

**Assignment 2**  
**EC9630: Machine Learning**  
**Chapter 4: Linear Regression**  
**Duration: 1 Hour**  
**Feature Selection**

**This assignment will be useful for all labs.**

**This is to familiarize with few variable selection methods. You are expected to try other feature selection methods as well.**

1. Use Boston housing data for this assignment. Load the data and extract the feature matrix and target vector separately.
2. Use the Person correlation to find the correlation between features. Draw the heatmap to show this correlation.
3. Extract the correlation of all variables with the target variable.
4. Display the first three features with high correlation and state the threshold value for this selection.
5. Now use Lasso regression and find the number of selected and eliminated variables.
6. Find the importance of each feature and plot the values using a bar graph.