



Machine Learning Training Curriculum

STRUCTURE



Machine Learning Training

About Croma Campus:

Croma Campus Training & Development Private Limited is an education platform since 2010 providing rigorous industry-relevant programs designed and delivered in collaboration with world-class faculty and industry.

- Hands-On Live Projects
- Simulation Test Papers
- Industry Cases Studies
- 61,640+ Satisfied Learners
- 140+ Training Courses
- 100% Certification Passing Rate
- Live Instructor Classroom / Online Training
- 100% Placement Assistance

Croma Campus Training Program Deliverables:

- **Session Recordings** - Original Class Room Voice & Video Recording
- **Training Material** - Soft Copy Handbooks
- **Assignments** | Multiple Hands-on Exercises
- **Test Papers** - We provide **Practice Test** as part of our course to help you prepare for the actual certification exam.
- **Live Case Studies**
- **Live Projects** - Hands-on exercises and Project work. You will work on real time industry-oriented projects and assignments for each module to practice.
- **Key focus on Hands-on exercises and Project work.** You will work on real time industry-oriented projects.
- Faculty with more than **10+ Years of Experience** in the Industry.
- **Technical Resume Designing & Job Assistance:** With more than 100+ Clients across the Globe and we help learners to get a good job in their respective field. We also help learners with resume preparation.
- **Interview Q&A**
- **About Croma Campus Training Certificate:** Croma Campus will provide you with an industry-recognized (Certified by **ISO 9001:2015** & **E-Cell IIT Jodhpur**) course completion certificate, which has lifelong validity.

How I unlock my Croma Campus Certificate: Attend Complete Batch & Submit at least One Completed Project.

Machine Learning Training Description:

Machine learning is important because it gives enterprises a view of trends in customer behavior and business operational patterns, as well as supports the development of new products. Many of today's leading companies, such as Facebook, Google and Uber, make machine learning a central part of their operations

Machine Learning Course Structure:

- Introduction to Machine Learning
- Math Refresher
- Techniques of Machine Learning
- Data Pre-Processing & Data Mining
- Regression
- Classification
- Unsupervised Learning: Clustering and SVM
- Projects

Machine Learning Course Content:

Module 1 : Introduction to Machine Learning

- Machine Learning Algorithms
- Algorithmic models of Learning
- Applications of Machine Learning
- Large Scale Machine Learning
- Computational Learning theory
- Reinforcement Learning
- Learning from Heterogeneous

Module 2 : Math Refresher

- Concepts of Linear Algebra
- Eigenvalues, Eigenvectors and Eigen Decomposition
- Introduction to Calculus
- Probability and Statistics
- Regularization
- Functions
- Relations
- Grammars
- Probabilistic Models
- Value Functions
- Sample Complexity Analysis

Module 3 : Techniques of Machine Learning

- Machine Learning System Design
- Supervised Learning
- Unsupervised Learning
- Semi-supervised and Reinforcement Learning
- Bias and variance Trade-off
- Representation Learning

Module 4 : Data Pre-Processing & Data Mining

- Data Preparation
- Feature Engineering
- Feature Scaling
- Datasets
- Dimensionality Reduction
- Anomaly Detection
- Parameter Estimation
- Data and Knowledge
- Selected Applications in Data Mining

Module 5 : Regression

- Regression and its Types
- Logistic Regression
- Ordinary Least Squares Regression (OLSR)
- Linear Regression
- Linear Algebra Review
- Linear Regression: Equations and Algorithms
- Linear Regression with One & Two Variable
- Linear Regression with Multiple Variables
- Locally Weighted Regression
- Stepwise Regression
- Multivariate Adaptive Regression Spline (MARS)

Module 6 : Classification

- Meaning and Types of Classification
- Bag of words Classifiers
- Nearest Neighbour Classifiers
- K-nearest Neighbours
- Probability and Bayes' Theorem
- Support Vector Machines
- Kernel Support Vector Machines
- Naive Bayes
- Bayesian
- Decision Tree Classifier
- Random Forest Classifier

Module 7 : Unsupervised Learning: Clustering and SVM

- About Clustering
- Clustering Algorithms
- K-means Clustering
- K-Medians
- Expectation Maximisation
- Unstructured Text
- Support Vector Machine
- Mixture Models
- Hierarchical Clustering
- Distributional Clustering

Module 8 : Projects

- We will do 2 projects out of below projects
 - Managing credit card Risks
 - Bank Loan default classification
 - YouTube Viewers prediction
 - Super store Analytics (E-commerce)
 - Buying and selling cars prediction(like OLX process)
 - Advanced House price prediction
 - Analytics on HR decisions
 - Survival of the fittest
 - Twitter Analysis
 - Flight price prediction