



Machine Learning Training + Certification



Learning Collaborations



Global Certifications



Intro to the Machine Learning Program

With brand new sections as well as updated and improved content, you get everything you need to master Machine Learning in one course! The machine learning field is constantly evolving, and we want to make sure students have the most up-to-date information and practices available to them. By the end of this course, you will have a Portfolio of Machine Learning projects that will help you land your dream job.

Inside the course, you'll learn how to:

- Gain complete machine learning tool sets to tackle most real world problems
- Understand the various regression, classification and other ml algorithms performance metrics such as R-squared, MSE, accuracy, confusion matrix, prevision, recall, etc. and when to use them.
- Combine multiple models with by bagging, boosting or stacking
- Make use to unsupervised Machine Learning (ML) algorithms such as Hierarchical clustering, k-means clustering etc. to understand your data
- Develop in Jupyter (IPython) notebook, Spyder and various IDE
- Communicate visually and effectively with Matplotlib and Seaborn
- Engineer new features to improve algorithm predictions

About the Machine Learning Certification

This course is designed for clearing the TechVidya Machine Learning Certification. The entire course content is in line with the certification program and helps you clear the certification exam with ease and get the best jobs in top MNCs.

As part of this training, you will be working on real-time projects and assignments that have immense implications in the real-world industry scenarios.

At the end of this program, there will be a assessment that perfectly reflects the type of questions asked in the certification exam and helps you score better marks.

TechVidya Course Completion Certificate will be awarded upon the completion of the project work and upon scoring at least 60% marks in the final assessment.

Prerequisites of the Machine Learning Program

- This course assumes no previous experience, and takes you from the absolute beginner concepts and then goes into more detail. Basic programming skill & scripting experience in any language is required.

Modules covered under Machine Learning Training Program

Module 1 : Introduction to Machine Learning

- Introduction To Machine Learning
- Importance Of Machine Learning
- How did Machine Learning work?
- Relationship Between Artificial Intelligence, Machine Learning, and Data Science
- Different Categories of Machine Learning: Supervised, Unsupervised and Reinforcement
- Applications of Machine Learning

Module 2 : Supervised Learning - Linear Regression

- Simple Linear Regression
- Multiple Linear Regression
- Performance Metrics: Accuracy Scores, R^2 And Adjusted R^2
- To Compare the Model with Different Numbers of Independent Variables.
- Approaches to Feature Selection: Univariate Selection, Feature Importance, RFE
- Parameter Tuning and Model Evaluation
- Data Transformation and Normalization
- Ridge & Lasso Regression (L1 & L2)

Module 3 : Logistic Regression

- Concept of Logistic Regression
- Univariate Logistic Regression
- Multivariate Logistic Regression: Model Building and Evaluation
- Dealing with Categorical Independent Variable – Hot Encoding Vs Dummy Variable

Modules covered under Machine Learning Training Program

Module 4: Decision Trees

- Concept of Decision Trees
- Importance and Usage of Gini And Entropy
- Information Gain
- Visualizing Decision Trees Nodes and Splits
- Working of The Decision Tree Algorithm
- Extending Decision Trees to Regressing Problem
- Evaluating Decision Trees Models: Accuracy, Precision, Recall, Confusion Matrix

Module 5: Classification – k Nearest Neighbor (KNN)

- Classification and Regression
- Application, Advantages and Disadvantages
- Distance Metric – Euclidean, Manhattan, Chebyshev, Minkow
- Measuring accuracy using Cross-Validation, Stratified k-fold, Confusion Matrix, Precision, Recall, F1-score.

Module 6: Naive Bayes Classifier

- The Bayes Theorem
- The Gaussian Naïve's Bayes Classifier – Assumptions of The Naïve Bayes Classifier, Functioning of The Naïve's Bayes Algorithm

Module 7: Classification SVM (Support Vector Machine)

- Classification and Regression
- Separating line, Margin and Support Vectors
- Linear SVC Classification
- Polynomial Kernel – Kernel Trick
- Gaussian Radial Basis Function (RBF)
- Grid Search to tune hyper-parameters
- Support Vector Regression

Modules covered under Machine Learning Training Program

Module 8: Unsupervised Learning - Clustering

- Introduction to Clustering
- K-Means Clustering: Linkage
- Use of Elbow Curve & Silhouette Score
- Hierarchical Clustering – Agglomerative & Divisive
- Distance Matrix, Dendrogram

Module 9: Density based clustering

- DBSCAN (Density based clustering) Technique
- Density based clustering
- Eps: Density
- Core, Border and Noise points
- Density edge and Density connected points
- DBSCAN Algorithm
- Hyper Parameters: MinPts and EpsA
- Advantages and Limitations of DBSCAN

