# Topics covered

1. Introduction to Python
   1. Data types
   2. Operations on datatypes
   3. Functions
2. Introduction to Statistics
   1. Variables in statistics
      1. Quantitative vs Categorical Variables (Ordinal, Nominal)
      2. Discrete vs continuous variables (interval)
   2. Introduction to Probabilities
   3. Bayes theorem
3. Introduction to Data Analytics
   1. Descriptive - what
   2. Diagnostic - why
   3. Predictive – what could
   4. Prescriptive – what we should do
4. Python libraries
   1. Numpy
   2. Pandas
   3. Matplotlib
   4. Seaborn
   5. Scikit learn
5. Introduction to AI, ML, DS
6. Introduction to Big Data and it components(Hadoop),HDFS,Map Reduce, ETL process
7. Introduction to machine Learning techniques
   1. Supervised learning
      1. Regression
         1. Linear regression using statistics, ML
         2. Logistic regression using ML
         3. Polynomial regression
         4. Stepwise regression
         5. Ridge regression
         6. Elastic net regression
         7. Lasso regression
      2. Classification
         1. Decision tree classifier
         2. Random forest classifier
         3. K-nearest neighbor classifier
         4. Naïve Bayes classifier
         5. Support vector machine
   2. Un-supervised learning
      1. Clustering
         1. K-means clustering
         2. Hierarchical clustering
8. Introduction to Deep learning
   1. Introduction to Neural networks
   2. Introduction to Tensor flow