

About the Course and Objective:

In this course, we will provide detailed background about the evolution of AI techniques and what are the leading techniques (ANN, SVM and OAs) currently being used and potential techniques to meet the future requirements. This course will also provide the hands on experience to the candidates by explaining various applications of these techniques in the fields of Electronics & Communication, Mechanical Engineering, Computer Science Engineering and other related discipline. In broad, emphasis will be on application of AI techniques in engineering domain. **This course will be useful for all the Engineering disciplines people, who want to understand/ work with the AI techniques in their respective domain.**

Course Content

Motivation, Fundamental of AI Techniques, Overview of ANN and its variants, ANN architecture, Regression and Classifications, Limitations & Challenges for future research.

Introduction to KNN and SVM, Difference and Challenges, kernels, Classification and SVM applications, ELM and its applications

Optimization algorithms: Basics of Genetic Algorithms, PSO and DE, Recent challenges in optimization algorithms, research opportunities in the field of OA and its applications.

Hand-on training of MATLAB for ANN, SVM and OAs.

Various Engineering applications of ANN, SVM and OAs

Course Material:

Hard / soft copies of the lecture notes/presentations will be made available to participants at the end of lecture/presentation.

About the City

The city of Jabalpur is considered Sanskardhani, a "Cultural Center Place". It is a place of great historical and cultural importance. This Cultural capital of Madhya Pradesh is situated on the bank of the holy Narmada and famous for Dhuandhar Falls and Marble Rocks in Bheraghat. Simultaneously it is keeping pace with modern advanced knowledge. Jabalpur is an important junction for the Indian Railways. Jabalpur is a large Defence and Military Center. Jabalpur is also known for housing spiritual leaders Maharishi Mahesh Yogi and Bhagwaan Sri Rajneesh (Osho). The Jageshwar Nath Shiv Temple at Bandakpur, near Damoh, Kundalpur Jain Teerth Kshetra. near Damoha, Vishnu-Varaha Temple, Majholi, Pench National Park, Kanha Tiger Reserve, Bandhavgarh National Park are attractions near Jabalpur city.

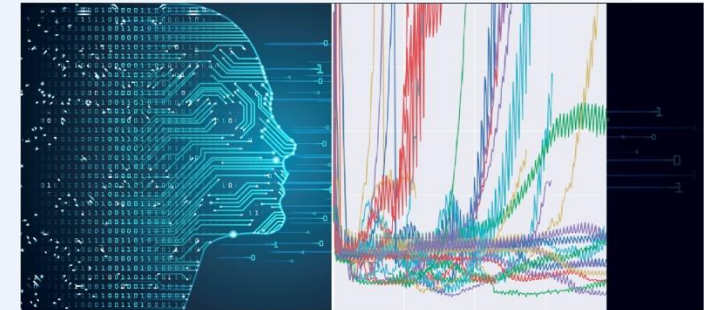
About the PDPM IIITDMJ

PDPM IIITDM Jabalpur was established in 2005 as a CFTI (Centrally funded Technical Institution) under the Ministry of HRD, Govt. of India. The Institute is being developed and nurtured under India - Japan partnership as a unique Institute of its kind with focus on IT enabled design and manufacturing. Under a joint agreement between the two Governments, Japan, a leader in cutting edge manufacturing technologies is committed to provide support for development of the teaching and research programmes and also to promote the infrastructure of the Institute. The Institute offers undergraduate, postgraduate and PhD programmes in Computer Science and Engineering, Electronics and Communication Engineering, Mechanical Engineering, Design and PhD programmes in Mathematics, Physics and Literature. Under IIIT act, the Institute has been declared as an Institute of National Importance in January 2015. The Institute campus is being developed on 250 acres of land close to Dumna Airport, Jabalpur. The Institute is 10 km from the main railway station and 5.5 km from Dumna Airport, Jabalpur.

