



DIGITAL UNIVERSITY

KERALA UNIVERSITY OF DIGITAL SCIENCES,
INNOVATION AND TECHNOLOGY

SCHOOL OF COMPUTER SCIENCE & ENGINEERING (SOCSE)

"Cultivating Excellence: Empowering Future
Innovators in Computer Science and
Engineering for Global Impact"

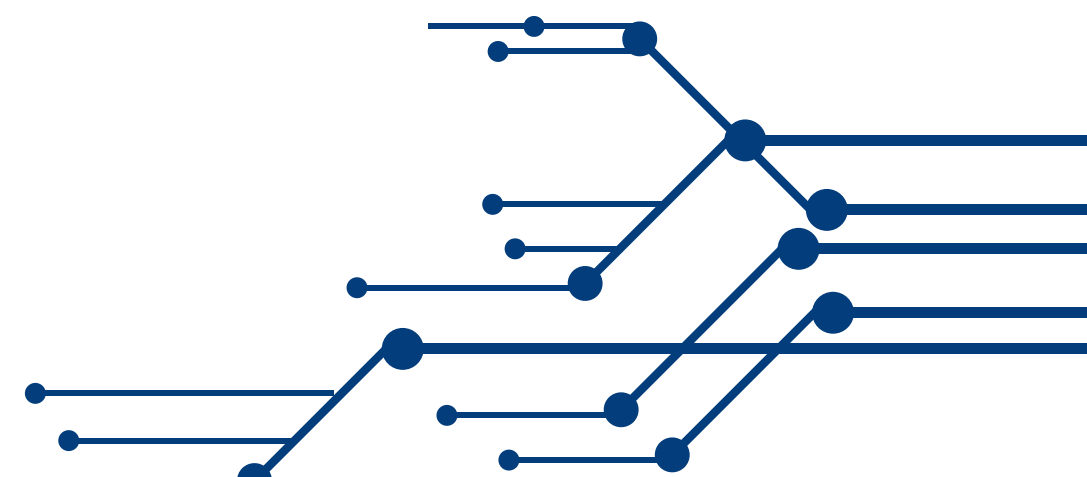


SCHOOL OF COMPUTER SCIENCE AND ENGINEERING

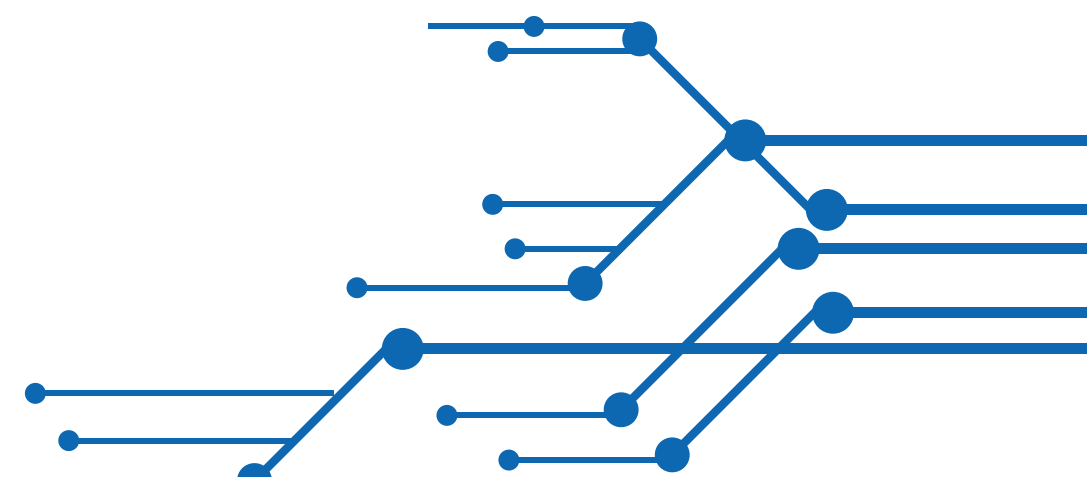
- School of Computer Science and Engineering (SoCSE) was founded in 2020.
- SoCSE offers both PhD and master's degree programs.
- Research at SoCSE are around Theoretical Computer Science, Computational Intelligence, and Systems & Networks.
- SoCSE is dedicated to nurturing the next generation of scientists and engineers, encouraging them to explore their research interests.
- Efforts result in the publication in conferences and journals across various fields of Computer Science and Engineering.
- Faculty members actively participate in numerous sponsored research and consultancy projects, supported by both governmental and industrial sources.
- SoCSE is committed to delivering excellence in education, fostering innovation, and shaping the future of both individuals and society.

