LINEAR REGRESSION EXERCISE

Question 1: Use the Fremont-Bridge dataset provided, perform the following tasks:

I. Produce some numerical and graphical summaries for the data. And write your observations. (eg: summary statistics of the data, plot hourly, weekly bicycle count and average traffic as a function of time of the day)
II. Implement least squares linear regression to check how weather and seasonal factors—temperature, precipitation, and daylight hours—affect the volume of bicycle traffic in a day. Show which features contribute significantly to the daily bicycle count. Use batch gradient descent method for optimizing $J(\theta)$.
III. Predict the bicycle count daily and print the accuracy metric.
IV. Plot the hypothesis function learned by your algorithm

LOGISTIC REGRESSION EXERCISE

Question 2: Using the dataset provided above, perform the following tasks:

I. Implement logistic regression to predict the count of bicycles daily.
II. Plot a graph to compare the total and predicted bicycle traffic visually.
III. Compare the accuracy of this model with the model in question 1 and give reasons as to why which model works better for your data.