YESIST12 (An International Innovation Contest)**

Lakshmi Narayanan M, MSc MI 2nd Year (SoCSE) have recently received credentials as a Finalist for the IEEE YESIST12 (an International Innovation Contest). The event took place in Tunis Science City, Tunisia, in September 2024. After successfully clearing the preliminary round in India, he was honored to be selected as one of the 25 finalists from thousands of applicants nationwide to present my project, "User Defined Pattern Authentication," at the Grand Finale. This international platform brought together innovators from all over the world, making it a truly inspiring experience. He have secured a place in the Top 5 and received the title of Finalist in the Maker Fair Track.

### **Digital University Kerala Triumphs as District-Level Winner in YIP 6.0 by K-DISC**

The team from Digital University Kerala has been honoured as the district-level winner of the prestigious Young Innovators Programme (YIP) 6.0, organized by the Kerala Development and Innovation Strategic Council (K-DISC). This recognition highlights the commitment to innovation and excellence in problem-solving. Competing against a wide array of highly skilled teams from across the district, they stood out as the sole team representing Digital University Kerala. This unique representation underscores the pioneering spirit and innovative drive that our university fosters among its students. Their winning project combined rigorous research, creative solutions, and teamwork to address a significant challenge, showcasing the potential for transformative ideas to emerge from our institution. Spearheading this success were the team members, Anandik and Sandra, whose hard work and dedication shone through every step of the competition.

## **KSAAC at DISHA 2024 - Inspiring the Next Generation of Cybersecurity Enthusiasts**

KSAAC actively participated in the DISHA (Discover Your Future) Higher Studies Expo held in Thrissur from October 4-8, 2024. Throughout the event, engaging sessions and seminars were conducted that generated significant interest in cybersecurity among attendees. Key presentations focused on topics like threat identification, vulnerability management, and safe online practices, resonating with both students and professionals.

Interactive Q&A sessions provided an opportunity for government officials and IT professionals to address their queries, equipping them with practical knowledge to strengthen cybersecurity practices in their respective fields. The enthusiastic response from attendees underscored a growing interest in cybersecurity, with many students expressing a desire to pursue it as a career.

KSAAC remains committed to advancing cybersecurity awareness and education, contributing to a safer digital ecosystem for the future.

### **Seminar on Bridging the Skill Gap**

KSAAC organized a seminar on October 30, 2024, for PMAJAY students, centered on the theme of "Bridging the Skill Gap." The session was led by Mr. Kesav R., a Senior Analyst at Alliance Global and a certified soft skills trainer, who shared valuable insights into current industry demands and strategies for developing relevant skills.

During the seminar, Mr. Kesav emphasized the importance of identifying skill gaps and provided practical approaches for acquiring both technical and interpersonal skills essential for career growth. He highlighted the role of continuous learning in staying relevant in the industry and encouraged students to utilize available resources to strengthen their competencies. The event concluded with an interactive Q&A session, offering students the chance to gain further insights and clarify their questions.

### **Seminar on ISMS and Career Opportunities**

KSAAC organised a seminar on "Cyber Security Decoded" on October 23, 2024, for PMAJAY students, led by Mr Krishna Prasad of Alliance Technology. The session provided a detailed overview of how an Information Security Management System (ISMS) function within organizations, outlining key strategies for data protection and regulatory compliance. In addition, the seminar covered recent cyber-attacks across various industry sectors and explored cybersecurity job roles available for freshers. The event concluded with an engaging Q&A session, offering students valuable insights and to clarify their doubts.

### **Seminar on Placement Enhancement and Startup Insights**

On October 8, 2024, KSAAC organized a seminar on placement enhancement specifically for PM-AJAY students, led by Rahul PK, Sr Consultant at State e Mission Team, KSITM. The seminar covered critical topics such as starting a business, launching a startup in the IT field, and the challenges faced by emerging companies. Mr Rahul also discussed the role of AI-powered virtual workers in supporting startup growth, as well as opportunities within the cybersecurity job domain. An engaging highlight of the event was a live demonstration of plant disease detection using Fast AI, showcasing practical applications of artificial intelligence in real-world scenarios.