FACULTY MEMBERS

- **Abhishek Kaushik, PhD (Bhabha Atomic Research Center, Mumbai)** : Robotics/Surgical Robotics, Simultaneous Localization and Mapping, Medical Image Processing.
- **Asharaf S, PhD (Indian Institute of Science, Bangalore)** : Data Engineering, Machine Learning, Information Retrieval, Blockchain Technology.
- **Balasubramaniam S, PhD (Anna University, Chennai)** : Machine Learning, Deep learning-based Disease Diagnosis, Cloud Computing Security, Electric Vehicles.
- **Elizabeth Sherly, PhD (University of Kerala)** : Natural Language Processing, Image Processing, Machine Intelligence.
- **Malu G, PhD (University of Kerala)** : Pattern Recognition, Medical Image Processing, Shape and Margin Descriptors, Graph Algorithms.
- **Preetam Mukherjee, PhD (Jadavpur University)** : Information Security Metrics, Security Policies, Security Modeling and Analysis, Business Process Modeling.



- **Sabu M Thampi, PhD (National Institute of Technology Karnataka)** : Internet of Things, Cognitive Security, Social Networks, Endpoint Security, Smart Cyber-Physical Systems.
- **Sinnu Susan Thomas, PhD (Indian Institute of Technology Kanpur)** : Computer Vision, Image / Video Signal Processing, Bayesian Optimization for Industrial Applications, Machine / Deep / Reinforcement Learning.
- **Tony Thomas, PhD, (Indian Institute of Technology Kanpur)** : Cyber Security, Augmented Reality/Virtual Reality, Quantum Computing, Artificial Intelligence / Machine Learning.





