Machine Learning Lab, B.Tech 5th Semester

Instructions

1. You are required to submit your assignment responses by 12 PM today through the Google Form that has been emailed to you.
2. There will be evaluation for this assignment.
3. Plagiarism checking will be performed on all the submissions for this assignment. If plagiarism is detected, your assignment will not be evaluated.

Evaluation Assignment 1

1. Create a dataset containing information about the prices of houses in a particular city. The dataset includes the following features for each house:
   - Size (in square feet)
   - Number of bedrooms
   - Age of the house (in years)
   - Distance to city center (in miles)
   - Price (in $)

   (a) Train a Linear Regression Model: Use the features (Size, Number of bedrooms, Age, Distance to city center) to predict the price of houses.

   (b) Evaluate the Model: After training the model on the training set, evaluate its performance using Mean Squared Error (MSE) as performance metrics.

   (c) Interpret the Results: Interpret the coefficients of the linear regression model. What are the values of the coefficients for each feature in the model? What is the impact of each feature on the predicted house price?

   (d) Given the following house details, predict the price using your trained model:
   - Size: 2500 sq. ft.
   - Number of bedrooms: 4
   - Age: 10 years
   - Distance to city center: 5 miles

Note: You are not allowed to use inbuilt function of any machine learning model.