AICTE (QIP) Sponsored Short Term Course on ARTIFICIAL INTELLIGENCE TECHNIQUES: NEURAL NETWORKS, SUPPORT VECTOR MACHINES and OPTIMIZATION ALGORITHMS



March 26-30, 2020



Organized by:

Discipline of Electronics and Communication Engineering, PDPM Indian Institute of Information Technology Design and Manufacturing, Jabalpur, Dumna Airport Road, Jabalpur-482005, India
(An institute of National importance, established by the MHRD, Government of India)

FEE

No course fee for participants sponsored by the AICTE approved Institutions. Only refundable security deposit of ₹. 1000/- needs to be paid.

Financial Assistance:

Limited number of participants (30) from the AICTE approved engineering institutions will be eligible for **to and fro train fare via shortest route in III AC class and free lodging and boarding in the Institute guest house/hostels during course period.** Candidates attending the course in full only will be eligible for TA. For all other participants, no TA will be paid.

Research Scholars and industry persons can also participate by paying non-refundable fee of ₹. 1000/- and ₹. 5,000/- respectively. There will be no TA/ DA for them.

The Security deposit/ registration fee is to be paid online in Allahabad Bank, Branch Mehgawan, Jabalpur (IFSC Code ALLA0212433) Account No. 50388395415 in favor of QIP PDPM IIITDM Jabalpur through any nationalized bank and payable at Jabalpur.

How to Apply?

Online: https://docs.google.com/forms/d/e/1FAIpQLSeT3NKTUSz_GuNWbb2ti99_YTqOBiXsxd4cAQnidlwYkZVR2A/viewform

By Email — Scanned copy of the filled in application form duly endorsed by the forwarding authority to be mailed at **qip.iiitdmj@gmail.com** by **March 21, 2020.** Application format is given in this brochure. Accommodation and local hospitality will be provided to the selected candidates from the AICTE approved institutions in the Institute guest house/hostels.

Important Dates:

Last Date of Registration: **March 21, 2020**
Intimation of Selection: **Within 24 hours of the application reception**
Course Duration: **March 26-30, 2020**

Note: The selected participants have to pay online ₹. 1000/- from any nationalized bank in Allahabad Bank, Branch Mehgawan, Jabalpur (IFSC Code ALLA0212433) Account No 50388395415 in favor of QIP PDPM IIITDM Jabalpur as a security deposit for confirmation of their participation. The security money will be returned back to the participant account only if he/she joins the course.

Tentative Resource Person

1. Prof G K Singh, IIT Roorkee
2. Dr. Millie Pant, IIT Roorkee
3. Dr. Om Prakash Verma, NIT Jalandhar
4. Dr. Narendra D Londhe, NIT Raipur
5. Dr. Anil Kumar, PDPM IIITDM Jabalpur
6. Dr. Varun Bajaj, PDPM IIITDM Jabalpur
7. Dr. Irshad A Ansari, PDPM IIITDM Jabalpur

Course Coordinators:

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Application Form

Name of the Course / Programme: **Artificial Intelligence Techniques: Neural Networks, Support Vector Machines and Optimization Algorithms**

Name of the Applicant (first, last): _____

Gender: M / F / T Category: GEN/SC/ST/OBC

Designation: _____

Name and Address of the Organization/Institute/College _____

City/town: _____ Email: _____

Contact Number: _____

Do you need accommodation? (Yes/No): _____

Note: Accommodation and meal facility will be available only from the evening of March 25, 2020 to the morning of March 31, 2020.

Date: _____ Signature of the Applicant
Place: _____

SPONSORSHIP

Prof./Dr./Mr./Ms./Mrs. _____
is an employee of our institute and his/her application is hereby sponsored. The applicant will be permitted to attend the AICTE sponsored short term course on **“Artificial Intelligence Techniques: Neural Networks, Support Vector Machines and Optimization Algorithms”** to be held at PDPM IIITDM Jabalpur during March 26-30, 2020, if selected.

Date: _____ Signature of Sponsoring Authority
Official Seal: _____