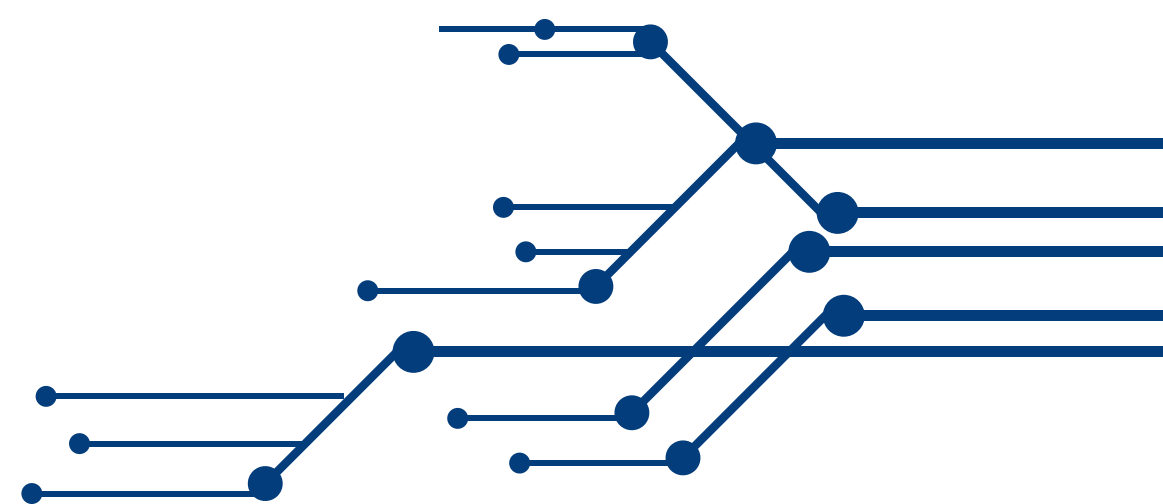
ACADEMIC PROGRAMS

▣ Master Level Programs

- MTech in Computer Science and Engineering
- MSc in Computer Science with specialization in Machine Intelligence
- MSc in Computer Science with specialization in Cyber Security

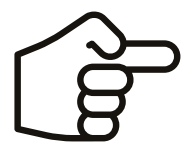
▣ PhD Programs

- Full-time regular
- Industry regular
- Part-time





RESEARCH AREAS



Systems & Networks

- Computer Architecture
- Cyber Physical Systems
- Networked Systems
- Security, Privacy and Trust
- Operating Systems, Compiler Design
- Software Engineering
- Database Systems, Big Data, Blockchain
- Ubiquitous Computing



Computational Intelligence

- Cognitive Computing
- Computer Vision
- Machine Learning
- Natural Language Processing



Theoretical Computer Science

- Algorithms
- Automated Theorem Proving
- Computational Complexity
- Cryptography
- Formal Methods
- Game Theory
- Graph Theory
- Mathematics for Computer Science
- Optimization
- Quantum Computing



LABS

Centre for Excellence in Brain Computing

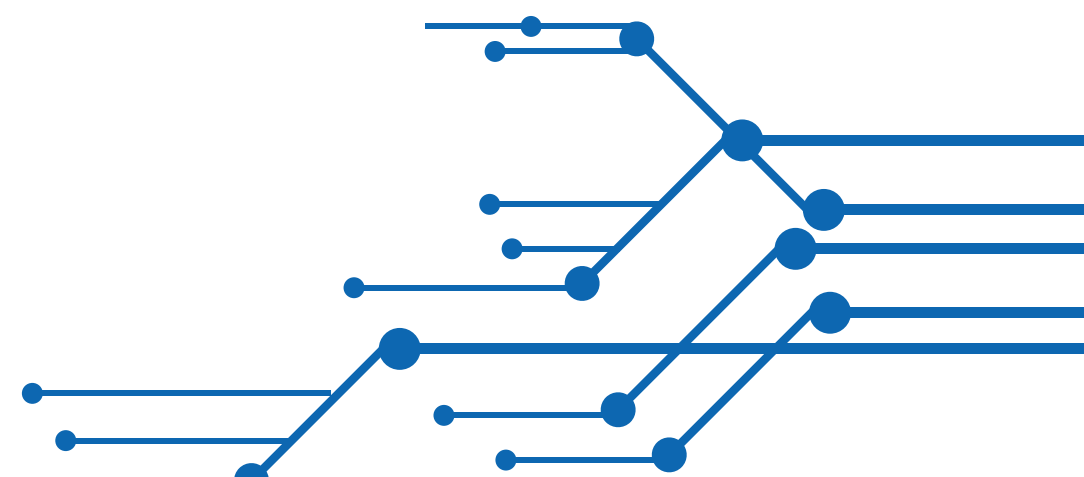
- Advance research in Brain Computing and create Intelligent Digital Systems.
- Utilize advanced AI technologies, such as Brain-Computer Interface, to analyze human brain activity.

Connected Systems and Intelligence Lab

- Conducts fundamental and applied research to address cutting-edge problems and promote activities focused on technology development.
- Collaborates with industry and academia to create innovative solutions for society and has developed several solutions for the Internet of Drones, the Internet of Vehicles, and smart surveillance.

