

Centre for Continuing Education of NIT Warangal:

The Centre for Continuing Education of NIT Warangal organizes Continuing Education Programs and Workshops in the frontier areas of Science, Engineering, Technology, Management, Humanities, Social Science and socially relevant themes on self-financing basis in three different modes: (i) At NIT Warangal by NIT Warangal (ii) At NIT Warangal in collaboration with other Organizations (iii) By NIT Warangal Faculty at the Host Organization/Institute.

About NIT Warangal:

National Institute of Technology Warangal, formerly known as Regional Engineering College was established in 1959. Over the years it has developed into a premier institute of higher learning and is ranked among the top technical education institutions in India. There are 13 Departments offering eight undergraduate and 32 post-graduate programs besides doctoral program. About 5000 students across the country and about 500 international students study in the campus. It is a fully residential campus sprawling over 250 acres with excellent infrastructure, state of the art library, seminar halls, guest houses and laboratories.



Brief Profile of the Department of CS & E:

The Department of Computer Science & Engineering was established in the year 1991. The department offers high quality undergraduate, postgraduate and doctoral programs. The Department has a team of well experienced faculty, graduated from IIT's, NIT's, Central Universities and other premier Institutes of higher learning. The department provides state-of-art research facilities to generate knowledge and develop technologies in the thrust areas of Computer Science and Engineering.

For any query regarding this program, please contact the Coordinators.

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Center for Continuing Education

Online Continuing Education Programme on “Machine Learning Models for Disease Diagnosis: A Practical Approach”

20th December
to
24th December, 2020

Call for Registration and Participation

Coordinators

Dr. Ramalingaswamy Cheruku

Dr. Ilaiah Kavati

Organized by
Department of CSE

In association with the
Center for Continuing Education



Overview of the FDP:

Machine learning in medicine has recently made headlines. Google has developed a machine learning algorithm to help identify cancerous tumors on mammograms. Stanford is using a deep learning algorithm to identify skin cancer. Still, machine learning lends itself to some processes better than others. The value of machine learning in disease diagnosis is its ability to process huge datasets beyond the scope of human capability, and then reliably convert analysis of that data into clinical insights that aid physicians in planning and providing care, ultimately leading to better outcomes, lower costs of care, and increased patient satisfaction. This FDP is aimed to bring out various machine learning models for disease diagnosis.

Objectives:

- The objective of the FDP is to introduce fundamentals of Machine Learning with its application in health care.
- The program would help the participants to understand the key concepts behind machine learning models.
- To give comprehensive knowledge of various classification, clustering, and ensemble models.
- To learn hyper-parameter and its fine tuning.
- This FDP also focuses on exploring various research opportunities and challenges in the healthcare field using machine learning.

Topics to be covered:

- ✦ Introduction to Machine Learning, Foundational Concepts
- ✦ Supervised Learning: Artificial Neural Networks, Statistical Classification Models, Case studies and Medical Applications.
- ✦ Unsupervised Learning: Clustering, Cluster Validity Indices, Case Studies, and Medical Applications.
- ✦ Ensemble Learning: Ada-Boosting, Stacking, Multi-Level, Sequential Models, Case Studies, and Medical Applications.
- ✦ Anomaly Detection for Medical Data: LOF, Normal Distribution, etc.
- ✦ Improving Machine Learning Models: Hyper-parameter tuning, Regularization and Optimization.
- ✦ Hands-on Tour to Machine Learning models, Public Datasets.

Resource Persons:

Eminent faculty from IITs, NITs, IIITs, Central Universities, Industry and Senior Faculty from different departments of NIT Warangal, will deliver lectures and conduct hands on sessions.

Registration is open to: Faculty members in all disciplines of Engineering, Sciences, Mathematics, Life sciences, Management, Post-Doctoral Fellows, Research Scholars, PG students, UG students who have an aptitude to work in the areas of Deep Learning.

How to Apply: Eligible candidates may apply by filling the following google form with payment proof on or before **30th November, 2020**.

<https://forms.gle/1NszmFjNgki5n4kv7>

Registration fee:

Category	Amount
Faculty, Post-doctoral fellows, Research Scholars, PG students, UG students	Rs. 500 /-
Industry participants	Rs. 1000/-

Registration fee may be remitted Online through NEFT to the Bank account given below. Proof of remittance of the requisite registration fee (with transaction number if online transaction) shall be uploaded in the google form.

Account Number	62403680215 (Savings Account)
Account Name	Center for Continuing Education NITW
Bank Name:	State Bank of India (SBI)
Branch:	NIT Warangal
IFSC Code:	SBIN0020149

Confirmation of Participation:

On receipt of the google form and fee remittance receipt, participants will be sent confirmation of their participation through email by **5th December, 2020**. As the program is conducted online, the number of participants in the workshop is limited to 100. *Candidates are advised to register early to avoid disappointment.*