

Preamble

Machine learning (ML) has emerged as a transformative force in healthcare, presenting enormous opportunities to revolutionize patient care, diagnosis, treatment, and management. This exploration highlights the significance of ML in healthcare, elucidating its pivotal role in connecting extensive patient data to extract valuable insights and enhance clinical decision-making. By reviewing recent advancements and case studies, it delves into how ML techniques like supervised and unsupervised learning, deep learning, and natural language processing are being utilized across diverse healthcare domains. Additionally, it addresses challenges, ethical considerations, and future directions in integrating ML technologies, highlighting their potential to amplify healthcare outcomes and innovation. It performs a critical role in improving the quality of medical care by transforming the conventional healthcare.

Indicative Topics

- Introduction to Machine Learning in Healthcare
- Supervised Learning Methods in Healthcare
- Unsupervised Learning and Clustering in Healthcare
- Deep Learning Applications in Medical Imaging
- Time Series Analysis in Healthcare
- Natural Language Processing (NLP) for Clinical Text Mining
- Role of Generative AI in Healthcare
- Evolution of Personalized Electronic Medical Record Platforms and ABHA Interface from NHA
- Hands-on Workshop: Building an ML Model for Healthcare
- Future Directions and Emerging Trends in Healthcare AI

Expected outcomes

- After completion of the FDP, participants are able to
- Understand machine learning's basics and significance in healthcare.
- Apply supervised learning for diagnosis and treatment prediction.
- Utilize unsupervised learning for patient segmentation and disease recognition.
- Implement deep learning for medical imaging analysis.
- Conduct time series analysis for patient monitoring and disease prediction.
- Use NLP to extract insights from clinical texts and records

- Apply generative AI for synthetic data and improved diagnostics.
- Understand personalized EMR platforms and national integration.
- Leverage AI for accelerated drug discovery and development.
- Securely manage and analyze healthcare data using cloud platforms.

Resource Persons

Eminent personalities with expertise in related fields from Industries, and other reputed institutions will deliver talks on various topics.

Targeted Participants

Professors/ Associate Professors/ senior Assistant Professors/ professionals from industry / Research Scholars, who have exposure to the subject, are eligible to attend.

Registration Fee/ Accommodation/ Selection criteria

No registration fee for participation. Outstation participants from AICTE approved institutions will be given TA/DA and accommodation as per AICTE/Institute norms. Selection will be done based on first-cum-first serve basis and the confirmed candidates will be notified immediately.

How to apply

Complete the registration form in all aspects and upload the scanned copy through the Google form link given below:

<https://forms.gle/Qh8FKXegzhVF8caJA>

Last date for receipt of registration form: 27.1.2025

Intimation of selection on or before: 29.1.2025

For further details contact:

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AICTE ATAL Sponsored Two weeks Faculty Development Program

on

Advancing Healthcare and Med-Tech through Machine Learning: From Theory to Practice

3 - 15 February 2025

Registration Form

1. Name: Male/Female:.....
2. Designation:
3. Organization:
4. Teaching Exp: Industry Exp:.....
5. Highest qualification:.....
6. Specialization:.....
7. Areas of interest:.....
8. Address for Communication:
.....
9. Mobile:.....
10. E-mail:.....

Declaration

The information furnished above is true to the best of my knowledge. I agree to abide by the rules and regulations governing the FDP.

Place:

Date:

Signature of the Applicant

DECLARATION

The above information is true to the best of my knowledge. I agree to abide by the rules and regulations governing the course. If selected, I shall attend the programme for the entire duration. I also undertake the responsibility to inform the chairman in case I am unable to attend the course.

Place:

Date: Signature of the Applicant

SPONSORSHIP CERTIFICATE

Mr/Ms/Dr _____

is an employee of our Institute / Organization and is hereby sponsored. He/She will be permitted to attend the programme in full, if selected.

Place: Signature of the Sponsoring Authority

Date: Office Seal

Application form completed in all respects is to be sent to:

Dr.R.C.Suganthe
Professor
Coordinator

AICTE ATAL Sponsored Two weeks Faculty Development Program on

Advancing Healthcare and Med-Tech through Machine Learning: From Theory to Practice

Department of Computer Science and Engineering

Kongu Engineering College

Perundurai, Erode-638 052

TamilNadu

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About the College

Kongu Engineering College was established in the year 1984, approved by AICTE, New Delhi, accredited by NAAC for 5 years with the grade of “A++” and an autonomous institution affiliated to Anna University, Chennai. The institution has completed 40 years of dedicated and excellent service in the field of technical education. It offers 14 UG, 6 PG and 16 Research programmes in Engineering, Applied Science and Management imparting high quality value education in India. It is one of the best self financing engineering colleges imparting high quality technical education in Tamil Nadu, India, and is well-known for its technical excellence, modern facilities, record of performance with excellent results and enterprising students, 2nd Position among Self Financing Engineering Colleges in Tamilnadu, 9th position in top Engineering colleges of super excellence and 64th position among 126 top Engineering Colleges in India including (IITs and NITs) in Competition Success Review (CSR). Kongu Engineering College has been awarded Swachha campus ranking for the year 2019 by AICTE.

About CSE Department

Department of CSE was started in the year 1988 with B.E. programme. With the increasing demand in Computer Science and Engineering, M.E programme was started in the year 1999. The department is recognized to offer research programme leading to Ph.D. The department aims at developing intellectually alert, scientifically progressive, globally competent and dynamic young IT professionals. Right from its inception it is continuously striving to impart quality education and promoting competitive spirit among students for academic excellence. The department has well equipped laboratories, good infrastructure, highly qualified and experienced faculty. A good number of research papers are published by the faculty in National/International conference proceedings/Journals. The department has signed MOUs with various organizations to provide real time training to the students. The department was sanctioned FDP under various schemes and was successfully executed.



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Department of
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Artificial Intelligence
Kongu Engineering College, Perundurai-638 052

(Accredited by NAAC with “A++” grade & NBA,
UGC Autonomous Institution and affiliated to Anna
University, Chennai)

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