Cyber Security Lab

- Analyses IoT malware extensively to proactively understand, identify, and combat evolving threats.
- Customizing security measures for immersive technologies to protect user privacy and data integrity.
- Devises robust encryption techniques to address potential vulnerabilities in the Quantum Computing era.





Data Engineering Lab

- Focuses on algorithmic research in the areas of Data Management and Data Intelligence.
- Development of highly scalable and reusable technologies and business models is the focus theme of the lab.

Image and Vision Computing Lab

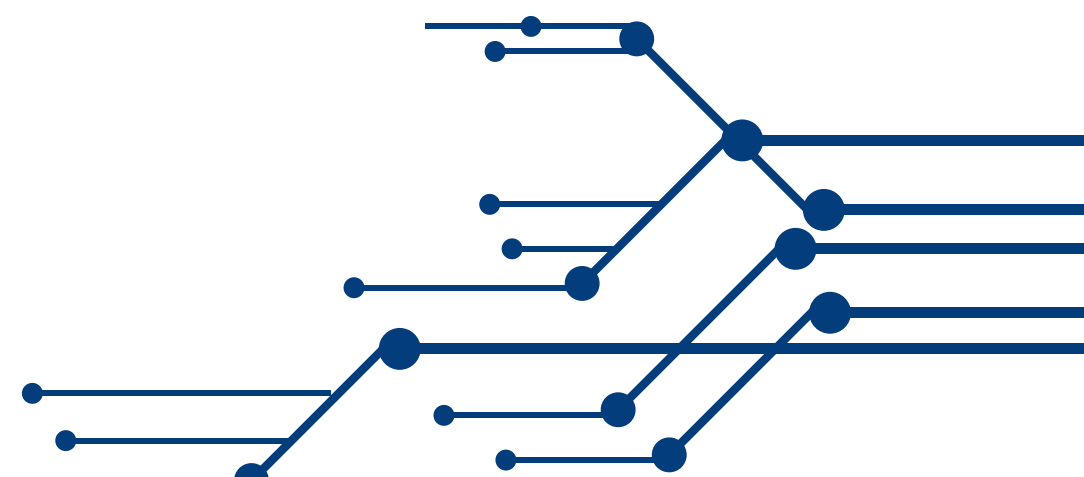
- Delves into refining the underlying algorithmic aspect of learning particularly in vision applications.
- Enhance visuals with advanced image and video signal processing technology.

