

# Data Science Syllabus

## Python:

- a. Fundamentals of Python
- b. Data Types
- c. Control Statements
- d. Loops
- e. Regex

## Data Science :

### Exploratory Data Analysis (EDA)

- a. Pandas

### Art of Data Science: Visualization

- a. Matplot:
- b. Seaborn:

### Machine Learning Algorithm:

- a. Scikit learn

### Supervised & Unsupervised Machine learning

- a. Performance Metric
  - i. RMSE
  - ii. F1 Score
  - iii. Confusion Matrix
  - iv. F1 Score
  - v. ROC-AUC Score
  
- b. Anomaly Detection

## **Supervised learning**

- a. Linear Regression
- b. Logistic Regression
- c. Decision tree
- d. Ensemble methods
  - i. Bagging
  - ii. Boosting
  - iii. Random forest
  - iv. Xgboost
- e. Naive Bayes
- f. Support Vector Machine (SVM)
- g. k Nearest Neighbor (KNN)

## **unsupervised learning**

- a. KMeans

## **Neural Network**

- a. Artificial Neural Network ( ANN)

## **DeepLearning:**

- a. Tensorflow
- b. Keras
- c. Convolutional Neural Network (CNN)
- d. Recurrent Neural Network (RNN)
- e. Long short-term memory (LSTM)

## **Natural Language Processing**

Using NLTK for various Natural Language Processing techniques such as:

- a. Stopword Removal
- b. Stemming & Lemmatizing
- c. Parts of Speech Tagging
- d. Sentiment Analysis