Electronics & ICT Academy IIT Roorkee

An Initiative of
Ministry of Electronics & Information Technology (MeitY)
Government of India

A Faculty Development Program
on
Python for Engineering Applications

In association with

National Institute of Technical Teachers Training & Research, Chandigarh

March 17 – March 21, 2025
(9:00 AM to 05:30 PM)
Register Before: March 14, 2025

Hybrid Mode: Venue: National Institute of Technical Teachers Training & Research, Chandigarh

Objectives of the course

The broad objectives of the course are:
- Provide a strong foundation in Python programming for AI applications.
- Train participants in data analysis, visualization, and preprocessing.
- Introduce machine learning algorithms and implementation techniques.
- Explore AI applications in healthcare, cybersecurity, and finance.
- Demonstrate hands-on AI/ICT tools for teaching and learning.

Focus Areas

- **Fundamentals & Pedagogy:** Essentials of Python, Strategic Instruction Pedagogy, and Expert Lecture from IIT Roorkee.
- **Data Science & Machine Learning:** Data Preprocessing, Exploratory Data Analysis, Machine Learning Algorithms, and AI Tools for Teaching.
- **Advanced AI Applications:** Healthcare AI Case Study, Computer Vision, and Generative AI by an expert from Intel.
- **Cybersecurity & AI:** DDOS Detection, Federated Learning, and AI for Cybersecurity.
- **Financial & Environmental AI:** Stock Price Prediction with LSTM, Air Quality Forecasting, and Social Network Analysis.

Why this course ?

The FDP on Python for Engineering Applications is designed to equip faculty members with the essential skills and knowledge required to integrate AI and Python-based applications into teaching, research, and real-world problem-solving. The course offers hands-on training in Python frameworks, machine learning, data processing, and advanced AI applications.

Course Features

- 40 Hours of Lectures, hands-on, and Pedagogy/Industry sessions.
- Lectures from Expert Speakers, Hands-on from industry/Academia experts.
- Access to learning material and video lectures
- Certificate by E&ICT Academy IIT Roorkee

Prerequisites

No experience is required, but fundamental knowledge of any programming language would be helpful.

Course Outcomes

- Master Data Preprocessing and Visualization
- Build and Evaluate Machine Learning Models
- Understand Federated Learning and Cybersecurity Applications
- Implement Generative AI and Large Language Models (LLMs)
- Develop Hands-on Experience in Computer Vision and Social Network Analysis
- Apply Python for Real-World Case Studies in Healthcare and Finance

Experts from Academia/Industry

Who Should Register?

Any Interested Faculty/PhD-Scholars & Industry Persons can register

Registration Fee

Fees: ₹ 250/- Faculty/Research Scholar
₹ 500/- Industry/Others
Note: Refund will be done in case of course cancellation only, with in 20 working days

How to make Payment

Please make the payment first using the below link upload the payment receipt when filling out the Google registration form

https://eict.iitr.ac.in/instruction-for-payment/

Conference Code: EICTIITR-FDP-25-35

Registration Link

https://forms.gle/A1xpn3euXgQJdEyL6

Scan QR for registration

Register before: March 14, 2025

Click to follow us on:

Who may benifits

- Academic Faculty and Students(UG/PG)
- Government Officials.
- Working Professionals in the Industry and Startups.
- Reasearch Scientists and Technical Staff.

This certificate can be considered in alignment with other Quality Improvement Programs (QIP) as well as NBA and NAAC for recognition/credit.

Principal Investigator

Prof. Sanjeev Manhas
ECE Department, IIT Roorkee

Course Coordinators

- Prof. Sanjeev Manhas, IIT Roorkee
- Dr. Maitreyee Dutta , NITTTR Chandigarh
- Dr. Amit Doegar, NITTTR Chandigarh

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