### **Malinya Muktha Nava Keralam Campus Cleaning Campaign**

On October 2, 2024, the Social Engagement Centre (SEC), in collaboration with the National Service Scheme (NSS), UBA, the Sports Council, and the Student Council of DUK, launched the Malinyamuktham Nava Keralam campaign with a campus cleaning drive. This initiative, inaugurated on Gandhi Jayanti, aims to achieve a waste-free Kerala by March 30, 2025, coinciding with International Zero Waste Day.

Inspired by the ideals of Gandhi, Malinyamuktham Nava Keralam encourages everyone to actively participate in cleaning their surroundings. The campaign's objective is to promote a waste-free environment in Kerala through local cleaning efforts, raising awareness, and advocating for recycling.

### **Social Engagement Centre - Core Associate Training**

To equip the newly selected Core Associates of the 2024-2026 batch with essential skills and a strong sense of camaraderie, the Social Engagement Centre (SEC) organized a comprehensive two-day training program on the 8th and 9th of October 2024. This session was meticulously designed to guide the Core Associates through their upcoming journey, emphasizing skill development, teamwork, and leadership.

The training event featured hands-on activities, creating an environment for the Core Associates to build confidence, develop interpersonal skills, and gain a clear understanding of their roles within the SEC.

The training program marks the beginning of an exciting journey for the 2024-2026 Core Associates, who will play a pivotal role in advancing the SEC's mission on campus. With this foundation, the new team is set to lead impactful initiatives, uphold the values of social engagement, and drive positive change.

### **Green Volunteer Meet-Up**

“Green Volunteers” is an initiative by the National Service Scheme and Green Campus Initiative. The Green Volunteers are dedicated to protecting the campus environment, promoting sustainability, and maintaining a clean campus. The inaugural meeting of the Green Volunteers took place at the Digital University Campus on October 15th, 2024.

Dr. Sooraj N.P., the NSS coordinator, along with SEC team members and the Green Volunteers, attended the event to discuss initiatives aimed at making the campus more environmentally friendly.

### **AARANYAKAM 2024: Celebrating Wildlife Week with Insight, Action, and Engagement**

Digital University Kerala’s Aaranyakam 2024 Wildlife Fest: A Celebration of Biodiversity and Conservation held in honor of Wildlife Week. The Wildlife Fest was a truly immersive and inspiring event dedicated to raising awareness for biodiversity conservation. The fest brought together students, experts, and enthusiasts through various talks, competitions, and interactive activities aimed at protecting our planet’s precious ecosystems. With enthusiastic participation and the unwavering support of dedicated volunteers and faculty, Aaranyakam 2024 left a lasting impact on everyone involved.

### **Inspiring Guest Talk**

Aaranyakam was privileged to host two distinguished speakers who shared their profound knowledge and experiences:

- Shri D.K. Vinod Kumar, I.F.S., captivated the audience with his compelling insights and firsthand experiences in wildlife conservation. Shri Vinod Kumar highlighted the urgency and dedication needed to protect our natural heritage by sharing stories of triumphs, challenges, and hard-won victories from his fieldwork.
- Dr. Vimal Kumar C.S., Principal Scientific Researcher at the Kerala Biodiversity Board, delivered a thought-provoking talk on biodiversity and sustainability. Emphasizing the importance of each individual's role, Dr. Vimal urged everyone to take proactive steps in conserving the environment and ensuring sustainable ecosystems for future generations.

## **VYUHAM '24: Digital University Kerala's First National Level Techno Cultural Management Fest!**

A Remarkable Celebration of Technology and Culture at Digital University Kerala proudly hosted Vyuham'24, an extraordinary three-day national-level tech-cultural fest that brought together students, industry experts, and tech enthusiasts across India. The event, held from October 25-27, 2024, was a hub of innovation, creativity, and learning, featuring diverse activities highlighting technology's transformative role in modern society.

### **South Zone Interuniversity Badminton Championship 2024**

A team of 7 members represented Digital University Kerala in the South Zone Interuniversity Badminton Championship, hosted at SRM College, Chennai, on 26th October 2024. The tournament gathered exceptional badminton talents across Southern India. Each of them was excited to make the university proud and motivated to at least secure a match victory in our opening round.

Even though the team didn't qualify for the 2nd round of the championship, the experience of competing in such a high-energy environment and witnessing the skill level required at this level was valuable for all team members. They returned with an understanding of the areas we need to improve upon to compete in future tournaments.

