

A Faculty Development Program on Machine Learning Techniques for Deep fake Detection

[23rd Sep - 27th Sep , 2024]

under the aegis of
Electronics & ICT Academy
IIT Roorkee



Supported by

Ministry of Electronics & Information
Technology
Government of India



Experts from Academia/Industry

Principal Investigator:

Prof. Sanjeev Manhas
E&ICT Academy, IIT Roorkee

**Certificates to participants by E&ICT
Academy IIT Roorkee**



Online Mode: ITM University
Gwalior

Why this course ?

Equip faculty members with cutting-edge knowledge and skills in detecting deepfakes through advanced machine-learning techniques. This course is designed to enhance teaching methodologies and research capabilities in the rapidly evolving field of digital forensics. Participants will learn to apply innovative machine learning algorithms to identify and mitigate the threats posed by deepfake technologies, fostering a deeper understanding of their implications in technology

Objectives of the course

- Overview of Machine Learning concepts and applications. machine learning techniques that are essential for detecting deepfake content
- Explore various machine learning models, including traditional algorithms and advanced deep learning techniques like CNNs, RNNs, and GANs, that are used in detecting deepfake content.
- Analyze real-world case studies where deepfake technology has been used maliciously and benignly, and explore how machine-learning techniques have been applied to detect and mitigate these instances.

Course Features

- 40 Hours of Lectures & Hands-on (Hybrid Mode)
- Lectures from Expert Speakers, Hands-on from industry experts
- Expert talks from the industry
- Access to learning material and video lectures
- Certificate by E&ICT Academy IIT Roorkee

Focus Area

- Introduction to Deepfake Technology
- The Socio-Political and Economic Implications of Deepfakes
- Machine Learning Fundamentals for Deepfake Detection
- Understanding the Mechanics of Deepfakes
- Recurrent Neural Networks (RNNs)
- Neural Networks (CNNs)
- Generative Adversarial Networks (GANs)

Prerequisites

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

Registration Link

<https://forms.gle/CSU9VW87h9fR67Yx8>

Registration Fee

Fees: ₹ 500/participant, non refundable
(Applicable for all)

Note: Refund will be done in case of course cancellation only,
with in 20 working days

How to make payment

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

Conference Code: EICTIITR-FDP-24-12

Course Coordinators

- Prof. Sanjeev Manhas, ECE Department, IIT Roorkee
- Dr. Pallavi Khatri, CSA Department, ITM University Gwalior
- Mr. Ratnesh Kumar Dubey, CSA Department, ITM University Gwalior

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