Insights & Self Reflection of Projects

Task 1

Insights: This task helped understand how to improve regression models. Learning about shrinking/reduction techniques and putting them into practice really helped with comprehension of how reduction techniques work. Ridge and Lasso also showed the importance of proper data wrangling and preprocessing.

Skills: During this project, I was able to recognize which metrics were needed and to drawing insights from data exploration. Additionally, using different hyperparameters helped get better results.

Challenges: A challenge was determining how many components to use during PCA. Another challenge was testing different hyperparameters for Ridge and Lasso.

New Things Learned: Some new things I learned from this project was the difference between Ridge, Lasso, RidgeCV, and LassoCV and their uses along with their respective hyperparameters.

Task 3

Insights: For this task, the data was only the features. Some insights to this were seeing how observations were clustered based on significant features. I also seen how scaling data can aid in have better performance metrics.

Skills: Some skills gained in this task how to draw insights from clusters and dendrograms. I had to make reasonable insights about the features space and the samples for each cluster.

Challenges: A challenge from this task was finding the correct number of clusters and reading into the meaning of the scatterplots and dendrograms. This dataset also needed heavy preprocessing which required knowledge & exploration of the dataset.

New Things Learned: Some new things I learned while performing this task was how to draw insights from clusters and what makes observations belong to a certain cluster. I also learned how to obtain & improved performance metrics for unsupervised learning techniques with hyperparameters.