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Course Name: Machine Learning With Python   **Duration**:- 45 Days   **Fee**:- 11500/-

ABOUT Machine Learning COURSE

This Machine Learning with Python course dives into the basics of *Machine Learning* using *Python*, an approachable and **well-known programming language**.

you will learn about applications of Machine Learning in different fields such as health care, banking, telecommunication, and so on. You'll get a general overview of Machine Learning topics such as supervised vs unsupervised learning, and the usage of each algorithm. Also, you understand the advantage of using Python libraries for implementing Machine Learning models.

Look at real-life examples of Machine Learning and how it affects society in ways you may not have guessed!

Explore many algorithms and models:

- **Popular algorithms**: Classification, Regression, Clustering, and Dimensional Reduction.
- **Popular models**: Train/Test Split, Root Mean Squared Error, and Random Forests.

More important, you will transform your theoretical knowledge into practical skill using many hands-on labs. Get ready to do more learning than your machine!

COURSE SYLLABUS Python

Module 1 - Python Basics

- o   Your first program
- o   Types
- o   Expressions and Variables
- o   String Operations

Module 2 - Python Data Structures

- o   Lists and Tuples
- o   Sets
- o   Dictionaries

Module 3 - Python Programming Fundamentals

- o   Conditions and Branching
- o   Loops
- o   Functions
- o   Objects and Classes

Module 4 - Working with Data in Python

- o   Reading files with open
- o   Writing files with open
- o   Loading data with Pandas
- o   Working with and Saving data with Pandas

COURSE SYLLABUS Machine Learning

Module 1 - Introduction to Machine Learning

- Applications of Machine Learning
- Supervised vs Unsupervised Learning
- Python libraries suitable for Machine Learning

Module 2 – Regression (you will get a brief intro to regression. You learn about Linear, Non-linear, Simple and Multiple regression, and their applications. You apply all these methods on two different datasets, in the lab part. Also, you learn how to evaluate your regression model, and calculate its accuracy.**)**

- Linear Regression
- Non-linear Regression
- Model evaluation methods

Module 3 – Classification (you will learn about classification technique. You practice with different classification algorithms, such as KNN, Decision Trees, Logistic Regression and SVM. **)**

- K-Nearest Neighbour
- Decision Trees
- Logistic Regression
- Support Vector Machines
- Model Evaluation

Module 4 - Unsupervised Learning (you will learn about different clustering approaches. You learn how to use clustering for customer segmentation, grouping same vehicles, and also clustering of weather stations. You understand 3 main types of clustering, including Partitioned-based Clustering, Hierarchical Clustering, and Density-based Clustering.**)**

- K-Means Clustering
- Hierarchical Clustering
- Density-Based Clustering

Module 5 - Recommender Systems

- Content-based recommender systems
- Collaborative Filtering