### **Caligo 24 Management Fest**

The Caligo 24 Management Fest, hosted by Marian International, two teams from Kerala University of Digital Sciences, Innovation, and Technology showcased their talents in various competitive events.

In the HR Games, the team consisting of Harikrishnan R, Vaisakh S, Nandana M, and Luthfa Jabir N competed against 23 teams. Their strong problem-solving abilities and teamwork saw them advance to the top 8, successfully progressing through three rounds before being eliminated.

In the Best Management Team event, Neha Krishna V G, Sneha Santhosh, Abhin A, and Ajsal Jaman competed against 20 teams. Their strategic thinking and leadership earned them an impressive 3rd place overall, a significant achievement even though they didn't reach a podium finish.

Both teams demonstrated excellence, dedication, and competitive spirit, proudly representing the university. Their performances at Caligo 24 reflected the high standards upheld by the students of Digital University Kerala.

## NOVEMBER 2024

### **WISE Stall at the HUDDLE Global 2024**

The stall representing Digital University Kerala's WISE (Women Incubation Startups and Entrepreneurship) project was officially inaugurated on 28th November 2024 at the 'HUDDLE Global 2024' industrial entrepreneurship fair, held at the Leela Raviz in Kovalam, Thiruvananthapuram. This prestigious event, led by Kerala Startup Mission, offered a platform for startups and budding entrepreneurs to showcase their innovations and ventures.

The inauguration of the WISE Stall was done by Dr. Mujeeb A, the Honourable Registrar of DUK.

The event held from 28th to 30th November 2024, featured inspiring presentations from emerging entrepreneurs, enriching panel discussions with industry leaders, talks by venture capitalists and government delegates, etc. The sessions were not only valuable learning experiences but also provided excellent networking opportunities for the startups, helping them forge connections and grow further.

Ventures floated by women entrepreneurs have also been generating significant interest at the event. Leading the fray were the startups incubated under Digital University Kerala's; Women Incubation, Start-ups and Entrepreneurship (WISE) scheme, aimed at promoting a women entrepreneurship ecosystem.

Project Co-ordinator of 'WISE' Dr. Elizabeth Shirley, WISE Business Developer Ms. Dyana B Rose, Women Entrepreneurs under WISE Project and Staff working on various projects under Digital University Kerala participated in the three day event. The WISE project and the startups under WISE greatly benefited from this platform; connecting with potential collaborators, investors and partners.

### **KITTS, Digital Varsity ink MoU to launch tech courses in tourism Tie-up aims to empower stakeholders in cutting-edge technologies**

Thiruvananthapuram, Oct. 24: Kerala Institute of Tourism and Travel Studies (KITTS), the HR development wing of State Tourism Department, today signed a Memorandum of Understanding (MoU) with Digital University Kerala (DUK) to introduce innovative, technology-integrated programmes in tourism and hospitality sector.

Tourism Minister Shri P A Mohamed Riyas, who is also the Chairman of KITTS, exchanged the MoU with Dr. Saji Gopinath, Vice Chancellor of DUK. The MoU was signed by Dr. Dileep M R, Director, KITTS and Prof. Mujeeb, Registrar of DUK.

Dr. B Rajendran, Principal, KITTS; Dr. Hari Krishnan, Coordinator, KITTS; DUK faculty Prof. Santhosh Kurup and Dr. Sini V Pillai were also present on the occasion.

Shri P A Mohamed Riyas said the MoU is part of the mission of the government to upgrade the activities of KITTS on par with global standard.

Significantly, the tie-up comes in the backdrop of Kerala Tourism increasingly leveraging cutting-edge digital tools and media in all verticals and planning to set up a technology hub-cum-incubator to mould startups exclusively catering to tourism.

The strategic collaboration aims to equip students, industry professionals, and government officials with cutting-edge skills to keep pace with the rapidly evolving digital landscape across the globe. It would help stakeholders of tourism industry attain competitiveness since they are relying largely on digital platforms from destination research to booking and trip planning.

The new courses being offered through this MoU will focus on key technology areas such as artificial intelligence (AI), cybersecurity, data analytics, digital and social media marketing, and management systems.

Besides, these programmes will serve as additional certifications or diploma courses for KITTS students, who can enhance their prowess in digital technologies, and it will also create opportunities for their placements.

Industry professionals will benefit from capacity-building programmes designed to hone their expertise in tech-driven management for the tourism and hospitality sectors.

