

## **Python:**

- Overview
- Installation
- Data Structures
- Indexing & Slicing
- List comprehensions
- File I/O
- Sorting
- Functions
- Dictionaries

## **Advanced Python:**

- OOP concepts
- Class in Python
- Multithreading
- Debugging
- Basic SQL operations using SQLite3

## **Statistics:**

- Data Terminology
- Basic statistics
- Probability
- Bayes Theorem

## **Python libraries for ML:**

- Numpy
- Pandas
- Matplotlib

## **Basics of ML:**

- Introduction to ML
- Supervised vs Unsupervised learning
- Linear regression
- Bias-Variance
- PCA

## **ML algorithms:**

- KNN
- Decision trees
- Ensemble learning
- Random forest
- Gradient Boosting
- SVM

- Accuracy measures
- K-Means clustering

**Deep Learning:**

- Introduction
- Working of a Neural Network
- Basics of CNN, RNN

**Big Data:**

- Overview of Big data
- Map-Reduce framework
- Basics of tools used in Hadoop