Module 10: Principal Component Analysis - PCA

- Noise in The Data and Dimensionality Reduction
- Capturing Variance – The Concept of Principal Components
- Assumptions in Using PCA
- Eigenvectors and Orthogonality of Principal Components
- What Is the Complexity Curve?
- Advantages of Using PCA
- The Working of The PCA Algorithm
- Singular Value Decomposition

Modules covered under **Machine Learning Training Program**

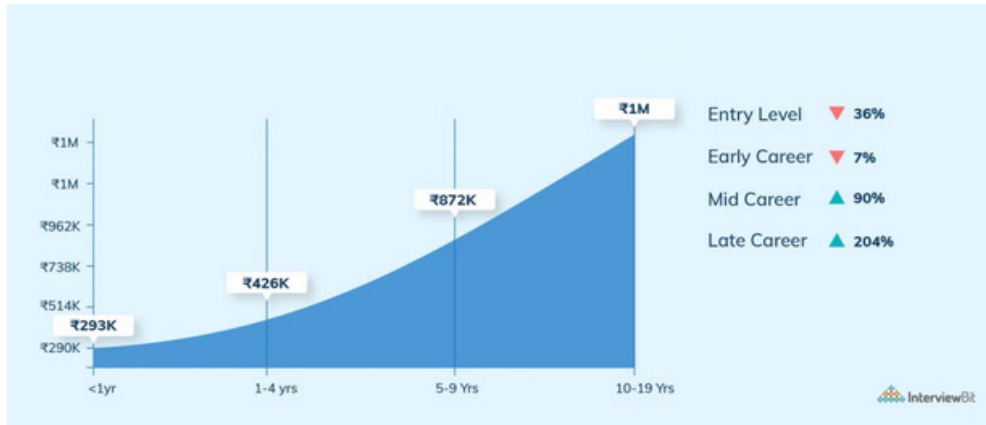
Module 11 : Ensemble Modelling

- Popular Ensembles
- Bagging
- Bootstrap
- Introduction to Random Forests
- Feature Importance in Random Forests
- Boosting
- How Boosting Algorithm Works?
- Adaboost
- Gradient Boost
- XGBoost

Module 12 : Project & Interview Preparation

- Project Work
- PD Classes
- Resume Preparation
- Interview Question Preparation

Benefits as Machine Learning



Our Training Benefits as Machine Learning Program

- Our complete training is constructed as per the current industry standard.
- Live Project & Industrial Based Training.
- One of the biggest team of Certified Expert & Competent Trainers.
- Easy to understand study material.
- Regular and Weekends classes for IT & Software training is provided.
- Interaction, analysis and case studies are an integral part of the training.
- Smart Labs with Real Latest Equipments.
- Students are free to access the labs for an unlimited number of hours
- Free Study Material, e-PDFs, Video Trainings, Sample Questions.
- Globally Recognized Course Completion Certificate.
- The ability to retake the class at no-charge as often as desired.
- One-on-One attention from instructors.
- Helps students to take knowledge of complex technical concepts.
- Post Training Support will help the students.
- Personality Development & Interview Preparation classes.
- 100% Job Assistance with dedicated training & placement team.



Join One of the Best Machine Learning Training Institute in India

(In-Class & Live Online Training by Industry Experts)



5740+
Batches Completed



68806+
Students Trained



470+
Skilled Instructors



Our Latest Reviews



Hi All, I am Shilpa and i have done my Certification from TechVidya. The study environment is good and trainers are full of knowledge. I personally recommend TechVidya Institute to all the students who looking for quality education and sincere about there future.

I am grateful to TechVidya - both the faculty and the Training & Placement Department. They've made efforts ensuring maximum number of placed students. The Institute started grooming us for placements in the first few months including courses such as Professional Excellence Program and Professional Skills Enhancement. I suggest to join TechVidya which comes under top 10 IT & Software training institute.



Hi I am Amit Kumar and my Enrollment ID with TechVidya is TV230967. I completed my Certification from TechVidya. They provides IT & Software courses in more practical & real scenario basis. Complete project based training help me to sharpen my technical skills.

TechVidya has always believed in helping and guiding its students and it was no different during the placement time. Regular classes held to help us with our aptitude and technical skills. Recommend to all the students who looking for best computer classes with quality education. Thanks TechVidya for explore my career.



RECORD BREAKING PLACEMENTS 100% JOB PLACEMENT ASSISTANCE

MEET OUR PLACED STUDENTS



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Star Solutions



Meenakshi
Chetu India



Neha Bisht
PayTM



Jeewan Singh
Aavishkar Ent.









