

# Online Certificate Course in Data Science and Machine Learning using Python

**6 Weeks / 30 Hrs. (1 Hrs. per day)****Medium of Instruction: English**

## Objective

*ML has emerged as a leading technology used in Booming areas like Artificial Intelligence (AI), the Internet of Things (IoT), and Data analytics. The currently available academic curriculum is not much enough to fulfill the requirement of Skills needed for ML in Industry. This course will offer the required skills and hands-on experience in ML to candidates and professionals; this will increase the employability opportunity for candidates and bridge the gap of Skilled Human requirements for the Industry.*

✓ *Knowledge in Programming concepts and basic Mathematics*

## Eligibility

## Prerequisite

- ✓ *Candidate must have latest computer/laptop with preferably 4 GB RAM or higher and Graphics Card (2 GB)*
- ✓ *Internet connection with good speed (preferably 2Mbps or higher)*

**Rs. 1,500/- (Inclusive of 18% GST)**

## Course Fees

## Certificate

Certificate will be issued to the participants based on the marks scored in the examination conducted after the completion of training.

- ✓ Teaching Mode: Online
- ✓ Instructor-led live sessions
- ✓ Online/ Blended lab sessions
- ✓ Content access through LMS
- ✓ Recorded Session Available

## Methodology

## Intended Users

Undergraduate students looking to understand the fundamentals of Data Analysis and Machine Learning. Anybody wants to join the first course on DS-ML using python.

**Course Content**

ST 111	Unit Name
Unit 1	An Introduction to Python, Data Structures & Operators, Conditions & Loops, Functions & Modules, Exceptions Handling, Classes in Python
Unit 2	Descriptive & Inferential Statistics, Probability Concepts, Probability Distributions, Entropy & Information Gain, Regression & Correlation, Confusion Matrix, Precision, Recall, F1-score
Unit 3	An Introduction to Data Science and Analytics, Data Analysis Using NumPy, Data Analysis Using Pandas, Data Visualization – Pandas, Matplotlib, Seaborn, Folium, Plotly and Cufflinks
Unit 4	Introduction to Machine Learning, Linear Regression, Logistic Regression, K-Means Clustering, Decision Tree, Random Forest K-Nearest Neighbors, Support Vector Machine

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