AICTE Training and Learning (ATAL)
Academy Initiative
One Week Faculty Development
Program
on

"Exploring Perspectives of AI and ML in Mechanical Engineering"

(27th Nov 2023 to 02nd Dec 2023)

Organized By

Department of Mechanical Engineering
K.K.Wagh Institute of Engineering
Education & Research Nashik.

(7Programme NBA Accrediated, NAAC "A" Grade, An Autonomous institute Affilated to SPPU, Pune)

ABOUT THE INSTITUTE

The institute was established in the year 1984 at Bhausaheb Nagar (Tal. Niphad, Dist. Nashik) and shifted to Nashik City in September 1986. The institute is approved by All India Council of Technical Education (AICTE), New Delhi and Government of Maharashtra, An Autonomous institute from A.Y. 2022-23 and affiliated to Savitribai Phule Pune University and has recognition under section 2 (F) and 12(B) of (UGC ACT 1956). The institute is adjudged as Grade 'A' by Government of Maharashtra. The institute is accredited by National Assessment & Accreditation Council (NAAC) with 'A' Grade, It is only institute in Nashik to be grouped thrice under "Platinum Category" by AICTE-CII Survey of Industry Linked Institutes and according to NIRF ranking survey 2016 ranked 85th amongst all engineering institutes in India. The only institute under SPPU that received funding for AICTE-Idea Lab Project.

Department of Mechanical Engineering

Department of Mechanical Engineering was established in the year 1995 and is approved by AICTE New Delhi and affiliated to Pune University. Department of Mechanical Engineering has been accredited by NBA, AICTE, New Delhi. Department is equipped with the state of the art equipment's and Laboratories with excellent computational facilities including professional software packages such as AutoCAD, PTC-Creo, Ansys, MATLAB, Master cam, Automation studio, etc. The Department is active academically with excellent results and is equally active in co-curricular activities including SAE, ISHRAE, MESA Renewable Energy and KK Motors sport Clubs.

Vision of the Department

To impart quality education to the students in the areas of Mechanical Engineering and expose them to the world of work.

Mission of the Department

M1: To impart analytical skills through adequate exposure to theory.
M2: To provide exposure to engineering practices.
M3: To inculcate professional ethics and provide necessary inputs for the development of overall personality.

PROGRAM OBJECTIVES

- ✓ To Understand & Analyze the fundamentals of sciences & mathematics for solving problems related to Mechanical Engineering.
- ✓ To learn the basics of Artificial Intelligence and various ways in which Artificial Intelligence is related to the real world.
- ✓ To provide necessary expertise for pursuing higher education/research in specialized domains like Artificial Intelligence, Machine Learning, MIS, etc.
- ✓ To learn practical approach of AI and Machine Learning using advanced tools and techniques.

ABOUT FDP

Artificial intelligence & Machine Learning is Multidisciplinary subject which focuses on technology for creating intelligent machines which can think and work like human beings. AI is a technology which enables a machine to simulate human behaviour.

This Faculty Development Program (FDP) is designed to focus on the Artificial Intelligence and Machine Learning. We will discuss its concepts, types, algorithms, techniques, and practical's for various applications. It will help to brush up the knowledge and skills of the faculty members of various academic institutions in India. This FDP will generate an ecosystem for research and provide the academic excellence in the system. The objective of this FDP is to provide the theoretical and practical knowledge about the Artificial Intelligence and Machine Learning.

FDP TOPICS

The following topics will be discussed and covered during the faculty development program

- ✓ *Artificial Intelligence and Machine learning for Mechanical Engineers*
- ✓ *Research Methodology*
- ✓ *Use of Python for Machine Learning*
- ✓ *Importance of Balancing and NVH in industry 4.0*
- ✓ *Data Acquisition and Visualization for Machine learning Models*
- ✓ *Reinforcement learning approach in Robotics*
- ✓ *Machine Learning using MATLAB/Python*
- ✓ *Image processing in damage detection*
- ✓ *Reinforcement learning approach in Robotics*
- ✓ *Industrial Case Studies on predictive maintenance-*

KEY SPEAKERS:

1. Dr. Vikas M. Phalle, Associate Professor, V.J.T.I. Matunga, Mumbai
2. Dr. Vijay Kumar Dalla, Assistant Professor NIT , Jamshedpur
3. Prof. Arvind Yadav, Professor, Parul University,Vadodara, Gujarat
4. Prof. Arun Balodi, Professor, Dayanand Sagar University,Bengaluru.
5. Dr.Abhishek Patange, Data Science & AI Specialist, ABB Pvt. Ltd. Bengaluru.

6. Mr. Hemant Bari, Manager, Adani Power Plant, Dahanu
7. Dr. Vishdeep Handikedkar, Sr. Engineer Monorail, Mumbai

PARTICIPANTS:

The faculty members of the AICTE approved institutions, research scholars, PG Scholars, participants from Government organizations, Industry (Bureaucrats/ Technicians/ Participants from Industry etc.) and staff of host institution.

REGISTRATION:

For registration refer the following link

https://atalacademy.aicte-india.org/

INSTRUCTIONS:

1. All registered participants are required to fill a consent form for confirmation of their participation in the FDP. The registration will be approved by the organizer only after receipt of the consent form.
2. Attendance in all sessions is mandatory with minimum of 80%.
3. A test will be conducted by the coordinator at the end of the program.
4. The certificates will be issued to those participants who have attended the program with minimum 80% of attendance and scored minimum 70% marks in the Continuous comprehensive Assessment.

Our Inspiration

Late Padmashri
Kakasaheb Wagh

Late Hon.
Shri. Balasaheb Wagh

PATRON
Hon. Shri. Sameer B. Wagh,
President,
K. K. Wagh Education Society, Nashik

Prof. (Dr.) K. N. Nandurkar
Director,
K.K.Wagh I.E.E.R. Nashik.

COORDINATOR
Dr. P. B. Kushare,
Professor,
Mechanical Engineering Department,
K.K.Wagh I.E.E.R. Nashik.

CO- COORDINATOR
Prof. G. R. Rayjade
Mechanical Engineering Department,
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