



# MACHINE LEARNING COURSE

45 DAYS PRACTICAL COURSE IN JAIPUR



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## Course Overview

### Become Job-Ready with Hands-On Machine Learning Training

Machine Learning is at the heart of data-driven innovation across all industries. This **45-day Machine Learning Course by SkillUpgrades** offers in-depth training on supervised and unsupervised learning, data handling, model evaluation, and deployment techniques — all using **Python** and industry tools like **scikit-learn, Pandas, and Matplotlib**.

You'll go from fundamentals to building predictive models for classification, regression, clustering, and recommendation systems — with real projects, assignments, and career-ready skills.

## What You'll Learn

- Introduction to AI, ML, and Data Science Ecosystem
- Python for Machine Learning: libraries & environments
- Supervised learning: regression, classification
- Unsupervised learning: clustering, dimensionality reduction
- Feature selection, data preprocessing, and scaling



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- Model training, tuning, and cross-validation
- Evaluation metrics: accuracy, precision, recall, F1-score
- Deploying ML models using Flask or Streamlit
- Real-world projects: sales prediction, customer segmentation, spam detection
- Building your GitHub portfolio and resume projects

## Who Should Enroll

- Students and freshers in IT, engineering, or statistics
- Software developers, data analysts, and testers
- Freelancers and professionals looking to enter AI/ML
- Entrepreneurs and product builders using smart tech

## Requirements

- Basic Python programming knowledge
- Laptop with minimum 8GB RAM
- Curiosity to work with data and real-world problems
- No prior experience in AI or ML required



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## Course Modules – Machine Learning (45 Days)

### Module 1: Python for ML & Data Preparation

- Python essentials: NumPy, Pandas, Matplotlib
- Data wrangling, missing values, data scaling
- Visualization and EDA (Exploratory Data Analysis)

### Module 2: Supervised Learning Algorithms

- Linear Regression and Logistic Regression
- Decision Trees, Random Forests
- K-Nearest Neighbors (KNN)
- Naive Bayes Classifier
- Evaluation metrics & confusion matrix

## Module 3: Unsupervised Learning Techniques

- K-Means Clustering
- Hierarchical Clustering
- PCA (Principal Component Analysis)
- Applications in customer segmentation

## Module 4: Model Evaluation & Tuning

- Train-Test Split and Cross Validation
- Overfitting, underfitting, and regularization
- Grid Search and hyperparameter tuning
- ROC, AUC, and performance interpretation

## Module 5: Real-World Projects

- House Price Prediction
- Loan Approval Classification
- Spam/Ham Email Detection
- Customer Segmentation for Retail



## Module 6: Model Deployment & Career Tools

- Introduction to Flask and Streamlit
- Deploying your ML model as a web app
- Publishing on GitHub and portfolio building
- Resume guidance and interview preparation

## Course Highlights

- Structured learning path from basics to project deployment
- Tools: Jupyter, scikit-learn, Pandas, Matplotlib
- Real industry datasets and assignments
- Certification of Completion
- Career support and project portfolio development

# Thank You



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