

4 To 6 Month Courses

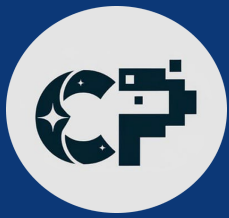


COSPIXARE
TECHNOLOGIES

MACHINE LEARNING

AVAILABLE ON ONLINE LIVE CLASS





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1. Introduction to Machine Learning

Understand what Machine Learning (ML) is, how it differs from traditional programming, and explore its types—supervised, unsupervised, and reinforcement learning.

Key Outcomes:

Build foundational understanding of how machines learn from data.

2. Python for Machine Learning

Brush up or learn essential Python skills: data types, control flows, functions, libraries, and writing clean, reusable code for ML applications.

Key Outcomes:

Become proficient in Python for ML pipelines.

3. Mathematics for ML – Statistics, Probability & Linear Algebra

Dive deep into core mathematical concepts used in ML:

- Mean, median, variance
- Probability distributions
- Matrices and vectors
- Eigenvalues and optimization

Key Outcomes:

Understand the math behind ML models and algorithms.

4. Data Preprocessing & Feature Engineering

Learn how to clean and transform raw data into usable format:

- Handling missing data
- Categorical encoding
- Feature scaling (Standardization & Normalization)
- Outlier detection

Key Outcomes:

Prepare high-quality input for ML models.

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5. Exploratory Data Analysis (EDA)

Use Pandas, Matplotlib, and Seaborn to analyze datasets, visualize trends, and uncover patterns that inform model building.

Key Outcomes:

Develop data intuition and storytelling with visuals.

6. Supervised Learning Algorithms

Explore key algorithms including:

- Linear Regression & Logistic Regression
- Decision Trees & Random Forests
- Support Vector Machines (SVM)
- Gradient Boosting (XGBoost, LightGBM)

Key Outcomes:

Solve classification and regression problems with accuracy.

7. Unsupervised Learning Algorithms

Understand techniques for learning from unlabelled data:

- K-Means Clustering
- Hierarchical Clustering
- Dimensionality Reduction (PCA, t-SNE)

Key Outcomes:

Perform customer segmentation, anomaly detection, and more.

8. Model Evaluation & Hyperparameter Tuning

Use confusion matrix, precision-recall, ROC-AUC, cross-validation, and grid/random search to evaluate and improve model performance.

Key Outcomes:

Build reliable, high-performance ML models.

9. Ensemble Methods & Model Stacking

Combine multiple models to improve predictive accuracy:

- Bagging (Random Forest)
- Boosting (AdaBoost, XGBoost)
- Stacking

Key Outcomes:

Learn strategies used in data science competitions.

10. Model Deployment & MLOps Basics

Learn how to deploy your ML models in real-world apps:

- Export models with joblib/pickle
- Build Flask/Django APIs
- Intro to Docker & CI/CD for ML
- Cloud deployment on Heroku, AWS, or Streamlit

Key Outcomes:

Take your ML projects from notebook to production.

11. Real-World Mini Projects

Build 3–4 small projects such as:

- Spam Email Classifier
- Stock Price Predictor
- Customer Churn Model
- House Price Predictor

Key Outcomes:

Apply your skills to business-relevant problems.

12. Capstone Project

Work on a major end-to-end ML project with proper data collection, cleaning, model training, evaluation, and deployment. Submit reports and give final presentations.

Key Outcomes:

Demonstrate readiness for job interviews and real-world applications

13. Career Preparation & Portfolio Development

Build your GitHub repository, update LinkedIn with projects, write blogs on Medium/Kaggle, prepare for technical interviews.

Key Outcomes:

Build visibility and credibility in the ML job market.

14. Final Evaluation & Certification

Complete a final MCQ and project-based test. Get certified by Cospixare Technologies (NSDC-Approved).

Key Outcomes:

Official recognition of your ML expertise.

15. Internship Opportunity

Top students (based on performance, project quality, and evaluations) will be offered a 3-month internship at Cospixare, working on client or internal ML projects.

Key Outcomes:

Gain valuable industry experience and an internship certificate.

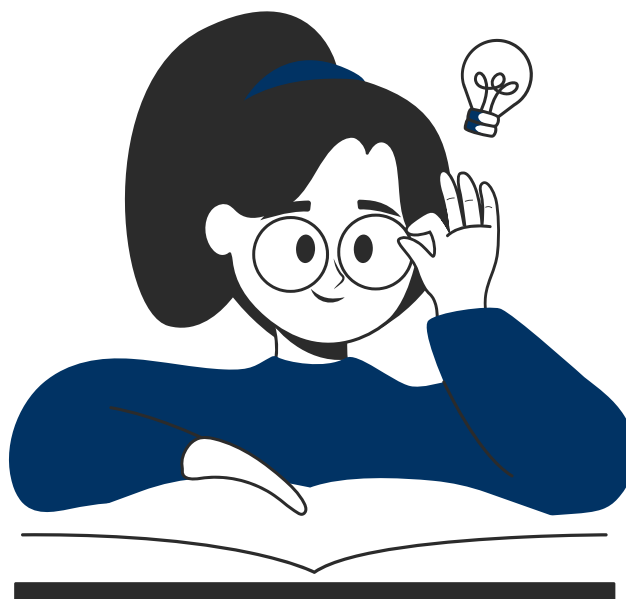
ABOUT THE PROGRAM:

Cospixare's Machine Learning Program prepares you to become job-ready by mastering data preprocessing, model building, and deployment. You'll start with Python and core ML math, then dive into algorithms like regression, classification, and clustering. Learn to evaluate models, tune hyperparameters, and deploy using Flask, Docker, and AWS. Gain hands-on experience through real-world projects and a capstone, ending with an NSDC-approved certificate. Top performers receive a 3-month internship to work on live ML projects, boosting your employability.

For Both Enquiries, Contact Us

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MACHINE LEARNING



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