



ANRF-PAIR Outreach Activity

Five Days Virtual STC & FDP
on

AI/ML IN HEALTHCARE TECHNOLOGY: CURRENT TRENDS AND FUTURE DIRECTIONS

6th – 10th March 2026

National Institute of Technology Rourkela

Odisha, India

www.nitrkl.ac.in



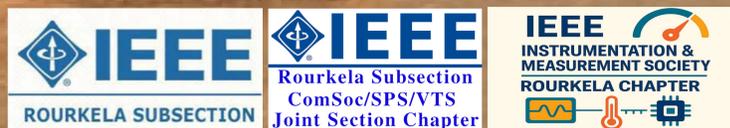
rourkela | NATIONAL INSTITUTE OF TECHNOLOGY

राष्ट्रीय प्रौद्योगिकी संस्थान
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Coordinator
Dr. Anwesa Sengupta
Dr. Suman Kr Dey
Prof. Dipti Patra
Prof. Susmita Das

COURSE OVERVIEW

Participants will learn the fundamentals of healthcare data types including electronic health records, medical images, physiological signals, and wearable sensor data. The course introduces core ML techniques such as supervised and unsupervised learning, deep learning, computer vision, and natural language processing, followed by their practical implementation in clinical scenarios like disease prediction, medical image analysis, patient risk stratification, remote monitoring, and personalized medicine. Special emphasis will be placed on emerging domains including explainable AI, federated learning, multimodal healthcare analytics, and AI-assisted decision support systems. The FDP also addresses critical aspects such as data privacy, ethics, bias mitigation, regulatory standards, and the safe deployment of AI in clinical environments. Hands-on sessions using open-source tools and healthcare datasets will enable participants to design prototype models and interpret results. By the end of the program, participants will be able to understand current technological trends, identify research opportunities, and develop interdisciplinary teaching and research modules in AI-enabled healthcare. The course ultimately aims to prepare educators and researchers to contribute effectively to next-generation smart healthcare systems and future digital hospitals.

TOPICS TO BE COVERED

- ⇒ Introduction to Artificial Intelligence, Machine Learning, and Deep Learning
- ⇒ Deep Learning for Biomedical Applications
- ⇒ Wireless Body Area Networks (WBAN) for Remote Health Monitoring
- ⇒ Cloud-based Healthcare Systems
- ⇒ AI Models in IoT-Healthcare Platforms
- ⇒ 5G-Enabled Remote Patient Monitoring

DISTINGUISHED SPEAKERS FROM ACADEMIA & INDUSTRIES

- ☺ **Dr. Ram Bilas Pachori**, Professor (HAG), Indian Institute of Technology Indore.
- ☺ **Dr. Mahesh K. H. Kolekar**, Assoc. Professor, Indian Institute of Technology Patna.
- ☺ **Prof. Susmita Das**, Professor, National Institute of Technology Rourkela.
- ☺ **Prof. Dipti Patra**, Professor, National Institute of Technology Rourkela.
- ☺ **Prof. Samit Ari**, Professor, National Institute of Technology Rourkela.
- ☺ **Prof. Harish Kumar Sahoo**, Professor, Veer Surendra Sai University of Technology Burla.
- ☺ **Dr. Tapas Kumar Patra**, Professor, Odisha University of Technology and Research Bhubaneswar.
- ☺ **Dr. Sobhan Kanti Dhara**, Asst. Professor, National Institute of Technology Rourkela.
- ☺ **Prof. Saptarshi Chatterjee**, Asst. Professor, National Institute of Technology Rourkela.
- ☺ **Dr. Sandip Ghoshal**, Asst. Professor, National Institute of Technology Rourkela.
- ☺ **Mr. Ankit Kumar**, Product Manager, IBM India.
- ☺ **Dr. Anup Nandy**, Assoc. Professor, National Institute of Technology Rourkela.



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National
Research
Foundation



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Five Days Virtual Short Term Course
& Faculty Development Program

on

AI/ML IN HEALTHCARE TECHNOLOGY: CURRENT TRENDS AND FUTURE DIRECTIONS

6th – 10th March 2026

Organized by

DEPARTMENT OF ELECTRICAL ENGINEERING

National Institute of Technology Rourkela

Odisha-769008, India

Technically Co-Sponsored by



ABOUT THE INSTITUTE

National Institute of Technology (NIT) Rourkela was founded as Regional Engineering College, Rourkela in 1961. It is a prestigious Institute with a reputation for excellence at both undergraduate and postgraduate levels, fostering the spirit of national integration among the students, a close interaction with industry and a strong emphasis on teaching and research in both basic and applied fields. Being an Institute of National Importance it has been consistently ranked within TOP 20 engineering institutes for last five consecutive years as per NIRF ranking of Ministry of Education, Government of India. The Institute houses twenty versatile departments across different fields of engineering, science, management, and humanities.

34	13	30	396
NIRF	NIRF	NIRF	QS
Overall	Engg.	Research	Asia

To know more about the Institute please [Click Here](#).

ABOUT THE DEPARTMENT

The department of Electrical Engineering is established with the vision to design technologies and nurture technologists for diverse and sustainable growth in electrical engineering, leading to wealth and welfare of humanity. The department offers various UG and PG programmes with the mission to develop a platform for forging students as technocrats in line with cutting-edge academic, research and modern industrial practices, and enhancing their aptness in any technical sectors across the globe.

To know more about the EE Department please [Click Here](#).

WHO SHOULD ATTEND

A team of distinguished experts from academia and industries will share their expertise on topics related to the role of AI/ML in Electrical, Electronics, and Biomedical Engineering Applications. Thus, the course is suitable for engineers, faculty, and research scholars pursuing a Ph.D. This course will open up many potential research directions, opportunities and challenges ahead. Interested UG and PG students who would like to further explore cutting-edge research in this area will be accommodated in this course.

The participants will be provided with online certificates upon successful completion of the course.

REGISTRATION DETAILS

Category	Registration Fee (including GST)#
Research Scholar/PG/UG Students	₹ 590.00
Faculties from Academia	₹ 944.00
Engineers from Industry and R&D Organizations	₹ 1,180.00
Participant from Abroad	\$ 118.00

Registration Fee*: To be deposited in the following account.

Account Name: Continuing Education NIT Rourkela

Account Number: 10138951784

IFSC Code: SBIN0002109

Swift Code: SBININBB137

Bank: State Bank of India

Branch: NIT Campus Rourkela

UPI ID: 01389517841@sbi

Registration fees is not required for Faculty/Staff/Student of NIT Rourkela.

To complete online registration, Please fill up the [Google Form](#) after paying the registration fee.

Registration deadline: 4th March, 2026

Confirmation to participants: 4th March, 2026

Online platform details and detail program schedule will be intimated by: 5th March, 2026



COORDINATORS

Dr. Anwasha Sengupta, Asst. Prof.

Dr. Suman Kr. Dey, Asst. Prof.

Dr. Dipti Patra, Professor

Dr. Susmita Das, Professor

Department of Electrical Engineering

National Institute of Technology Rourkela,

Rourkela, Odisha-769008, India

CONTACT AND QUERIES

You may write/call us for any queries at the following Email or phone number.

✉ [stc.ee.nitrkl\[at\]gmail.com](mailto:stc.ee.nitrkl[at]gmail.com)

Dr. A. Sengupta, ☎ (+91) 9432187482

Dr. S. K. Dey, ☎ (+91) 661-246-2414

