## 10. Data Visualization III

Download the Iris flower dataset or any other dataset into a DataFrame. (e.g., https://archive.ics.uci.edu/ml/datasets/Iris ). Scan the dataset and give the inference as:

- 1. List down the features and their types (e.g., numeric, nominal) available in the dataset.
- 2. Create a histogram for each feature in the dataset to illustrate the feature distributions.
- 3. Create a boxplot for each feature in the dataset.
- 4. Compare distributions and identify outliers.

## Group B- Big Data Analytics - JAVA/SCALA (Any three)

- 1. Write a code in JAVA for a simple WordCount application that counts the number of occurrences of each word in a given input set using the Hadoop MapReduce framework on local-standalone set-up.
- 2. Design a distributed application using MapReduce which processes a log file of a system.
- 3. Locate dataset (e.g., sample\_weather.txt) for working on weather data which reads the text input files and finds average for temperature, dew point and wind speed.
  - 4. Write a simple program in SCALA using Apache Spark framework

## Group C- Mini Projects/ Case Study – PYTHON/R (Any TWO Mini Project)

- 1. Write a case study on Global Innovation Network and Analysis (GINA). Components of analytic plan are 1. Discovery business problem framed, 2. Data, 3. Model planning analytic technique and 4. Results and Key findings.
- 2. Use the following dataset and classify tweets into positive and negative tweets. https://www.kaggle.com/ruchi798/data-science-tweets
- 3. Develop a movie recommendation model using the scikit-learn library in python.

Refer dataset

https://github.com/rashida048/Some-NLP-Projects/blob/master/movie\_dataset.csv

4. Use the following covid\_vaccine\_statewise.csv dataset and perform following analytics on the given dataset

https://www.kaggle.com/sudalairajkumar/covid19-in-india?select=covid\_vaccine\_statewise.csv

- a. Describe the dataset
- b. Number of persons state wise vaccinated for first dose in India
- c. Number of persons state wise vaccinated for second dose in India
- d. Number of Males vaccinated
- d. Number of females vaccinated
- 5. Write a case study to process data driven for Digital Marketing **OR** Health care systems with Hadoop Ecosystem components as shown. (Mandatory)
  - HDFS: Hadoop Distributed File System
  - YARN: Yet Another Resource Negotiator
  - MapReduce: Programming based Data Processing
  - Spark: In-Memory data processing
  - PIG, HIVE: Query based processing of data services
  - HBase: NoSQL Database (Provides real-time reads and writes)
  - Mahout, Spark MLLib: (Provides analytical tools) Machine Learning algorithm libraries
  - Solar, Lucene: Searching and Indexing