Weavers Web™
academy

Machine Learning Courses

Course Duration:	6 Months
Mode of Training:	Offline/Online
Price:	**INR 60,000/-**

Our USP:

- Mentors From Top Notch Tech Companies
- 1:1 Live Doubt Clearing Sessions
- Dedicated Relationship Manager/Counsellor

Weavers Web™ academy

Machine learning Course Module →

Module 1: Introduction to Machine Learning

Overview of Machine Learning

- Definitions and key concepts
- Types of Machine Learning: Supervised, Unsupervised, and Reinforcement Learning

History and Evolution

- Key milestones in Machine Learning
- Impact on various industries

Tools and Software

- Introduction to Python, R, and other tools
- Popular libraries: Scikit-learn, TensorFlow, PyTorch

Module 2: Supervised Learning

Regression

- Linear Regression
- Polynomial Regression
- Techniques to prevent overfitting

Classification

- Logistic Regression
- Decision Trees and Random Forests
- Support Vector Machines
- Neural Networks Basics

Model Evaluation

- Confusion Matrix
- Cross-Validation
- Precision, Recall, and F1 Score

Module 3: Unsupervised Learning

Clustering

- K-means Clustering
- Hierarchical Clustering

Dimensionality Reduction

- Principal Component Analysis (PCA)
- t-SNE

Association Rule Learning

- Apriori Algorithm
- Eclat Algorithm

Weavers Web™ academy

Module 4: Deep Learning

Foundations of Neural Networks

- Neuron and architecture
- Activation functions

Convolutional Neural Networks (CNNs)

- Applications in image recognition and video analysis
- Building and training a CNN

Recurrent Neural Networks (RNNs) and LSTMs

- Time-series analysis
- Natural Language Processing (NLP) basics

Advanced Topics

- Autoencoders
- Generative Adversarial Networks (GANs)
- Reinforcement Learning

Module 5: Practical Applications and Case Studies

Industry-Specific Applications

- Healthcare: Medical image analysis
- Finance: Algorithmic trading
- Retail: Customer segmentation and recommendation systems

Project-Based Learning

- Defining project scope and objectives
- Data acquisition and cleaning
- Model building, training, and deployment

Module 6: Ethical AI and Future Trends

Ethical Considerations

- Bias and fairness in ML models
- Privacy concerns with data handling

Future of Machine Learning and Deep Learning

- Emerging technologies and methodologies
- Potential impact on various sectors

Weavers Web™ academy

Module 7: Hands-on Labs and Workshops

Lab Sessions

- Coding exercises and problem sets
- Real-world datasets analysis

Capstone Project

- Group projects addressing real industry problems
- Presentation and peer review