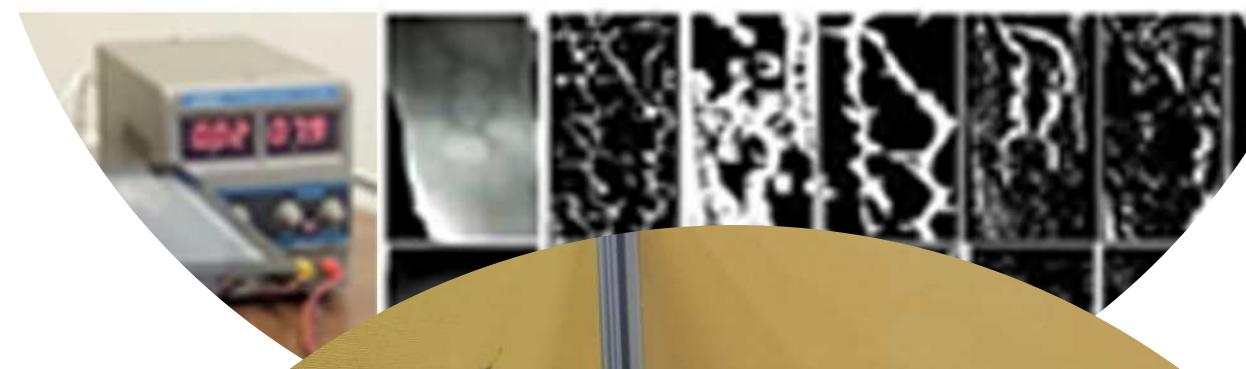
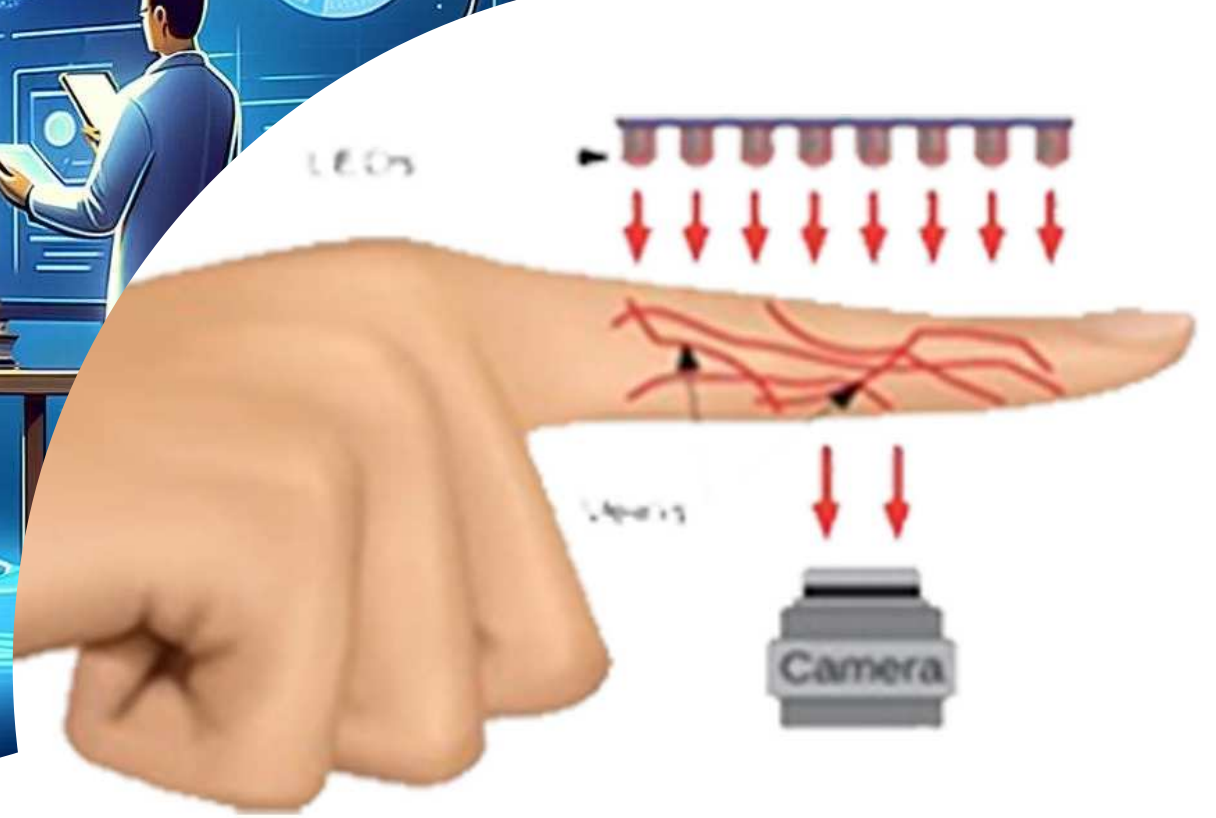
Optimization and Machine Learning Lab

- Diverse areas such as Bayesian optimization, Optimal transport, Algorithm unrolling, Uncertainty quantification contributing to the forefront of Optimization.

