## **Problem 4- Linear Regression**

- My code implementation is given in the file **Problem-4-code** (Linear Regression), it is an executible .ipynb jupyter file.
- We get the result of mean squared error (MSE) of the three models using 5-fold cross validation as below-

Lasso Regression MSE: 20.201919508863853 Ridge Regression MSE: 10.811896358135671

Elastic Net Regression MSE: 18.973519863264816

• Conclusions: In comparing the mean squared error (MSE) scores for Lasso, Ridge, and Elastic Net regression models in predicting cooling load (y2), it appears that Ridge Regression model achieved the lowest MSE, indicating superior predictive performance on the given dataset.