The initiative also includes specialized courses for officials of the Department of Tourism, District Tourism Promotions Councils (DTPCs), and other related public sector agencies, aimed at improving proficiency in technology tools and cybersecurity measures. The tie-up will empower tourism stakeholders with advanced digital solutions and enhance the overall efficiency, resilience, and future-readiness of Kerala's tourism industry.

Thiruvananthapuram-based KITTS, an affiliated member of United Nations World Tourism Organisation (UNWTO) and an authorised learning centre of IATA (International Air Transport Association), offers over 10 different industry-based courses including MBA and conducts free training programmes for the State and Central governments.

### **Centre for Digital Transformation & Innovation organized Advanced IT training program for the Department of Archaeology, Govt. of Kerala**

The Centre for Digital Transformation & Innovation (CDTI), a center of excellence at Digital University Kerala, organized an “Advanced IT” training program for the Department of Archaeology, Govt. of Kerala from November 25 to 29, 2024. Building on the foundation of a basic IT training program held in the previous year, this initiative aimed to further enhance participants' digital capabilities. The program opened with an inspiring welcome address by Ms. Shabana N.D, Chief Administrative Officer of the IIITM-K, who highlighted the transformative potential of technology in cultural heritage preservation.

Over the five days, expert trainers delivered sessions on topics such as advanced data management, digital communication tools, AI applications like ChatGPT, government ICT initiatives, and leveraging social media for professional growth. The training also included practical demonstrations and group activities that encouraged participants to explore innovative approaches to their work. Practical sessions on e-Office and other relevant tools were also included.

The training concluded with a valedictory session on November 29th, 2024, marked by a welcome address by Dr. Sini V Pillai, Assistant Professor at DUK. The Chief Guest, Dr. A. Mujeeb, Registrar of DUK, delivered a keynote address, emphasizing the importance of applying newly acquired skills in both personal and professional contexts. He also presented certificates of participation and mementos to the attendees and trainers, recognizing their dedication and contributions to the program's success. Feedback from attendees reflected the program's effectiveness in bridging their knowledge gaps and providing actionable insights into leveraging IT solutions in their professional roles. The training successfully equipped attendees with enhanced digital skills and strategies for integrating technology into their professional roles.

### **Human-Centric Artificial Intelligence: Building for Deep Impact**

The Research Office DUK organized an insightful talk with Dr. Sooraj Krishna, a globally acclaimed Human-Centric AI Researcher. The talk was titled "Human-Centric Artificial Intelligence: Building for Deep Impact". The talk explored AI designed with ethical and human-focused principles, with the possible transformative power it could bring forth. The insights of Dr. Krishna were a mix of cutting-edge research, real-world applications, and a vision that AI could really serve humanity.

This session offered an interactive Q&A period where students and faculty had the opportunity to question Dr. Krishna directly. Some questions included challenges in

ethical AI implementation and career pathways for industries with AI drives. The responses from Dr. Krishna underlined critical thinking, adaptability, and the importance of a sound ethical foundation in AI development.

The event culminated in a unified acknowledgment of the transformative capacity inherent in human-centric artificial intelligence, underlining the critical importance of accessibility, trust, and ethical incorporation in the development of AI systems. Notable speakers, including Dr. Sooraj Krishna, illuminated the necessity of reconciling technological progress with societal obstacles, illustrating how AI can effectively tackle real-world problems while prioritizing a user-centered framework. The wide range of topics to be studied, from communicative actions of educational agents through the integration of artificial intelligence in sustainable agricultural practices, highlights how interdisciplinary collaboration is needed in bringing solutions that are real-life relevant.

The discussions emphasized the importance of innovation that is grounded in ethics and responsibility, thereby propelling the participants to consider transparency and inclusiveness while working on their projects. Furthermore, the end of the workshop reiterated the importance of maintaining a continued conversation between researchers, practitioners, and the wider society to ensure that AI development moves in line with human values.

### **Rural Immersion Program for MBA students**

The MBA students at DUK had a Rural Immersion Program in Pondicherry from 2-7 November, which provided an insightful exploration of the region's micro-enterprises, cultural heritage, and sustainable practices.

