

## EXPLORATORY DATA ANALYSIS

1. Create a csv file with the following columns. Name, Age, Gender, Height, Weight.

Populate the csv with 50 values.

- a. Calculate the mean age of the population
  - b. Calculate the median age of the population
  - c. Calculate the minimum and maximum value in Age
  - d. Calculate the dispersion of Age of your population set
  - e. What is the 75% percentile of the Age
  - f. What is the standard deviation in weight and height ?
  - g. Develop a linear regression model for height and weight(dependent) and get the coefficients. Perform the significance test for linear regression at a significance level of 0.05.
  - h. Given a height predict the weight value.
  - i. Plot the regression model.
2. You are entitled with the work of predicting the likelihood of occurrence of heart attack in people. You have collected a dataset which has the following features. Age, Gender, Bp, Blood Sugar level, Cholesterol and whether they have suffered a heart attack. Read the dataset and use R to create a logistic regression model for this dataset with the independent variables being age, BP, Blood Sugar level, Cholesterol level and the dependent variable being whether they have had a heart attack.
    - a. Also calculate the median age of persons who have suffered heart attack.
    - b. Range of Blood Sugar and cholesterol level