Electronics & ICT Academy IIT Roorkee

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

A Faculty Development Program
on

Advancing Healthcare with Explainable AI: Empowering Educators and Practitioners

In association with

UPES Dehradun

June 23 – June 27, 2025

Timings: 10:00 AM – 7:30 PM
Register Before: June 21, 2025

Venue: Hybrid Mode at UPES Dehradun, Uttarakhand 248007

Objectives of the Course

- To equip participants with the foundational and advanced knowledge of Explainable AI in healthcare
- To explore ethical, legal, and social implications of AI-driven decision-making in medicine
- To provide hands-on training in the implementation of XAI tools and frameworks
- To foster academic and industry collaboration in the development of reliable AI solutions for health applications

Why this course ?

The integration of Artificial Intelligence (AI) in healthcare is revolutionizing diagnosis, treatment, and patient care. However, the black-box nature of many AI models raises critical concerns around trust, interpretability, and ethical decision-making. This Faculty Development Program (FDP) is designed to address these gaps by introducing Explainable AI (XAI) techniques specifically tailored for healthcare, aiming to empower educators and practitioners with the knowledge to build transparent, ethical, and reliable AI systems.

Prerequisites

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

Experts from Academia/Industry

Who Should Register?

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

Registration Fee

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

FDP Kits & Refreshment will be provided

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/

EICT Course Code: EICTIITR-FDP-5H6-02

Registration Link

https://forms.gle/8CSqg2ZsWezDK5HZ8

Scan QR for registration

Register before:
June 21, 2025

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Course Outcomes

- Understand and apply key AI and XAI concepts in healthcare scenarios
- Evaluate AI models for fairness, transparency, and interpretability
- Integrate regulatory and compliance considerations into AI model design
- Use SHAP, LIME, Grad-CAM, and other techniques for explaining model behavior
- Develop basic healthcare AI prototypes using Python and MATLAB
- Lead research and curriculum development in the emerging field of Explainable Healthcare AI

Focus Areas

- Fundamentals of AI and ML in Healthcare
- Core concepts and tools in Explainable AI (XAI)
- Trust, bias, and fairness in medical AI systems
- Regulatory frameworks and compliance for healthcare AI
- Applications of XAI in medical imaging, diagnostics, and predictive analytics
- Hands-on practice with Python, MATLAB, SHAP, LIME, Grad-CAM, 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

Who may benifits

- Academic Faculty and Students(UG/PG)
- Government Officials.
- Working Professionals in the Industry and Startups.
- Research 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. Kapil Gupta , UPES Dehradun
- Dr. Virender Kadyan , UPES Dehradun

Reach Us:

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