

# Data Science Course in Python



## DATA ANALYTICS WITH PYTHON

- Data Science Introduction & Use Cases
- Python Basics: Basic Syntax, Data Structures
- Python Basics: Loops, If-elif statements, Functions, Exception Handling
- Statistics, Measures of central tendency, Population, Sample, Probability Distribution, Normal and Binomial Distribution, Random Variable, Pictorial Representations
- Python Advanced: Numpy, Pandas
- Python Advanced: Data Manipulation, Matplotlib
- Exploratory Data Analysis: Data Cleaning, Data Wrangling

## MACHINE LEARNING

- ML Introduction & Use Cases
- Statistics 2 – Inferential Statistics
- Linear Regression
- Logistic Regression
- Decision Trees, Random Forest
- Modelling Techniques (PCA, Feature Engineering)

- KNN, Naive Bayes
- Support Vector Machines(SVM)
- Clustering, K-means

## DEEP LEARNING WITH NLP

- Introduction to NLP & Deep Learning
- Word Embeddings
- Word window classification
- Introduction to Artificial Neural Networks
- Introduction to Tensorflow
- Recurrent Neural Networks for Language modelling
- Gated Recurrent Units(GRUs), LSTMs
- Recursive Neural network

## ADVANCED MACHINE LEARNING

- Market Basket Analysis & Apriori Algorithm
- Recommendation System
- Dimensionality Reduction
- Anomaly Detection
- XG Boost
- Gradient Boosting Machine(GBM)
- Stochastic Gradient Descent(SGD)
- Ensemble Learning