

Certificate Course in Machine Learning using Python

Machine Learning using Python

6 Weeks / 90 Hrs. (3 Hrs. per day)

90 Hours Online Course

Objective

Machine Learning is broad and fast-growing sub-field of Artificial Intelligence. This course introduces students to the basic concepts and techniques of Machine Learning. The objective of this course is to develop the skills required for Machine Learning Technologies with use of Python to analyze data and solving ML problems like Regression, Classification, and Clustering using machine learning algorithms.

BE / B.Tech. (Any Branch), 3-Year Diploma (Computer Science / Electronics/ IT), NIELIT O/A Level, Graduate in Science or Commerce or Statistics/Mathematics

Eligibility

Prerequisite

- ✓ Candidate must have computer / laptop with Minimum 2 GB RAM
- ✓ Internet connection with good speed.

Rs. 3800/- incl. GST & all other charges.

Course Fees

Certificate

Certificate will be provided to the participants, based on minimum 75% attendance and on performance (minimum 50% marks) in the online test, conducted at the end of the course.

- ✓ Instructor-led live classes.
- ✓ Instructor-led hands-on lab sessions.
- ✓ Content Access through e-Learning portal.
- ✓ Assessment and Certification

Methodology

How to Apply?

Step-1: Read the course structure & course requirements carefully.

Step-2: Visit the Registration portal and click on apply button.

Step-3: Create your login credentials and fill up all the details, see the preview and submit the form.

Step-4: Login with your credentials to verify the mobile number, email ID and then upload the documents, Lock the profile and Pay the Fees online, using ATM-Debit Card / Credit Card / Internet Banking / UPI etc.

Course Content

Day	Topic	Day	Topic	Day	Topic
Day #01	<ul style="list-style-type: none"> Introduction to Machine Learning Applications of Machine Learning Types of Machine Learning 	Day #02	<ul style="list-style-type: none"> Python Installation with various IDEs Simple Python Program Python Data Types Lists, Tuples, Dictionary in Python 	Day #03	<ul style="list-style-type: none"> Python Control Structure Conditional Statements Loops in Python
Day #04	<ul style="list-style-type: none"> Python Functions Defining a function Calling a Function Lambda and Map Function 	Day #05	<ul style="list-style-type: none"> Object Oriented Programming Concepts Creating Classes in Python Constructor Inheritance in Python Classes 	Day #06	<ul style="list-style-type: none"> Python Modules Python Packages NumPy in Python
Day #07	<ul style="list-style-type: none"> Pandas in Python 	Day #08	<ul style="list-style-type: none"> Exercises and Practice Problems in Python 	Day #09	<ul style="list-style-type: none"> Exercises and Practice Problems in Python
Day #10	<ul style="list-style-type: none"> Types of Problems in Machine Learning Regression, Classification Clustering 	Day #11	<ul style="list-style-type: none"> Pre-processing of data for Machine Learning Handling Null Values Data Summarization 	Day #12	<ul style="list-style-type: none"> Regression Problem Solving First Machine Learning Problem Training and Testing Data Applying ML Algorithm: Linear Regression Using SkLearn Module
Day #13	<ul style="list-style-type: none"> Applying ML Algorithm: Decision Tree Regression, Random Forest Regression Performance Evaluation of ML Model Deployment of Machine Learning Model 	Day #14	<ul style="list-style-type: none"> Classification Problem Solving Classification Problem: Loan Prediction Problem (Mini Project 1) Handling Null Values and Categorical Data 	Day #15	<ul style="list-style-type: none"> Applying ML Algorithm: Logistic Regression, Support Vector Machine, Decision Tree Classifier, K-Neighbor Classifier, Gaussian Naïve Bayes (continued from previous day)
Day #16	<ul style="list-style-type: none"> Deployment of Classification Model Performance Evaluation of Classification Model Confusion Matrix 	Day #17	<ul style="list-style-type: none"> Working on Images in Python 	Day #18	<ul style="list-style-type: none"> Image Classification Problem (Mini project 2) Making ML Model Evaluating Model Deployment of Model
Day #19	<ul style="list-style-type: none"> Text Classification Count Vectorizer 	Day #20	<ul style="list-style-type: none"> Solving Text Classification Problem: Spam Detection (Mini Project 3) Making Model 	Day #21	<ul style="list-style-type: none"> Solving Text Classification Problem (continued from previous day) Model Evaluation Confusion Matrix
Day #22	<ul style="list-style-type: none"> Accessing Twitter Data in Python for Sentiment analysis etc. 	Day #23	<ul style="list-style-type: none"> Mathematics behind Regression Algorithms 	Day #24	<ul style="list-style-type: none"> Mathematics Behind Classification Algorithm Purity Matrix
Day #25	<ul style="list-style-type: none"> Data Exploration and Visualization using matplotlib and seaborn modules 	Day #26	<ul style="list-style-type: none"> Clustering Problem Making Clustering Model from Customer data (Mini Project 4) Applying K-Means Clustering Algorithm Elbow Method 	Day #27	<ul style="list-style-type: none"> Feature Importance Correlation Matrix
Day #28	<ul style="list-style-type: none"> Ensemble Learning 	Day #29	<ul style="list-style-type: none"> Questions & Answer Session 	Day #30	<ul style="list-style-type: none"> Final Test

Course Coordinator

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