**Machine Learning with Python**

* **Python** (6 Days)
  + Basic Data Types
    - Numerical Types
      * Integer
      * Floats
      * Complex
      * Booleans
    - Natively Implemented Arithmetic Operations
    - Containers
      * Lists
      * Sets
      * Tuples
    - String
    - Dictionaries
  + Working with Assignment Operator
  + Control Flow
    - If
    - Elif
    - Else
    - For / Range
    - While / Break / Continue
  + Advanced Iteration
  + Functions
    - Function Definition
    - Return Statement
    - Parameters
* **Numpy for Machine Learning** (2 Days)
  + Importing Conventions
  + Creating Arrays
    - 1-D Array (Dimension & Shape)
    - 2-D and 3-D Array
  + Functions for Creating Arrays
    - Evenly Spaced
    - Number by Points
  + Common Arrays
    - Zeros
    - Ones
  + Basic Data type
  + Indexing and Slicing
* **Matplot for Machine Learning** (2 Days)
  + Importing Convention
  + Simple Graph
  + Plot Function & Show Function
  + Title of Graph
  + X and Y Label
  + Adding another co-ordinate
  + Working with Legends
  + Changing colors and line width
  + Types of Plot
    - Regular Plot
    - Scatter Plot
    - Bar Plot
* **Pandas for Machine Learning** (2 Days)
  + Importing Conventions
  + Creating Series and DataFrane
  + Functions for Creating and Manipulating
    - Series
    - DataFrame
  + Importing CSV and Excel Sheets
  + Performing Operations on CSV and Excel Sheets
* **Intro to Machine Learning** ( 1 hr)
  + - What is machine learning
    - Application of Machine Learning
    - Types of Machine Learning
    - Supervised Machine Learning
    - Unsupervised Machine Learning
    - Reinforcement Learning
* **Linear Regression Algorithm** (4 Days)
  + Understanding Theory of Algorithm
  + Math behind Algorithm
  + Practical Implementation
* **Logistic Regression Algorithm** (4 Days)`
  + Understanding Theory of Algorithm
  + Math behind Algorithm
  + Practical Implementation
* **Decision Tree Algorithm** (4 Days)
  + Understanding Theory of Algorithm
  + Math behind Algorithm
  + Practical Implementation
* **Project** (5 Days)