



Electronics & ICT Academy IIT Roorkee



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

Joint Faculty Development Program on

AI & Deep Learning

Two - Week Joint Faculty
Development Programme

In association with



Feb 1 - Feb 23, 2025
Saturday and Sunday
12:00 PM - 5:00 PM

Register Before: Jan 30, 2025

Mode of Delivery is Online



About E&ICT Academy

Electronics and ICT Academy is an initiative of Ministry of Electronics & Information Technology (MeitY), Govt. of India for conducting various Faculty/ Research Scholar Development Programme. Academy has planned short-term training programs on fundamental and advanced topics in IT, Electronics & Communication, Product Design, and Manufacturing with hands-on training and project work using the latest software tools and systems. In addition, the Academy will conduct specialized/customized training programs and research promotion workshops for corporate sector & educational institutions.

Prerequisites

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

Objectives of the course

- Introduce participants to the foundational concepts of AI, ML, and deep learning.
- Explore advanced deep learning techniques, including CNNs, RNNs, and attention-based models.
- Provide hands-on exposure to applying neural networks in real-world problems, including classification, regression, and sequence modeling.
- Familiarize participants with cutting-edge topics like transformers, large language models, and generative modeling.
- Emphasize the importance of explainability and interpretability in deep learning applications across various domains.

Focus Areas

- Fundamentals of Artificial Intelligence (AI) and Machine Learning (ML)
- Neural networks: Basics, challenges, and optimization techniques
- Deep learning architectures: Convolutional Neural Networks (CNNs), sequence models, and transformers
- Applications of advanced neural networks in classification, regression, and generative modeling, etc.

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

Course Outcomes

Participants are likely to:

- Understand and implement neural networks, including forward and backward propagation, and tackle vanishing/exploding gradient problems.
- Design and apply CNNs for image classification, regression problems, and leverage transfer learning techniques.
- Build and use sequence models like RNNs, LSTMs, GRUs, and transformers for various applications.
- Apply vision transformers and explainability methods to improve the transparency of deep learning models.
- Create and deploy generative models using autoencoders, variational autoencoders, and GANs in real-world scenarios.



Experts from Academia/Industry

Who Should Register?

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

Registration Fee

Fees: ₹ 500/- Faculty/Research Scholar
Note: Registration Fee is Refundable if the
cancellation request is submitted before the last date
of registration.

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-25-25

Registration Link

<https://forms.gle/X7zyWcAxT9XCpBCg9>



Scan QR for
registration

Register before:
Jan 29, 2025

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Resource Person

- Dr. R. Balasubramanian, IIT Roorkee
- Prof. Santosh Kumar Vipparthi, IIT Ropar
- Dr. Subrahmanyam Murala, Trinity College, Dublin
- Prof. Pritee Khanna, PDPM IIITDM Jabalpur
- Dr Amit Vishwakarma, PDPM IIITDM Jabalpur
- Dr Shivram Dubey, IIIT Allahabad

Principal Coordinator

**Dr Amit Vishwakarma, IIITDM
Jabalpur**

Joint Principal Coordinators

- Prof. Sanjeev Manhas, IIT Roorkee
- Prof. Jitin Singla , IIT Roorkee
- Dr. Arka Prokash Mazumdar, MNIT Jaipur
- Dr. Mukesh Kumar, NIT Patna
- Dr. Piyush Kumar, NIT Patna
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