**Required Assignment – 1**

Prepare a Python notebook to build, train and evaluate a regression model on the given dataset. Please read the instructions carefully.

**Business Case:** Build regression models to predict car price based on various features given:

**Task: Car Price Dataset**

Click the icon below to view/download the dataset



1. Import Libraries/Dataset (1 mark)

* Import the required libraries and the dataset

1. Data Visualisation and augmentation (0.5\*6 =3 marks)

* Plot at least two EDA graphs (use matplotlib/seaborn/any other library)
* Prepare data to be able to build the model
* Bring the train and test data in the required format
* Perform missing values check
* Perform scaling of data
* Print the shapes of train and test data

1. Decision Tree Regression Model Building (0.5\*3 = 1.5 marks)

* Build a decision tree regression model
* Train the model on the train dataset
* Print the model summary

1. Random Forest Regression Model Building (0.5\*3 = 1.5 marks)

* Build a random forest regression Model
* Train the model on the train dataset
* Print the model summary

1. Model Evaluation (1 + 1 = 2 marks)

* Print the final train and validation RMSE and MSE for both models
* Check for other evaluation metrics like MAE, R2, etc. and explain which one should be used to evaluate this model (consider the business case)

1. Compare the performance of decision tree regression and random forest regression models for given dataset (1 mark)