**Assignment 6**

1. Implement Multilinear Regression using the data in the file “MyData.csv”. Display the coefficients. (that is ) and display the intercept(that is ) also. Solve by implementing the equations given in MULTI LINEAR REGRESSION\_1.pdf or MULTI LINEAR REGRESSION\_1.pptx available in the AI\_ML folder. Do not use sklearn API. Predict Y values for

|  |  |  |  |
| --- | --- | --- | --- |
| Y | X1 | X2 | X3 |
| ? | 50 | 70 | 80 |
| ? | 30 | 40 | 50 |

**Incase you have doubts, refer MLR\_Excel.html for code. But try to implement on your own.**

2. Implement Multiple Linear Regression to predict the price given the data set below. Do data preprocessing to fill the null value. (Hint fill the null value with the median). Display the coefficients. (that is ) and display the intercept(that is ) also. Solve by implementing the equations given in MULTI LINEAR REGRESSION\_1.pdf or MULTI LINEAR REGRESSION\_1.pptx available in the AI\_ML folder. . Do not use sklearn API. **Use HPriceData.csv for the dataset.**

|  |  |  |  |
| --- | --- | --- | --- |
| Area | Bedrooms | Age | Price |
| 2600 | 3 | 20 | 550000 |
| 3000 | 4 | 15 | 565000 |
| 3200 |  | 18 | 610000 |
| 3600 | 3 | 30 | 595000 |
| 4000 | 5 | 8 | 760000 |
| Predict the price for the below |  |  |  |
| 3000 | 3 | 40 | ? |
| 2500 | 4 | 5 | ? |

3. Implement Multilinear regression using sklear API for the dataset given in **HPriceData.csv.**

|  |  |  |  |
| --- | --- | --- | --- |
| Predict the price for the below | Bedrooms | Age | Price |
| 3000 | 3 | 40 | ? |
| 2500 | 4 | 5 | ? |

**Refer HousePricePrediction.html and HPriceData.csv**

2. Refer hiring.csv in the assignment folder. This file contains hiring statics for a firm such as experience of candidate, his written test score and personal interview score. Based on these 3 factors, HR will decide the salary. Given this data, you need to build a machine learning model for HR department that can help them decide salaries for future candidates. Using this predict salaries for following candidates,

2 yr experience, 9 test score, 6 interview score

12 yr experience, 10 test score, 10 interview score

**You can use sklearn API**

Answer

53713.86 and 93747.79