#### What is Data Science?

- Introduction to Data Science
- Real life examples with applications
- Data Scientist job roles and responsibilities
- The most promising job of the 21st Century
- Machine Learning vs. Data Science vs. AI

### **Introduction to Python**

- Python Introduction
- Installation of Anaconda Navigator
- Jupyter Notebook Interface
- How to Open, Save and Rename a file
- Variables and Data Types
- Python Strings
- Loops (Conditional)
- Loops (Iterative while)
- Loops (Iterative For)
- Python Functions (Built in, Lambda, User defined functions)
- Lists
  - **Tuples**
  - Sets
- Dictionaries

#### **Data Manipulation and Data Analysis Tools**

🖕 Numpy Arrays in Python

Three Dimensional Arrays Indexing and Slicing

Matrices

Pandas in Python

Importing CSV, Excel Files

Exporting CSV File

#### **Python - Statistics**

Basic descriptive statistics with Numpy and applying statistical functions on matrices

Linear Algebra with NumPy

Numpy Random Numbers

Probability distributions using NumPy

Normality test with SciPy

#### **Data Visualization in Python**

The matplotlib package

Basic matplotlib Plots

Logarithmic Plots

Scatter Plots

Three Dimensional Plots

Lag Plots

**Autocorrelation Plots** 

Plot.ly



# **Program Syllabus**

#### **Applications in Industry - BFSI**

In consultation with Industry experts



## **Our Instructors**



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