



Electronics & ICT Academy IIT Roorkee



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

A Joint Faculty Development Programme on

AI in Medical Imaging and Diagnostics: Current Trends and Challenges

In association with



July 07 - July 14, 2025

Register Before: July 05, 2025

Mode of Delivery is Online

Course Outcomes

- Understand AI applications in diverse medical imaging modalities
- Build and evaluate models for disease detection and classification
- Handle medical datasets and apply preprocessing techniques
- Use deep learning frameworks for real-time diagnostics
- Address ethical and privacy challenges in healthcare AI
- Translate academic concepts into clinically useful research
- Guide students in interdisciplinary AI-healthcare projects



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

Basic knowledge of semiconductor physics, electronic circuits, and familiarity with simulation or programming tools.

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/ Students
₹ 1000/- Industry/Others
Note: Refund will be done in case of course cancellation only, within 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-JFDP-NKN-07

Registration Link

<https://forms.gle/yAoWuQvZURhLmzH48>



Scan QR for
registration

Register before:
July 05, 2025

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Objectives of the course

- To introduce fundamentals of AI and machine learning in medical imaging
- To explore current technologies in image acquisition, processing, and diagnostics
- To familiarize participants with deep learning models for image interpretation
- To examine data annotation, model training, and evaluation strategies
- To highlight clinical challenges and regulatory considerations in AI deployment
- To bridge the gap between healthcare needs and AI solutions
- To enable faculty to initiate research and student projects in medical imaging AI

Focus Areas

- Basics of medical imaging modalities (MRI, CT, X-ray, Ultrasound)
- Image segmentation, classification, and enhancement using AI
- Deep learning architectures (CNNs, GANs) for diagnostic support
- Dataset preparation, labeling, and model validation
- Clinical integration and decision support systems
- Ethical, legal, and regulatory aspects in medical AI
- Tools and platforms: Python, TensorFlow, Keras, MONAI

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

Principal Coordinator

- Prof. M P Singh, NIT Patna
- Dr. Shyam Singh Rajput, NIT Patna

Joint Principal Coordinator

- Prof. Sanjeev Manhas, IIT Roorkee
- Prof. Jitin Singla, IIT Roorkee
- Dr Anil Kumar, IIITDM Jabalpur
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