WQD7006 Machine Learning for Data Science
Individual Assignment (Regression) 15%
Deadline 18 Nov 2023 11.59pm
Submission Link: https://forms.gle/CKzS99jkw4bDnvTY6

Instructions

1. Load the insurance.csv file
2. Select the 'bmi', 'age' and 'charges' columns. Visualize it in 3D as Figure 1
3. As you can see, there are two groups of insurance charges, divided by bmi rather than age.
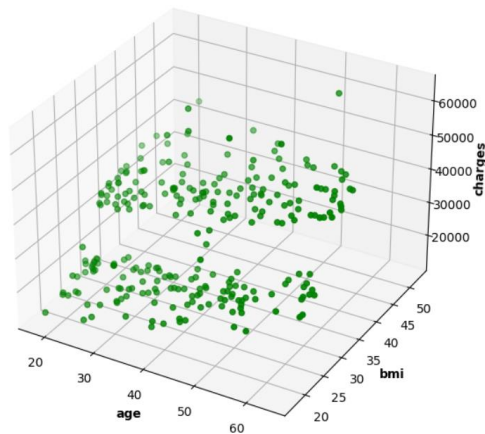

Figure 1

4. Fit two regression models on to the dataset as Figure 2 . The train vs test ration should be set as 75: 25. What are the values of the intercepts and parameters? There should be two intercept values and two corresponding parameters/slope. Visualize Figure 2
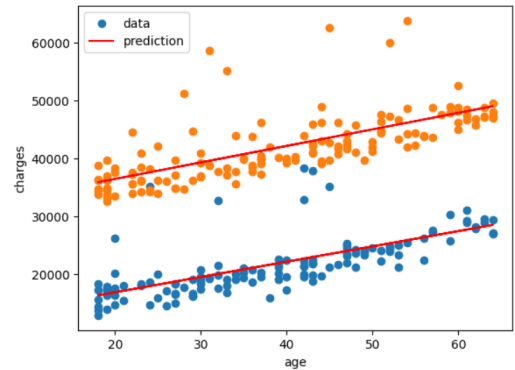

Figure 2

5. What is the R^2 scores for both regression line? How much do you predict a person aged=10 and aged 98 will have to pay for their insurance charges?

6. Fit a Multivariable Linear Regression on 'bmi', 'age', and 'charges' and find the plane. Visualize it as Figure 3
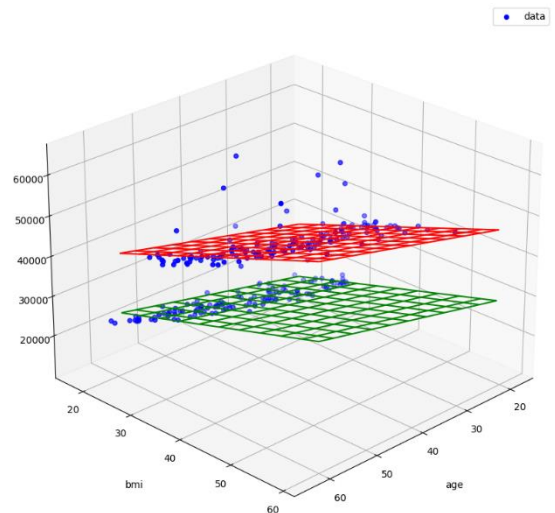

Figure 3