Prem Prakash
MPS Limited



Career Assistance Services



-  **Career Oriented Sessions**  Throughout the Course
-  **Resume & LinkedIn Profile Building**  After 70% of the Course Completion
-  **Mock Interview Preparation**  After 80% of the Course Completion

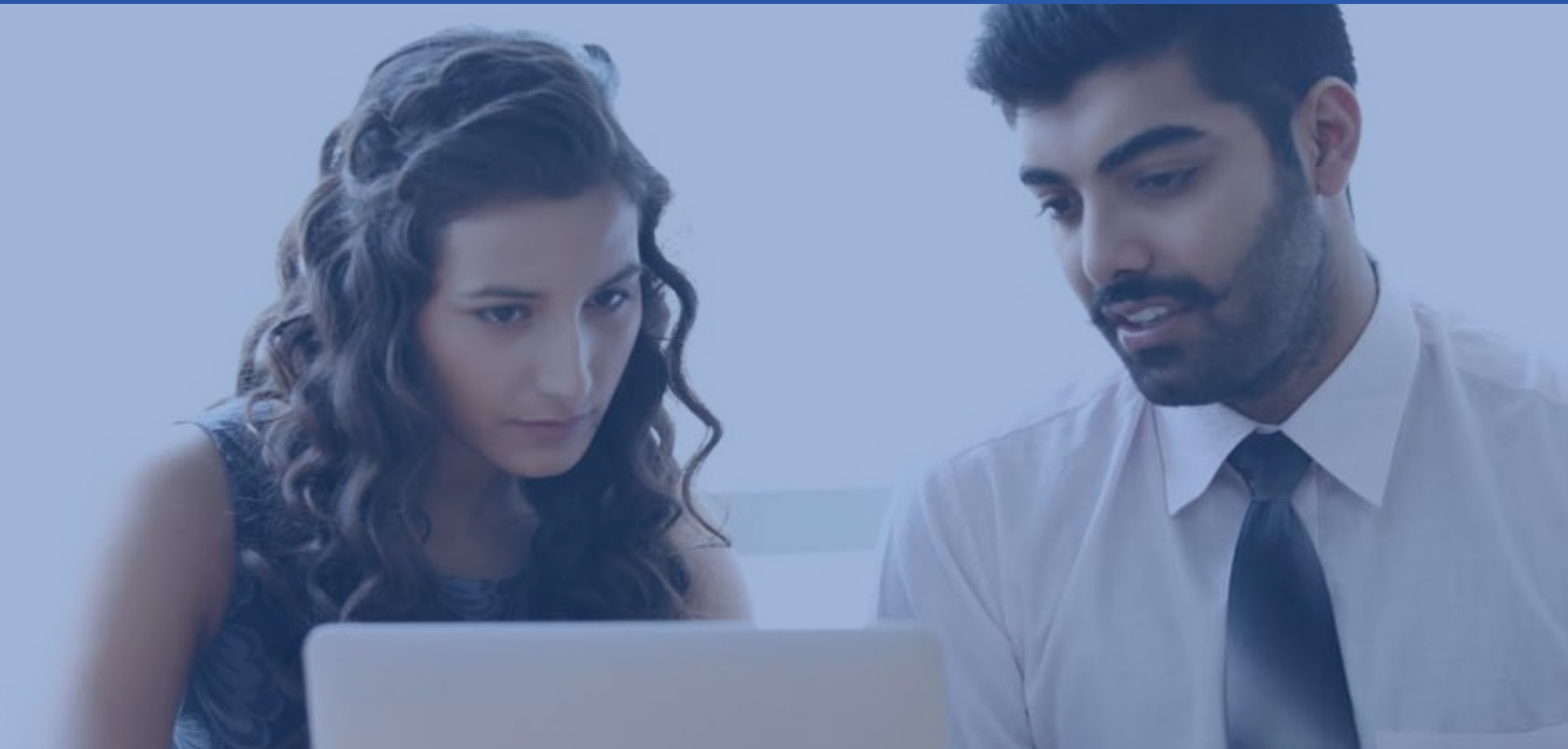
-  **1 on 1 Career Mentoring Sessions**  After 90% of the Course Completion
-  **Assured Interviews**  After 90% of the Course Completion
-  **1 Year Placement Assistance**  After 100% of the Course Completion





Our Top Placement Partners





TechVidya In News



08-Jan

ET Now- Startup Central

TIMESNOWNEWS.COM

22-Dec

What skills in demand & how should upgrade?

THE HINDU
BusinessLine

14-Nov

Turning executive education into class act

EducationTIMES
EST. ESTABLISHED

30-Sep

TechVidya Campaign
#StayUpdatedStayAhead



02-Sep

How TechVidya enhance learning experience

THE ECONOMIC TIMES

16-Jun

The journey of an EduTech Company



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