



### About MNIT Jaipur:

The college was established in 1963 with the name as Malaviya Regional Engineering College, Jaipur as a joint venture of the Government of India and the Government of Rajasthan, Subsequently; on June 26, 2002 the college has been given the status of National Institute of Technology and on 15 August 2007, Proclaimed Institute of National Importance through Act of Parliament. The Institute is fully funded by Ministry of Education (Shiksha Mantralaya), Government of India. More than 12,000 students have already been graduated since its establishment. Extending into an area of over 317 acres of lush greenery, the campus of the Institute is imaginatively laid-out with a picturesque landscape. It presents a spectacle of harmony in modern architecture, and natural beauty which enthralls and inspires. The campus of the institute consisting of the institute buildings, halls of residence and staff colony. It is a residential campus offering accommodation to faculty, staff and students.

### Contact Us

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### Confirmation of Participation:

Upon receipt of the google form and fee remittance receipt, participants will be sent confirmation of their participation through email by 03rd June, 2022. Candidates are advised to register at the earliest as the number of seats are limited.

### Highlights of the Course:

- **The courser will be conducted in hybrid mode. Candidates may attend the course in online and offline mode.**
- This short-term course will be conducted six hours a day (excluding breaks)
- The sessions will begin at 10 AM and conclude at 5 PM
- The majority of topics will be covered hands-on using Python.

### Benefits:

- Participants will get hands-on experience in using Python
- Participants will develop an understanding of ML algorithms.
- All the ML algorithms will be hand solved for greater understanding and then later, will be applied on real data



## SHORT TERM COURSE ON MACHINE LEARNING FOR NON-CODERS

**04 – 08 JULY, 2022**

### Coordinators

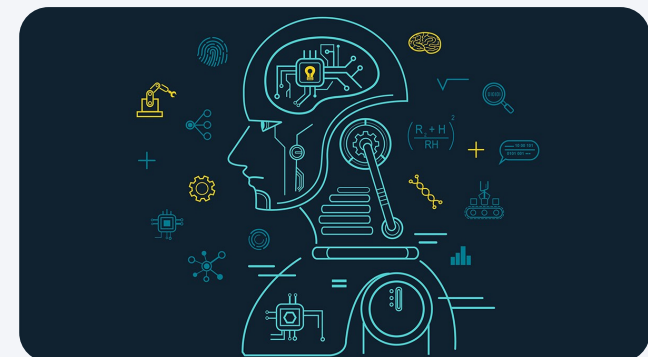
Prof. Rajesh Kumar (Dept. of Elect. Engg.)  
Dr. Gunjan Soni (Dept. of Mech. Engg.)  
Dr. Priyanka Harjule (Dept. of Mathematics)

### Organized by

Department of Electrical, Mechanical  
Engineering and Mathematics, MNIT Jaipur

### In association with the

Indian Institution of Industrial Engineering,  
Mumbai



## Overview of the Short term course:

This short-term course aims at imparting skills in the area of artificial intelligence

## Objectives:

- To introduce participant to the basic concepts and techniques of Machine Learning
- To develop skills of using recent machine learning software for solving practical problems
- To gain experience in doing independent study and research.

## Course Content:

### Module 1: Python for data science/ machine learning crash course

•Data Types, Comparison Operators, If, elif and else statements, For Loop, While Loop, Functions, Lambda Expressions, List Comprehension, Map and Filter, Python Essentials

### Module 2: Data Analysis :NumPy and Pandas

•Introduction to NumPy, NumPy Arrays, NumPy Array Indexing, NumPy operations, Pandas, Series, DataFrames, Missing values and Treatment, Group by - Merging, Joining and Concatenation, Data Input and Output

### Module 3: Exploratory Data Analysis

•EDA, •Introduction to Data Visualization, Hands on Matplotlib, Hands on Seaborn, Different types of visualizations and their typical use cases