The Rural Immersion Program was conducted to foster exposure and understanding of these grass-roots ventures among the Digital University of Kerala students. The project was conducted in Pondicherry, and the program focused on micro-enterprises' activities and what methods could help them grow. The program aimed to understand the dynamics of rural businesses and identify strategies to empower them for long-term growth. Key highlights include visits to agriculture-focused initiatives like the M.S. Swaminathan Research Foundation, artisan hubs in Auroville, and community-based enterprises such as clay statue manufacturers and coconut craft shops. Dr. Sini V. Pillai accompanied the students, helping them identify how the resilience and creativity of local communities can be taken as an opportunity while highlighting challenges such as market access, digital literacy, and resource constraints. The study identified opportunities for enhancing economic growth through qualitative methodologies like field observations, interviews, and SWOT analyses. Recommendations emphasize the

importance of e-commerce integration, skill development, eco-tourism promotion, and infrastructural support to create sustainable livelihoods while preserving cultural heritage.

### **Kerala Blockchain Academy Shines at Devcon 7**

The Ethereum Foundation's Devcon 7, held from November 12–15, 2024, at the Queen Sirikit National Convention Center (QSNCC) in Bangkok, Thailand, marked a milestone in global blockchain innovation. This prestigious event attracted 12,500 attendees from 130 countries at the venue. Sessions from renowned speakers like Aya Miyaguchi, Vitalik Buterin, Roger Dingledine, and Bruno Macaes attracted the community.

Dr. Adarsh S (Sr. Scientist), Franklin John (Research Scientist & Manager-Training), Sakeer M (Research Scientist) A, Mobin Mohanan (Research & Development Engineer), and Dr. Arya V N (Jr. Content Writer) represented Kerala Blockchain Academy (KBA). Mobin Mohanan also took on the roles of ETHGlobal Mentor and Dev Scholar, adding further prestige to KBA's involvement. DC 7 focused on the promotion of decentralised protocols, tools, and culture, fostering collaboration and innovation. Josh Stark, Ethereum Foundation Leadership representing the Ethereum Foundation, acknowledged the contributions of KBA to the Ethereum ecosystem during the opening ceremony underscoring KBA's global significance.

### **KBA Hosts Insightful Session on Digital Identity & Verifiable Credentials**

As part of the Institution's Innovation Council (IIC), Kerala Blockchain Academy (KBA) conducted an engaging session on "Digital Identity & Verifiable Credentials" on 19th November 2024. The session was led by Danny Wong, Enterprise Architect & Head of Global Blockchain at Allianz Technology, who brought profound expertise and industry insights to the discussion.

The transformative potential of blockchain in enhancing trust and identity in the digital era was emphasised. By pinpointing various practical use cases, the session highlighted the potential of verifiable credentials in improving privacy and security. Real-world applications in identity management were discussed alongside the challenges and opportunities in implementing digital credentials. The strategies employed at Allianz Technology captivated the audience. The speaker created a space for innovative thinking and the discussions followed by the session addressed the significance of blockchain in shaping the future of digital identity.

### **Leadership Program**

Sinnu Susan Thomas attended the Nurturing Future Leadership Program, under the Aegis of Malaviya Mission teacher Training Program at IIT Kanpur during 19-23 November 2024.

23 faculty members from various institutes all across the country participated in this five-day program which was fully aligned with the 'National Education Policy 2020's emphasis on holistic development, institutional autonomy, and innovation, empowering participants to become leaders in academic institutions.

### **Constitution Day**

As part of the Constitution Day celebrations on 27th November 2024, the Social Engagement Center (SEC), in association with NSS and Unnat Bharat Abhiyan, organized a thought-provoking group discussion on the topic, "Uniform Civil Code: Essential for Equality or a Threat to Diversity?". The discussion aimed to help students analyze the delicate balance between uniformity and diversity within a democratic framework.

This event was not just another policy discussion; it was an opportunity for students to delve into the complex issue of how to balance equality with cultural diversity. Far from being a dull lecture, it was a dynamic platform where students could actively engage, share their perspectives, challenge each other's views, and learn from one another.

What truly made the discussion special was the diversity of voices that contributed to it. Participants included law graduates, English majors, and history enthusiasts, each offering their unique insights. Some students passionately argued for legal uniformity, while others emphasized the importance of respecting cultural differences. This range of viewpoints enriched the discussion and fostered a deeper understanding of the topic.

