



## FACULTY DEVELOPMENT PROGRAMME (FDP)

on

### Harnessing Python for Data Science: Mastering Libraries and Frameworks for Advanced Analysis

13<sup>th</sup> May – 23<sup>rd</sup> May 2024, Time: 2 PM to 6 PM

Organized by

E & ICT Academy, National Institute of Technology, Warangal

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

In collaboration with

Department of Information Science and Engineering

Nitte Meenakshi Institute of Technology, Bangalore - 64



NITTE MEENAKSHI  
INSTITUTE OF TECHNOLOGY

#### Preamble:

“Electronics & ICT Academy” was set up at NIT Warangal with financial assistance from MeitY, GoI. The jurisdiction of this academy is Telangana, Andhra Pradesh, Karnataka, Goa, Puducherry and Andaman & Nicobar Islands. This academy role is to offer faculty development programmes (FDPs) in standardized courses and emerging areas of Electronics, Information Communication Technologies, training and consultancy services for Industry, Curriculum development for Industry, CEP for working professionals, Advice and support for technical incubation and entrepreneurial activities.

This FDP is devoted to addressing the need to enhance the knowledge about the latest technologies pertaining to **Harnessing Python for Data Science Mastering Libraries and Frameworks for Advanced Analysis**, which is being conducted at the **NIT, Warangal, and NMIT, Bengaluru**.

#### Major Course Contents:

- Introduction to Python for Data Science
- Data Structures in Python
- Foundations of Data Science
- Data Manipulation with Pandas
- Data Visualization with Matplotlib and Seaborn
- Statistical Analysis with NumPy and SciPy
- Machine Learning Fundamentals with Scikit-learn.
- Interactive Visualizations with Plotly
- Geographic Data Visualization with GeoPandas
- Time Series Analysis and Forecasting
- Time Series Data Handling
- PySpark for Distributed Computing
- Natural Language Processing (NLP)
- Text Preprocessing Techniques
- NLP with NLTK and spaCy
- Image Processing and Computer Vision
- Image Manipulation with OpenCV
- Object Detection and Recognition
- Optimization Techniques for Data Science
- Linear and Nonlinear Optimization
- Feature Engineering and Selection
- Feature Extraction Techniques
- Feature Selection Strategies
- Bias and Fairness in Machine Learning

#### Faculty Conducting this Programme:

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

#### Eligibility:

The program is open to the Faculty of Engineering, MCA and

other allied disciplines in India. Industry personnel working in the allied discipline can also attend.

#### Registration Fee Particulars:

Faculty, Research Scholars, and Participants from Industry	Rs. 1000/-
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Participants need to pay the Registration Fee Online using the following details:

Online Transfer Details	
Account Name:	Electronics & ICT Academy NITW
Account No. :	62423775910
IFSC :	SBIN0020149

#### How to Apply:

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

Link to Apply:

<https://forms.gle/k7FTFZ4W9iaoCNxi8>



#### Selection Criteria:

Selection will be made based on a first-come-first-serve basis to a maximum number of 100 (hundred). The list of selected participants will be intimated through e-mail. The DD/online payment will be returned if a candidate is not selected. Candidates will be issued satisfactory certificates on successful completion of the course. Reservations are followed for selecting candidates as per GOI norms.

#### Important Dates:

Last date for Application	06/05/2024 (11:59 PM)
Selection List by Email	08/05/2024 (11:59 PM)
Duration	13/05/2024 (Monday) to 23/05/2024 (Thursday), 02:00 PM to 06:00 PM

#### About NIT Warangal:

NIT Warangal, the pioneering RECs offers top-notch technical education with B.Tech, M.Tech, and Ph.D. programs. All its B.Tech and M.Tech programs are NBA accredited. The Computer Science and Engineering department provides B.Tech in CSE, M.Tech in CSE and CSIS, and MCA. With experienced faculty, robust labs, and industry ties with Microsoft, IBM, Oracle, and others, it conducts sponsored programs regularly.

#### About NMIT Bengaluru:

Established in 2001, NMIT is one of the youngest engineering colleges to gain Autonomous Status and NBA accreditation. It holds NAAC 'A+' Grade and Platinum Grade by AICTE-CII. With a strong emphasis on research, NMIT hosts 11 Centers of Excellence. Dept. of ISE offers B.E, and Ph.D. programs; the department has well-experienced faculty and promotes industry-academia collaboration resulting in setting up labs with state-of-the-art technologies to foster innovation.

#### Coordinators

**Dr. Shiva Darshan S.L**

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