### Module 4: Machine Learning

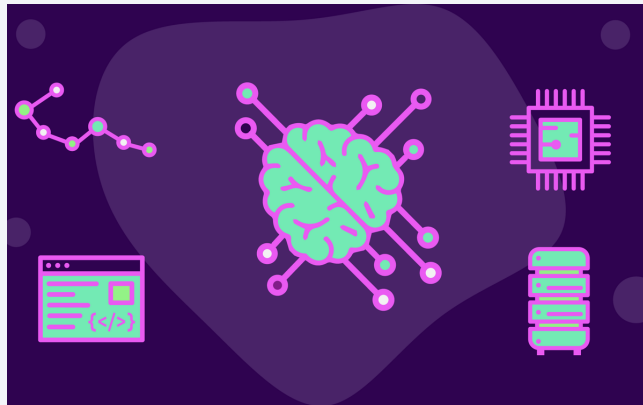
•Introduction to Machine Learning, Supervised, Unsupervised and Semi supervised Machine Learning, Data Pre-processing, Regression vs classification, Build your first machine learning Model: K Nearest Neighbour (KNN), Machine learning Model: Naïve Bayes, Logistics Regression, Decision Tree, Support Vector Machine (SVM), Evaluating classification models: Performance metrics, Regression ML Models, Evaluating Regression Models: Performance metrics, Concept of Overfitting, Underfitting. Bias Variance Trade-off, Ensemble Learning.

### Module 5: Deep Learning

Deep Neural Networks, Convolutional Neural Networks, Recurrent Neural Networks, Long Short Term Memory Networks, Gated Recurrent Unit, Generative Adversarial Networks, Graph Neural Network, Deep Belief Networks

## • LIST OF PROJECTS

1. Prediction of COVID-19
2. Diagnosis of knee abnormality
3. Alzheimer's Disease Detection
4. Epilepsy Detection using EEG Signal
5. Heart Disease Prediction
6. Early prediction of diabetes
7. Breast Cancer Prediction
8. Fake news detection
9. Handwritten Character Recognition
10. Sentiment Analysis
11. Recognition of human activities
12. Loan prediction
13. Housing Price prediction
14. Stock price prediction
15. Weather forecasting
16. Rainfall prediction
17. Earthquake Prediction Model
18. Bitcoin Price Prediction
19. Employee Attrition Prediction
20. Earthquake Prediction Model
21. Predict Tinder Matches
22. Predict Car Prices
23. Predict Migration
24. Predict Fuel Efficiency
25. Daily Births Forecasting
26. Next Word Prediction
27. Employee Turnover Prediction
28. Wine Quality Predictions
29. Books Recommended System
30. Energy consumption prediction



## Resource Persons:

Faculty from different departments of NIT Jaipur and Industry will deliver lectures and conduct hands-on sessions.

## Registration is open to:

Faculty members in all disciplines of Engineering, Sciences, Mathematics, Life sciences, Management, Post-Doctoral Fellows, Research Scholars, PG students, UG students who have an aptitude to work in the areas of data sciences and machine learning.

## How to Apply:

Eligible candidates may apply by filling out the following google form with payment of proof on or before 1st June 2022.

[https://docs.google.com/forms/d/e/1FAIpQLSdnTY9\\_gueSWxj4KksY3FdnSr9A-dtmC6VYbYOEv-MzBUxFPw/viewform](https://docs.google.com/forms/d/e/1FAIpQLSdnTY9_gueSWxj4KksY3FdnSr9A-dtmC6VYbYOEv-MzBUxFPw/viewform)

## Registration fee:

| Category                                    | Amount (incl. of GST)                        |
|---|--|
| Faculty                                     | Rs. 2500 /- (Offline)<br>Rs. 1500/- (Online) |
| Research Scholars, PG students, UG students | Rs. 1500/- (offline)<br>Rs.1000/- (Online)   |
| Industry person                             | Rs. 5000/- (offline)<br>Rs. 3000/- (Online)  |

**Account Number: 676801700388**

**Account Name: Registrar (Sponsored research)**

**Bank Name: ICICI bank Ltd.**

**Branch: MNIT Jaipur**

**IFSC Code: ICIC0006768**