FULL CURRICULUM · 2026

# Machine Learning

## Teach computers to learn from data — the skill behind every AI product.

Every module, every lesson — the complete syllabus, end to end.

| 32 | 133 | 7 | ₹31,000 |
|---|---|---|---|
| MODULES | LESSONS | MONTHS | FULL PROGRAMME |

## What this course covers

### 1 Level 1 · Beginner

Introduction · Python Programming · Data Preprocessing in Python

**2 months** · **10** modules · **47** lessons · **₹7,500**

### 2 Level 2 · Intermediate

Random Forest Regression · Evaluation of Regression Models · Logistic Regression

**2 months** · **10** modules · **24** lessons · **₹10,000**

### 3 Level 3 · Advanced

Hierarchical Clustering · Apriori Algorithm · ECLAT Algorithm

**3 months** · **12** modules · **62** lessons · **₹13,500**

# The whole journey

This is the complete syllabus for Machine Learning — 32 modules and 133 lessons, in the order you will learn them. The level markers show how far each stage carries you, but the curriculum runs as one continuous path from the first lesson to the last.

1

LEVEL 1

## Beginner

Introduction · Python Programming · Data Preprocessing in Python

**2 months** · **10** modules · **47** lessons · **₹7,500**

### 1. Introduction

3 lessons

- Intro to ML and its types
- Applications and Challenges
- Intro to Python Module

### 2. Python Programming

12 lessons

- Python Data Types
- Data Types Practical
- List in Python
- Tuples in Python
- Dictionary in Python
- Sets in Python
- Loops in Python
- Comprehension in Python
- Functions in Python
- Lambda Functions in Python
- Exception Handling in Python
- Regular Expressions in Python

### 3. Data Preprocessing in Python

11 lessons

- Dataset Preparation
- Training and Testing Set
- Importing Dataset
- Essential Libraries for Pre Processing
- Numpy Introduction
- Numpy Operations & Manipulation
- Numpy Bonus Operations
- Pandas in Python
- Pandas Operations for Data
- Pandas Bonus Operations
- Matplotlib in Python

### 4. Handling Missing Data & Feature Scaling

2 lessons

- Handling Missing Data
- Feature Scaling in ML

### 5. Data Preprocessing in R

3 lessons

- What is R
- R Installation
- Preprocessing Codes in R

## 6. Linear Regression

4 lessons

- Linear Regression
- Linear Regression Code
- Plot for Predicted vs. Test Data
- Linear Regression using R

## 7. Multiple Linear Regression

3 lessons

- Multiple Linear Regression
- Multiple Linear Regression Code
- Multiple Linear Regression using R

## 8. Polynomial Regression

3 lessons

- Polynomial Regression
- Polynomial Regression Code
- Polynomial Regression using R

## 9. Support Vector Regression

3 lessons

- Support Vector Regression
- SVR Code
- SVR using R

## 10. Decision Tree Regression

3 lessons

- Decision Tree Regression
- Decision Tree Code
- Decision Tree using R

2

LEVEL 2

# Intermediate

Random Forest Regression · Evaluation of Regression Models · Logistic Regression

**2 months** · **10** modules · **24** lessons · **₹10,000**

## 11. Random Forest Regression

3 lessons

- Random Forest Regression
- Random Forest Regression Code
- Random Forest in R

## 12. Evaluation of Regression Models

3 lessons

- Evaluation of Regression Models
- Regression Model Selection in Python
- Evaluation Metrics Bonus

## 13. Logistic Regression

2 lessons

- Logistic Regression & Code
- Logistic Regression using R

## 14. Support Vector Machine

2 lessons

- Support Vector Machine and Code
- SVM using R

## 15. K Nearest Neighbors (KNN)

3 lessons

- K Nearest Neighbours
- KNN Code
- KNN using R

## 16. Decision Tree Classification

2 lessons

- Decision Tree Classification and Code
- Decision Tree using R

## 17. Random Forest Classification

2 lessons

- Random Forest Classification and Code
- Random Forest Using R

## 18. Naive Bayes Classification

2 lessons

- Naive Bayes Classification & Code
- Naive Bayes using R

## 19. Evaluation of Classification Models

1 lessons

- Evaluation Metrics in Classification

## 20. K Means Clustering

4 lessons

- K Means Clustering
- K Means Clustering Code Python
- Optimising K Means Clustering and Elbow Method
- K Means Clustering using R

3

LEVEL 3

# Advanced

Hierarchical Clustering · Apriori Algorithm · ECLAT Algorithm

**3 months** · **12** modules · **62** lessons · **₹13,500**

## 21. Hierarchical Clustering

3 lessons

- Hierarchical Clustering
- Hierarchical Clustering using Python Code
- Hierarchical Clustering using R

## 22. Apriori Algorithm

4 lessons

- Apriori Algorithm
- Market Basket Analysis
- Apriori Implementation in Python
- Apriori Code using R

## 23. ECLAT Algorithm

3 lessons

- ECLAT Algorithm
- ECLAT Code
- ECLAT vs Apriori

## 24. Reinforcement Learning

7 lessons

- What is Reinforcement Learning
- Multi-Armed Bandit Exploration vs Exploitation
- Upper Confidence Bound Algorithm
- UCB using Python and R
- Thompson Sampling Algorithm
- Deterministic vs Probabilistic UCB & Thompson Sampling
- Thompson Sampling Code

## 25. Natural Language Processing

17 lessons

- NLP-Introduction, Challenges & Applications
- Introduction to NLTK
- Stop Word Removal
- Tokenization
- Stemming and Lemmatization
- Named Entity Recognition
- POS Tagging
- POS Tagging Approach & Applications
- Rare Word Removal
- Correcting Words using NLTK
- Bag of Words Technique
- Word Embeddings
- What is Sentiment Analysis
- Sentiment Analysis Implementation
- Sentiment Analysis with machine Learning
- ML for Sentiment Analysis Code
- Training & Hyperparameter Tuning for Sentiment Analysis

## 26. ML Model Deployment

3 lessons

- What is Model Deployment
- Introduction to streamlit
- Model Deployment using Streamlit

## 27. Deep Learning : Artificial Neural Networks

8 lessons

- Introduction to Deep Learning: History and Context
- Machine Learning vs. Deep Learning
- DL Basics Neurons,Synapses,Activation Funcns
- Understanding Activation Functions
- Artificial Neural Networks
- Gradient Descent vs Brute Force Optimization
- ANN Code in Python
- ANN using R code

## 28. Deep Learning : Convolutional Neural Networks

7 lessons

- Convolutional Neural Networks
- Understanding Layers of CNN
- Convolution in CNN
- Keras & TensorFlow for CNN
- CNN using Python
- Introduction to Transformers
- Encoder Decoder Achitecture

## 29. Dimensionality Reduction

6 lessons

- What is Dimensionality Reduction
- Principal Component Analysis
- PCA in Python
- PCA using R
- Linear Discriminant Analysis and Code
- Kernel PCA and Code

## 30. Model Selection and Boosting

2 lessons

- K Fold Cross Validation & Code
- Gradient Boosting for Classification Problems

## 31. Capstone Project

1 lessons

- ML Project

## 32. Conclusion

1 lessons

- ML - Conclusion & Future Scope

## Certificates & what comes next

You receive a certificate at the end of every level you finish. Join for a single level or the full programme — the choice is yours. Learners who stand out may be invited to work on live client projects as interns; these places are merit-based, limited, and depend on projects being available.