IMPORTANT DATES

Last date for registration: 19-02-2021
Confirmation by E-mail: 20-02-2021
Workshop Dates: 22-02-2021 to 26-02-2021

VENUE / MODE

Online mode using Google Meet

PARTICIPANTS

- Faculties from TEQIP Institutions and AICTE recognized Universities and Engineering Colleges.
- Practitioners from industries, scientists from R&D laboratories.
- Students at all levels (B.Tech/ M.Tech/ Ph.D) from technical institutions.

REGISTRATION AND CERTIFICATES

- This is an online workshop, and there is no registration fee. Registration is mandatory.
- The brochure of the workshop can be downloaded from the Institute website www.nitk.ac.in.
- E-mail the scanned attested-copy of the registration-form to mla21nitk@gmail.com
- Maximum seats: ~50 (on a first-come first-served basis).
- Links for joining the online sessions will be emailed only to the registered participants.
- E-Certificate will be issued only to the registered participants with full participation in the workshop.

REGISTRATION PORTAL

https://forms.gle/mcLqBcovc3mq6CKy8

CHIEF PATRON & CHAIRMAN

Prof. K. Umamaheshwar Rao
Director, NITK Surathkal

PATRONS

Prof. Ravikiran Kadoli
Coordinator, TEQIP-III
NITK Surathkal

Prof. T. Laxminidhi
Head, Dept of ECE
NITK Surathkal

COORDINATORS

Dr. Raghavendra B.S.
Assistant Professor
Department of ECE, NITK Surathkal
PO: Srinivasanagar, Mangaluru - 575025
Email: r.bobbi@nitk.edu.in
Phone: +91 824 247 3517

Dr. A.V. Narasimhadhan
Assistant Professor
Department of ECE, NITK Surathkal
PO: Srinivasanagar, Mangaluru - 575025
Email: dhansiva@nitk.edu.in
Phone: +91 824 247 3500

EMAIL FOR CORRESPONDENCE

mla21nitk@gmail.com

TEQIP-III Sponsored

Five-Day Workshop on

MACHINE LEARNING AND APPLICATIONS

22-26 FEBRUARY 2021

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA SURATHKAL

PO: Srinivasanagar, Surathkal
Mangaluru - 575025, Dakshina Kannada
Karnataka State, INDIA, www.nitk.ac.in

ABOUT NITK SURATHKAL

NITK Surathkal is a premier institute mainly engaged in imparting high-quality technological education and research, and offers undergraduate and postgraduate programs in Engineering, Science and Management. It is recognized as an Institute of National Importance by the Government of India, and carries out research and consulting activities mainly sponsored by the government agencies. The campus is located on the scenic shores of the Arabian Sea, on the National Highway 66, and about 20 km north of Mangaluru. It is well connected by road, rail and air, the nearest airport being Bajpe (about 14 km from Surathkal) and the nearest railway station, Surathkal (about 3 km from the campus). Having the vision to strive for excellence and to be globally competitive in technical education and to focus on knowledge assimilation, generation, and dissemination, NITK is committed to enhancing the capabilities and potential of human resources with the objective of transforming them into leaders in their chosen areas of interest.

ABOUT ECE DEPARTMENT

Electronics and Communication Engineering (ECE) department, was established in the year 1979, offers BTech in ECE, MTech in three domains (Signal Processing and Machine Learning, VLSI design, and Communication Engineering and Networks), and PhD program in the broad themes of signal processing, communication and networks, and VLSI design. The department has been actively involved in high-quality teaching, research and consultancy services. The department possesses a core group of well-trained, competent and highly motivated faculty and staff who have imbibed and adopted the best academic practices being followed around the world. The department has been successfully conducting sponsored research projects from DST, DRDO, AICTE, MoE and other research labs funded by the Govt of INDIA.

ABOUT THE WORKSHOP

Machine Learning (ML) is becoming ubiquitous, encompassing applications in a wide variety of domains and increasingly becoming popular and important. This motivates us to understand the theory and practice of the domain to come up with engineering solutions for a wide variety of application problems. The subject lies in the intersection of statistics, probability theory, computer science and algorithmic aspects. Consequently, it is essential to understand theoretical principles of ML to build an intelligent application which may need learning from the data and finding hidden patterns and insights.

Many of the time a minute-level technical details are abstracted away and hidden which leads to the situation wherein a practitioner becomes unaware of the design procedures which may limit the use of machine learning techniques. There is a necessity of having a thorough mathematical understanding of many of the concepts for a good grasp of the inner workings of the ML algorithms. The workshop on **Machine Learning and Applications** aims at giving a mathematical understanding of the principles and practical techniques for enthusiastic researchers and practitioners who are interested to learn more about the theory and practice behind successful machine learning-based solution techniques.

The workshop is intended to give an understanding of the foundational mathematical and algorithmic concepts of machine learning which intern motivates their usefulness in giving a machine learning solution to a variety of engineering problems.

REGISTRATION PORTAL

https://forms.gle/mcLqBcovc3mq6CKy8

COURSE CONTENT

- Introduction to machine learning
- Matrix methods for machine learning
- Probabilistic methods for machine learning
- Machine learning as a pattern recognition problem
- Deep generative models
- ML and Deep learning applications
- Hands on Python programming: Pandas, Numpy, TensorFlow
- Hands on machine learning with scikit-learn and TensorFlow

RESOURCE PERSONS

Dr. Ashok Rao
Former Head, Network Project
CEDT, IISc, Bengaluru
Currently Director, NIE-MC, Mysuru

Dr. Arulalan Rajan
Formerly Asst Prof, ECE, NITK Surathkal
Faculty, Proficience, CCE, IISc Bengaluru

Dr. Prathosh A.P.
Asst Prof. Dept of EE, IIT Delhi

Dr. Sharath
Senior Researcher
Mechanical Engineering, IISc Bengaluru
Formerly Researcher, VSSC, ISRO
Thiruvananthapuram

Dr. Sandesh Kamath
Senior Researcher, CSE, IIT Hyderabad
PhD, CMI Chennai