

Department of Artificial Intelligence & Machine Learning Engineering

Machine learning (ML) is a subfield of AI that deals with creating algorithms that can learn from data and make predictions based on that data. This allows them to make decisions based on what they've seen before, rather than being given explicit instructions on what to do. This programme discusses AI and Machine Learning methods based in different fields, including neural networks, machine Intelligence, Deep Learning, Devops, Cyber security, Natural language processing and data mining etc, in order to present a unified treatment of machine learning problems and solutions. The scope and significance of AI and ML are enormous. They have the ability to change our lives in ways we can't even imagine right now.

The biggest difference between these two technologies is that artificial intelligence involves programming machines so that they can think like humans do, while machine learning does not require programming; instead, it uses algorithms to analyze data and make predictions based on those analyses. Both AI and ML are great at making decisions quickly and accurately, which means they're perfect for everything from medicine (diagnosing diseases) to finance (making stock predictions).

Ultimately, the goal is to develop an AI or ML system that's as close as possible to being human-like in its abilities: being able to understand context, convey emotion, etc. And although there's still a long way to go before achieving this goal (and it might never actually be reached!), these technologies are already having a huge impact on our lives today -- especially when it comes to making our lives easier!

Vision

- To develop globally competent and ethical professionals in the field of Artificial Intelligence and Machine Learning for noteworthy contribution in research, innovation and sustainable development.

Mission

1. Impart rigorous training to generate knowledge through the hands on experience on latest tools and technologies in Artificial Intelligence and Machine Learning.
2. Inculcate problem solving and team building skills and promote lifelong learning with a sense of societal and ethical responsibilities.
3. Mould students to be technically competent through innovation and leadership with collaboration of industry experts.
4. Provide a conducive environment for faculty to engage in and train students in progressive and convergent research themes by establishing Centre of Excellence.

Program Outcomes (POs)

Students are expected to know and be able to–

PO1	Engineering knowledge	An ability to apply knowledge of mathematics, computing, science, engineering and technology.
PO2	Problem analysis	An ability to define a problem and provide a systematic solution with the help of conducting experiments, analyzing the problem and interpreting the data.
PO3	Design/Development of Solutions	An ability to design, implement, and evaluate a software or a software/hardware system, component, or process to meet desired needs within realistic constraints.
PO4	Conduct Investigation of Complex Problems	An ability to identify, formulate, and provide systematic solutions to complex engineering/Technology problems.
PO5	Modern Tool Usage	An ability to use the techniques, skills, and modern engineering technology tools, standard processes necessary for practice as an IT professional.
PO6	The Engineer and Society	An ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modelling and design of computer-based systems with necessary constraints and assumptions.
PO7	Environment and Sustainability	An ability to analyze and provide solution for the local and global impact of information technology on individuals, organizations and society.
PO8	Ethics	An ability to understand professional, ethical, legal, security and social issues and responsibilities.
PO9	Individual and TeamWork	An ability to function effectively as an individual or as a team member to accomplish a desired goal(s).
PO10	Communication Skills	An ability to engage in life-long learning and continuing professional development to cope up with fast changes in the technologies/tools with the help of electives, professional organizations and extra-curricular activities.
PO11	Project Management and Finance	An ability to communicate effectively in engineering community at large by means of effective presentations, report writing, paper publications, demonstrations.
PO12	Life-long Learning	An ability to understand engineering, management, financial aspects, performance, optimizations and time complexity necessary for professional practice.

PSO No.	Program Specific Outcomes of AIML Engineering
PSO 1	An ability to apply the theoretical concepts and practical knowledge of Artificial Intelligence & Machine Learning in analysis, design, development and management of information processing systems and applications in the interdisciplinary domain. An ability to understand the computational fundamentals and computing resources.
PSO 2	An ability to analyze a problem, and identify and define the computing infrastructure and operations requirements appropriate to its solution. AI & ML graduates should be able to work on large-scale computing systems.
PSO 3	An understanding of professional, business and business processes, ethical, legal, security and social issues and responsibilities.
PSO 4	Practice communication and decision-making skills through the use of appropriate technology and be ready for professional responsibilities.