The event truly embodied the spirit of our Constitution—creating space for critical thinking, open dialogue, and mutual respect. It wasn't about winning an argument; it was about listening, learning, and growing together.

The event was successfully organized by second-year MBA students Vedaprasad, Noufal Ashique, and Megha, under the guidance of Fousiya. Their teamwork and dedication were instrumental in ensuring the event's success, providing valuable learning experiences for the participants.

### **World Diabetes Day Walkathon - A Resounding Success!**

On World Diabetes Day, Abhin A, MBA Student represented DUK in a highly successful walkathon, aimed at raising awareness about diabetes and promoting the importance of fitness in managing the condition. The event began bright and early at 6 AM from the iconic Kanakakunnu Palace, starting with an energizing Zumba session, which set an enthusiastic and positive tone for the day. The session emphasized the significance of physical activity in managing diabetes and overall health. The program was inaugurated by Cine Actor Sudheer Karamana, and a wonderful speech was delivered by Dr. Jayram, highlighting the crucial role of fitness and awareness in controlling diabetes. Afterward, participants walked along a scenic route toward Precise Eye Care Hospital, combining fun, fitness, and purpose, while raising awareness about the impact of diabetes and the importance of an active lifestyle. It was an inspiring event that brought the community together, with everyone engaged in the cause. At the end of the walkathon, certificates of participation were awarded, and refreshments were provided to help participants rehydrate and celebrate their accomplishment.

### **Seminar on Soft Skill Development**

KSAAC conducted a seminar on November 6th, 2024, for PMAJAY students, focusing on the theme “The Importance of Soft Skill Development.” The session was facilitated by Ms. Mary Suresh, a distinguished communication and soft skills trainer with extensive experience in equipping individuals with essential professional competencies.

The two-hour session emphasized the development of communication and presentation skills, critical for achieving personal and professional success. The interactive format encouraged active participation, enabling students to ask questions and engage in activities that underscored the significance of soft skills in today’s competitive landscape.

### **Hardware Workshop for ATL Students - PM Shri KV Pallipuram**

The Institution's Innovation Council and Innovation Club DUK organized a one-day hardware workshop for the PM Shri KV Pallipuram students on 27th November 2024.

### **Inauguration of IGU at Schools: Indigenously Produced the First Electronic Hardware Product from DUK**

Inauguration of IGU by Minister of Sports Shri. V. Abdurahiman at Govt. New LPS Kallimel, Minister for Higher Education and Social Justice of Kerala, Prof. R Bindhu at Govt. LPS Nadavaramba, Minister for Public Works and Tourism, Shri P. A. Mohammed

Riyas at GMLPS Karuvanthuruthi, MLA Shri. Adv. K. Premkumar at Govt. LPS Elambulassery, MLA Shri. K N Unnikrishnan at Govt. LPS Palliport, MLA , Shri. C. H. Kunhambu at GLPS Periya, MLA Shri. I.C. Balakrishnan at GLPS Andoor.

The integrated gaming unit ( IGU ) is conceived at the thingQbator facility with the dedicated efforts of a team of students, Mr. Adithya Vishnu and Mr. Alfas Hakeem, led by Mr.Sarath.SM, Innovation Officer and Mr. Lal Prakash, Senior Software Developer of DUK. This is the first electronic hardware product to be indigenously developed and successfully commercialized from the Digital University.

IGU is an integrated digital solution which will assess the performance of students undergoing training on various sports and games. This is deployed in 30 schools across the state as a pilot project. The project is mentored by Prof. Asharaf S, Dean Academic and Prof Manoj Kumar T K , Dean Research of Digital University.

### **Third Annual Athletics Meet**

The Third Annual Athletics Meet of our institution was successfully held on November 13th, 2024, at LNCPE Ground Karyavattom. The event showcased exceptional talent, teamwork, and sportsmanship among our students.

The inaugural function commenced at 9:45 a.m. with our esteemed chief guest, Shri S. Gopinath IPS (Retd.), formerly Inspector General of Police, Kerala. The program began with a march Past by four houses: Blue House, Green House, Red House, and Yellow and Salute Reception by our Chief Guest after that National Anthem, Welcome Speech was delivered by Prof Md Meraj Uddin, Chair of Student Affairs, Flag Hosting and Presidential Address by Shri Madhavan Nampier, Chairman of IITMK, Inaugural Address by Shri S. Gopinath IPS (Retd.) and Felicitation delivered by Prof Santhosh Kurup, Oath Ceremony by Abraham S, Secretary of Sports Club. DUK. Sports Club Secretary Received the torch from beloved chief guest and hand it over to other captains of all four houses after that Vote of Thanks by Sohan J, General Secretary of Student Council.

