About the College

Sri Sivasubramaniya Nadar College of Engineering (SSNCE), an autonomous institution affiliated to Anna University, founded by Dr. Shiv Nadar, Founder Chairman HCL Technologies, is a philanthropic venture to give back to the society that nurtured him. SSNCE has been highly ranked and very reputed educational institution in Tamil Nadu, India, stands out as a premier center of higher learning with a mission of pursuing excellence in education and research. The institution, with its diverse and dynamic community of students, offers a distinctive combination of some of the undergraduate, postgraduate and research programs, accomplished faculty, world-class facilities, and a residential campus set on a sprawling 250 acres. SSNCE has been accredited by NAAC with A+ grade. The National Board of Accreditation has accredited 9 UG and 9 PG programs. SSNCE has been ranked 46th in the Engineering Category and 81st among all educational institutions in India by NIRF, MHRD.

Advisor

Dr. B. Praba,
Head, Department of Mathematics

Conveners

Dr. T.M. Rajalaxmi
Assistant Professor

Dr. S. Sampath Kumar
Assistant Professor

Registration Details

The workshop is open to UG/ PG Students, Research Scholars, Faculty and Professionals from Industry. **Prior knowledge of Python programming would be helpful. Registration fee is Rs. 600.** Registration includes a kit and working lunch. Registration will be accepted upto 20th March, 2025. **Paid Accommodation will be arranged at our college hostels on prior request.**

Email:
rajalaxmitm@ssn.edu.in;
sampathkumars@ssn.edu.in

Phone:
+91 9952968735;
+91 9944003615

Address:
Department of Mathematics,
Sri Sivasubramaniya Nadar College of Engineering (Autonomous),
Rajiv Gandhi Salai (OMR),
Kalavakkam, Chennai.
603110
http://www.ssn.edu.in

Two-Day National Workshop on Fundamentals of Machine Learning and Deep Learning

(Offline Mode)

March 27th & 28th, 2025

Organized by Department of Mathematics, Sri Sivasubramaniya Nadar College of Engineering, Chennai, Tamil Nadu

Registration Link

About the Department

The Department of Mathematics was established in 1996 to provide a strong foundation in Mathematics and its applications in Engineering both at undergraduate and postgraduate levels. The Department of Mathematics has 15 faculty members all of whom are doctorates, working on diverse areas such as Algebra, Rough set theory, Queuing Theory, Stochastic Process, Graph Theory, Fluid Mechanics, Functional Analysis, Topology, Image Processing, Machine Learning, Deep Learning etc. The department organizes various workshops, FDPs, and conferences periodically sponsored by SSN Trust and other funding agencies. The department is recognized research center under Anna University, Chennai. About 29 Ph.D. scholars obtained their degree and around 27 scholars are pursuing for the degree under the guidance of our faculty.

Resource Person

Dr. M. K. Bhuyan,
Professor,
Department of Electronics & Electrical Engineering,
IIT Guwahati.

Prof. Manas Kamal Bhuyan received a Ph.D. degree in electronics and communication engineering from the Indian Institute of Technology (IIT) Guwahati, India. He was with the School of Information Technology and Electrical Engineering, University of Queensland, St. Lucia, QLD, Australia, where he was involved in postdoctoral research. Subsequently, he was a Researcher with the SAFE Sensor Research Group, NICTA, Brisbane, QLD, Australia. In the year 2014-2015, he was a Visiting Professor with Indiana University and Purdue University, Indiana, USA. Dr. Bhuyan was a recipient of the National Award for Best Applied Research/Technological Innovation, which was presented by the Honorable President of India in the year 2012, the Prestigious Fullbright-Nehru Academic and Professional Excellence Fellowship, and the BOYSCAST Fellowship. He is an IEEE senior member. His current research interests include Machine Learning and Artificial Intelligence, Image/Video Processing, Computer Vision, Human Computer Interactions (HCI), Virtual Reality & Augmented Reality, and Biomedical Signal Processing.

Objectives

- **Strong foundation in key mathematical principles that underpin machine learning algorithms.**
- **To foster a deeper understanding of their mechanics and behavior.**
- **To develop analytical and problem-solving skills by applying mathematical methods to address real-world machine learning challenges.**
- **To facilitate the integration of mathematical knowledge into machine learning workflows to bridge gaps between theoretical research and practical implementation.**
- **To introduce advanced mathematical topics such as kernel methods, eigenvalue decomposition, and Bayesian inference for cutting-edge research and applications.**

Workshop Contents

- Introduction to Machine and Deep Learning
- Artificial Neural Networks
- Performance Measures
- Bias-Variance tradeoffs
- Linear Regression
- Bayes Decision Theory
- Normal Density
- Discriminant Function
- Bayes Decision Theory-Binary Features
- Logistics Regression
- Decision Trees
- Hidden Markov Model
- Dimensionality Problem
- Principal Component Analysis (PCA)
- Linear Discriminant Analysis (LDA)
- Support Vector Machine
- Mean-shift Clustering
- **Hands-on session (online)**