



ONLINE FACULTY DEVELOPMENT PROGRAMME (FDP) In ONLINE ON Feature Engineering: The Backbone of Effective AI and ML Solution Applications

(3rd March - 14th March 2025)

Organised Under

Electronics & ICT Academy, NIT Warangal as HUB

by

Department of CSE and EE, International Institute of Information Technology (IIIT) Bhubaneswar

Sponsored by Ministry of Electronics and Information Technology (MeitY), GoI



Preamble:

"Electronics & ICT Academy – Phase II" was set up at NIT Warangal with financial assistance from MeitY, GoI. This academy's role is to offer Faculty Development Programmes in standardized courses and emerging areas of Electronics, Information Communication Technologies, training & consultancy services for Industry, Curriculum development for Industry, CEP for working professionals, Advice and support for technical incubation and entrepreneurial activities.

About the FDP:

The FDP titled "Feature Engineering: The Backbone of Effective AI and ML Solution Applications" focuses on integrating academic research with AI and Machine learning industry needs. Feature Engineering is a critical aspect of developing robust AI and ML solutions. It transforms raw data into meaningful features that enhance model accuracy, efficiency, and interpretability. This process is particularly vital in applications where data is complex, noisy, or incomplete, ensuring that AI models can extract valuable insights and make accurate predictions.

Major Course Content:

This course aims to explore practical applications of Machine Learning (ML) across diverse sectors, emphasizing the transformative role of feature engineering in bridging academic insights with real-world industry challenges. It also aims to build bridges between researchers and practitioners, fostering innovation and practical ML developments.

- Introduction to feature engineering in AI and ML
- Feature Extraction, Feature Selection, Dimensionality Reduction
- Supervised Learning: Regression and Classification
- Recognizing system
- AI-based searches strategic and Game search
- Unsupervised Learning: Clustering
- Feature Engineering for Predictive Analytics: Techniques and Best Practices

Advanced Feature Learning AI and ML Applications:

- Metaheuristics based feature selection in Biomedical data classification
- Application for Computer Vision: A Visual Surveillance Approach
- Machine Learning for Heart Disease Detection Using Heart Sound Features
- Harnessing Feature Engineering for Fault Detection in Power Systems Using AI
- Revolutionizing Fault Management in Smart Grids Through AI and ML

Faculty Conducting This Programme:

The programme will be conducted by faculty members from NIT Warangal; academicians in the concerned field from IITs/NITs/IIITs are invited to deliver lectures. Speakers from industries are also expected to deliver as part of the course.

Registration Fee Particulars:

Participants need to pay the Registration Fee Online using the following details:

Faculty and Research Scholars	Rs. 750/-
Industry Participants	Rs. 2250/-

Online Transfer Details

Account Name	: Electronics & ICT Academy NITW
Account No.	: 62423775910
IFSC	: SBIN0020149
Bank and Branch:	State Bank of India, NIT(REC) Warangal

How to apply:

Participants are required to fill the online registration form by clicking on the following link:

<https://forms.gle/UTW1rb1bEYqVK8So8>

Selection Criteria:

Selection will be done on first-come-first-serve basis to a maximum number of 50 (fifty). Candidates will be issued satisfactory certificates on successful completion of the course.

Important Dates:

Last date (Application)	01.03.2025
Selection List by E- mail	02.03.2025
Duration	03.03.2025 to 14.03.2025

About NIT Warangal:

National Institute of Technology, Warangal, is the first among 17 RECs set up as a joint venture of the Government of India and the state government. Over the years, the college has established itself as a premier Institute imparting technical education of a very high standard, leading to B.Tech degrees in various branches of engineering, M.Tech., and Ph.D. programs in various specializations. All B. Tech and M. Tech programs of NIT Warangal are NBA accredited.

About IIIT Bhubaneswar:

The Government of Odisha established the International Institute of Information Technology, Bhubaneswar in 2006. It is designed to be a premier institute of Information Technology and related areas. The Institute has been converted into a unitary university by the Government of Odisha on 20th Jan 2014. IIIT Bhubaneswar offers undergraduate, postgraduate, and doctoral programs, emphasizing hands-on learning, interdisciplinary collaboration, and industry partnerships.

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