The program concluded at 4:00 p.m. with the distribution of medals. The event was a huge success, promoting sportsmanship, teamwork, and physical fitness among our students.

## DECEMBER 2024

### **Landmark MoU Between CCS, NIMHANS and CEBC, DUK to Advance Neuroscience and Cognitive Computing Research**

A landmark MoU has been signed between the Centre for Consciousness Studies (CCS), Department of Neurophysiology, NIMHANS, Bengaluru and the Centre for Excellence in Brain Computing (CEBC), Digital University Kerala (DUK), to foster academic cooperation in research, teaching, training, publications, and innovative projects in 2023. This collaboration marks a significant step towards advancing education and research in areas of mutual interest. As a part of this initiative, NIMHANS has launched an MSc Neuroscience program in NIMHANS, with DUK actively contributing to specialized training in the transformative field of Cognitive Computing. The second batch of MSc course started at NIMHANS and the CEBC team conducted one paper on Computational Neuroscience in online mode in December 2024. Under the visionary leadership of Dr. Elizabeth Sherly, Head of CEBC, this partnership aims to redefine the landscape of cognitive sciences, creating a hub of knowledge and innovation for aspiring students and researchers.

### **'SEVANA 2024' - Celebrating Volunteerism**

In celebration of volunteerism, the Social Engagement Centre, DUK, organized **'SEVANA 2024'** on **4th December 2024**. This meaningful event provided an excellent opportunity to connect with others, learn more about volunteerism, and explore new ways to make a positive impact. Dr. Satheesh Kumar K. G., Chair of SoDiHLA, inaugurated the session.

The program featured an enlightening session by Mr. Gautham Raveendran, Founder and CEO of Volunteer for India. He shared valuable insights into the power of collective action and how every individual can contribute to creating a better tomorrow.

Among the many highlights of the program, **Mr. Sai Shankar G Nair** was honored with the prestigious **Best Volunteer Award**. This accolade is a testament to Sai Shankar's tireless and selfless contributions as a Core Member of the Social Engagement Centre (SEC). His unwavering commitment, innovative ideas, and leadership have been instrumental in driving several impactful initiatives.

The program also included a heartfelt memento-giving ceremony to honor the SEC leadership team of the 2023-2025 batch for their dedication and contributions.

As part of this event, SEC also organized various competitions that brought together participants from diverse disciplines.

Winners of the games at 'SEVANA 2024':

- Treasure Hunt: Navaras P (M.Sc. in Computer Science with Specialization in Machine Intelligence), Dev Jacobs Peter (M.Sc. in Ecology with Specialization in Ecological Informatics), Namitha Raveendran (M.Sc. in Computer Science with Specialization in Cyber Security).
- Reel Making Competition: Anjitha Sivakumar (M.Sc. in Computer Science with Specialization in Machine Intelligence), Suhaib T (M.Sc. in Computer Science with Specialization in Data Analytics), Dev Jacobs Peter (M.Sc. in Ecology with Specialization in Ecological Informatics), Milan Prasad (M.Sc. in Data Analytics and Computational Science).

These competitions showcased the creativity, teamwork, and innovative spirit of the participants, making '**SEVANA 2024**' a truly memorable event.

Photos: [https://drive.google.com/drive/folders/1Pw3ZBc-dMSeqrP\\_oCBOgdjluh6LsWWF7](https://drive.google.com/drive/folders/1Pw3ZBc-dMSeqrP_oCBOgdjluh6LsWWF7)

### **Allianz Award**

In a proud moment for Digital University Kerala, seven talented students were honored with the prestigious "Allianz Award for Best Digital Innovation for Social Impact" on November 29, 2024, at Allianz Technology. The award celebrates innovative solutions that harness digital technology to address critical societal challenges, marking a significant collaboration between Allianz and DUK. This initiative is part of Allianz's 20th-anniversary celebrations in India and aligns with DUK's mission to create a responsible digital world.

