4 Weeks Online Certification Course

Introduction to Artificial Intelligence in Healthcare

Course Start Date: 14th June 2025
Lecture Time: 2:30 PM – 5:30 PM
Every Saturday

Jointly Offered by

- International Institute of Information Technology, Naya Raipur (IIIT-NR)
- Institute de Informatica (IDI)

Artificial Intelligence (AI) and Machine Learning (ML) transform how medical professionals diagnose, treat, and manage patients. Medical Professionals need the necessary skills and understanding to leverage these technologies effectively.

This course is designed to equip professionals with the knowledge and tools necessary to understand, evaluate, and apply AI in clinical settings, to enhance patient care and operational efficiency.

IIT Delhi Alumni established the **Institute de Informatica in 1995** to create SMART professionals. Since its inception, IDI has been conducting skill development courses in leading-edge technologies. IDI has conducted over **1,500** courses, training more than **30,000+** professionals. The institute has a team of SMEs and highly qualified and dedicated professionals, mainly from IITs and other leading institutes. These professionals are involved in live projects in collaboration with the healthcare industry. Recently, they completed two projects in collaboration with Imperial College, London.

Objectives

- ❑ **Concepts** of Artificial Intelligence (AI), Machine Learning (ML), and Deep Learning (DL)
- ❑ **Applicability** of these Technologies in Healthcare
- ❑ **Latest** Trends in AI and AI Opportunities in Healthcare
- ❑ **Implementation** of AI/ML Projects in Healthcare Establishments

Target Audience

- ❑ **Medical Professionals** Curious to Know how AI is Going to Impact the Healthcare Industry
- ❑ **Medical Faculties and Physicians** involved with Training Future Doctors / Health Professionals
- ❑ **Healthcare Startup Entrepreneurs**
- ❑ **Medical Students, Interns**, and **Researchers**

Eligibility

- ❑ **Basic Understanding** of Healthcare Processes and Clinical Practices
- ❑ **Desire** to Understand the Impact of AI/ML Technologies in Healthcare
- ❑ **Curiosity and Innovation** Driven Thinking
- ❑ **Futuristic** Outlook

Course Overview

- The course introduces the participants to the Concepts of Artificial Intelligence, Machine Learning, and Deep Learning and their applicability in healthcare. Use cases from healthcare make these concepts relevant to the participants.
- Each participant must work on example programs using **Google Colab Notebook** and the available datasets. This enables the participants to be aware of issues related to implementing an Artificial Intelligence project in a healthcare establishment.
- The course will conclude by introducing the latest trends in AI and how Healthcare can use these advancements to increase productivity.

Expected Outcomes

Healthcare professionals who are:

- Informed, Aware, and Responsible Users of AI
- Improved ability to assess AI/ML Models' suitability for a task
- Able to Evaluate, Test, and Validate AI Applications for Healthcare/Clinical Use Cases
- Able to Collaborate on AI Projects in Healthcare across Institutions

Course Content

The course is conducted online and led by an Instructor.

Week 1: Introduction to AI and ML
- Concepts of Artificial Intelligence, Machine Learning, and Deep Learning
- Evaluation Metrics to measure the performance of an ML Model
- Setting up Google Colab Notebook Environment for Practical Sessions

Week 2: Supervised and Unsupervised Learning
- Supervised Classifier Models: Decision Tree and K-Nearest Neighbour Classifiers
- Unsupervised Learning Model: K-means Clustering

Week 3: Deep Learning and Future Trends
- Deep Learning Models: CNN for Medical Images
- Generative AI (GAI), LLM, and Generative Adversarial Network (GAN)

Week 4: Clinical Data Handling for AI/ML Projects
- Data Sources and Types, Data Augmentation and Pre-processing, Data Quality, Protection, and Privacy
- Cost of Deployment of a Project

Course Faculty

The faculty for the course are practicing professionals with research credentials from world-renowned institutions.

Dr. Manoj Saxena is the Founder and CEO of NetEdge Computing, a leading IT services company specializing in AI and ML. He has extensive experience in Distributed AI, ML algorithms, and Agentic Workflow Frameworks.

Prof. K. K. Biswas retired as an Emeritus Professor from the Computer Science and Engineering Department, IIT Delhi. He has written over 160 Research Papers and supervised 18 Ph.D. theses in AI, ML, and allied technologies.

Course Delivery and Certification

Lectures: Instructor-led Online Sessions (60-minute Live Sessions) are held over the weekend for participants, followed by a 15-minute Q&A Session to clarify concepts.

Demo of AI applications: During the lecture, AI applications relevant to healthcare will be demonstrated to clarify the concepts taught in that session.

Expected study time per week: 3 – 4 hours

Certification: The Course Certificate will be jointly issued by the International Institute of Information Technology, Naya Raipur, and the Institute de Informatica upon completion of the course to each participant

Course Registration and Fee

Registration: Fill out the registration form with personal and professional details. Submit the proof of Professional Status (ID Card or College ID). **Course Start Date: 14th June 2025. Last Date for Registration: 9th June 2025**

Registration Link: *<Link will be Shared Shortly>*

Course Fee: The course Fee is as follows:
- Rs. 5,000/- per participant from the Healthcare Industry
    - Rs. 4,000/- per participant if 5 or more participants from the same Organization
    - Rs. 3,000/- per participant, if 10 or more participants from the same Organization
- Rs. 3,000/- per participant for Medical Students and Faculty Members of Medical Institutes

Contact Details
Course Coordinator: Krati Agarwal, Institute de Informatica
Email: krati@institudedeinformatica.com
Mobile: +91-98701-94014