***Group Activity 2***

***Comparing the Performances of Different Regression Models***

In this lab, you are expected to explore different regression models, and compare their performances. The boilerplate is to be followed strictly.

(Do not change function definitions and other structures, and only fill in your code where it says ‘YOUR CODE HERE’)

The regression models we will be looking at are:

1. **Linear Regression** – Classic approach assuming linear relationships
2. **Lasso Regression** – Linear regression with L1 regularization
3. **Ridge Regression** – Linear regression with L2 regularization
4. **Elastic Net Regression** – Combination of L1 and L2 regularization

The boilerplate and the dataset can be found here:

<https://github.com/Narpear/AOML_TA_PSK_Code/tree/main/Group%20Activity%202>

Remember, the goal is not just to implement the models, but to understand how they perform differently and why. It’s fine if the MSE or R^2 are not the best. The idea of the lab is to get you to learn how to use existing libraries to build models. Good luck!