The award was presented by Dr. Barbara Karuth-Zelle, Member of the Board of Management, Allianz Group. The award was secured by team 'INSIGHTS' Shivani Bansal and Vicky Singh from M.Sc. in Computer Science with Specialization in Machine Intelligence, and team 'Threads' Annapurna Padmanabhan (M.Sc. Computer Science with Specialization in Data Analytics), Sudhi Suresh (M.Sc. Computer Science with Specialization in Cyber Security), Praveena. R (M.Sc. Data Analytics and Bio AI), Fathima Nazrin (M.Sc. Data Analytics and Computational Science), Fathima S Rahim (M.Sc. Computer Science with Specialization in Data Analytics).

The recognition stems from the students' work as part of DUK's postgraduate "Digital Access for Community Empowerment" (DACE) program. This program encourages students to address challenges faced by marginalized communities using innovative digital solutions.

The awarded projects include the "FabricSense" project, which enhances the quality inspection of handloom fabrics, boosting manufacturing efficiency and reducing eye strain for workers. Another winning initiative, "Autism Aid," is an AI-driven platform that advances early autism detection and provides personalized care.

### **Workshop on Internet of Things (IoT) for School Students**

The Institution's Innovation Council and Innovation Club of DUK is jointly organizing a series of workshops for school students on Internet of Things (IoT). The first one was organised on 11th December 2024 for the students from KV Pallipuram.

**Photo Gallery**

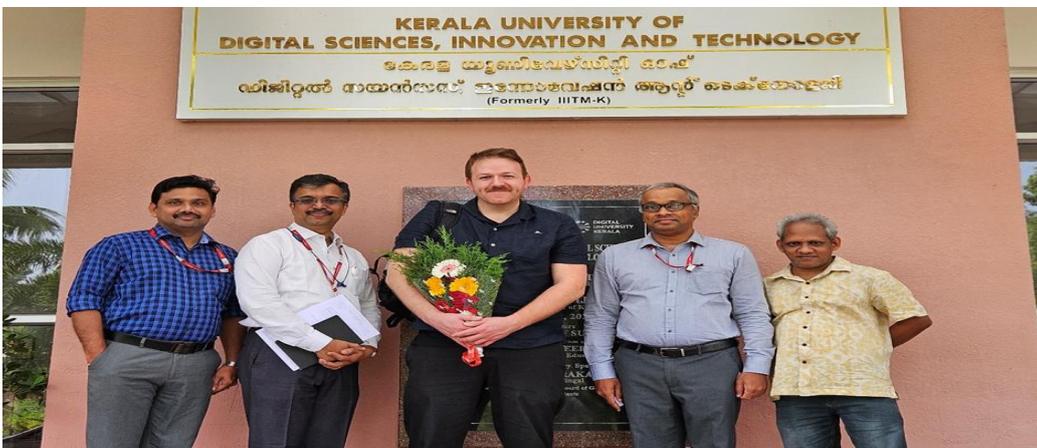
---



75th Republic Day Celebration at DUK



Workshop on Quality Processes and CMMI Standards



Dr. Robert Potts hosted a Science Lecture at Digital University as part of the Global Science Festival



Institution's Innovation Council (IIC) Regional Meet @ Kochi



Digital University Kerala celebrated its 3rd Foundation Day



Chief Minister Pinarayi Vijayan Inaugurates Renovated IITM-K Building



Beach Cleaning by DUK Students at St.Andrew's Beach



National Science Day 2024



Global Science Festival Kerala



International Women's Day Celebrations



Digital Renaissance to Empower Aspiring Minds – DREAM 2024



Computer Science Research Colloquium



World Environment Day Celebrations



International Yoga Day Celebration



Transitioning from Web2 to Web3 with Algorand Blockchain



CDIPD Released New Digital Innovative Solution -  
Loka Keralam Online – Digital Platform for Global NRK



2nd Convocation of Digital University Kerala



Independence Day Celebrations 2024



Onam Celebrations - AARAVAM 2024



Digital University Kerala Submits Landmark Report on Judicial Digital Transformation to Kerala High Court



Digital University Kerala Embarks on CMMI Certification for the Center for Digital Innovation and Product Development (CDIPD)



Farewell to the Hon'ble Vice Chancellor



KITTS, Digital Varsity ink MoU to Launch Tech Courses in Tourism



Allianz Award for Best Digital Innovation for Social Impact



DUK Christmas Celebrations