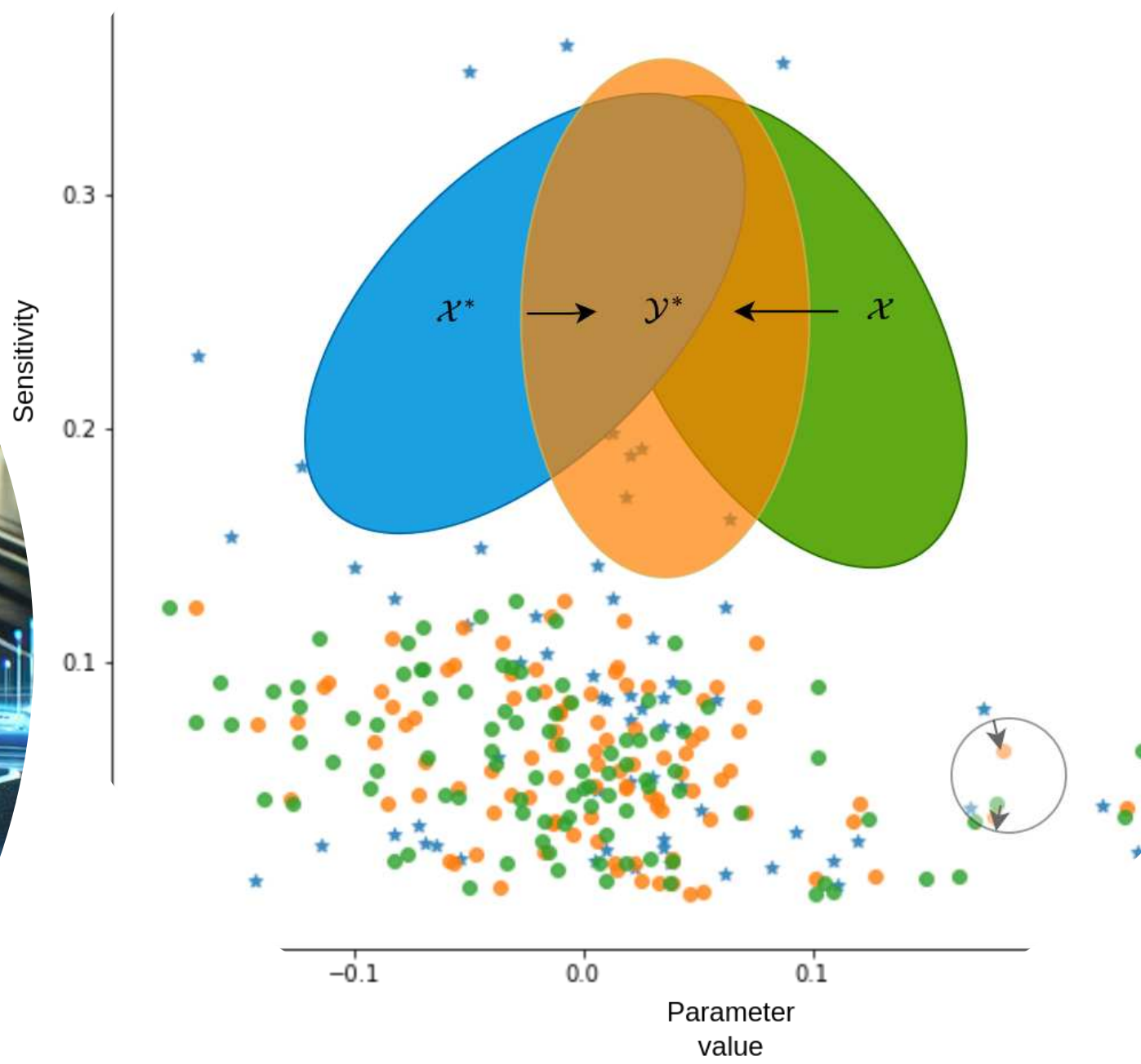
Virtual Resource Centre for Language Computing

- Conduct research and development on foundational and applied aspects of Language computing, Cognitive computing and cultural diversity.





- ★ Distribution Corresponding to T2
- ★ Optimized Distribution obtained
- ★ Distribution corresponding to T2



JOIN US

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