# Lab 5

## Due Date

Sunday Feb 8th 2022

## Task

1) Create cross validation grid search classification tree for Corolla price.

a. Create a binary variable for above average price and below average price.

b. Search for the best optimization options. Only include the appropriate variables for modeling.

c. Determine the best estimators

d. Plot the tree

e. Calculate the accuracy

2) Create a model to predict the prices of used cars using below 2 methods:

1. Regression (full, forward, backward)
2. Regression trees (cv=5 gridsearch)

Identify which model provides better predictions.

Use the following independent variables for both regression models:

**Variable Value**

Age\_-08\_-04, KM, Fuel\_Type, HP, Automatic, Doors, Quarterly\_Tax, Mfr\_Guarantee, Guarantee\_Period, Airco, CD\_Player, Powered\_Windows, Sport\_Model, Tow\_Bar

Note:

Please follow all the necessary steps i.e. splitting data sets, converting to categorical, etc. where necessary.