ML1102/ML1202_Machine Learning-I

Skill 2

Date of display: 22/07/2021

Date of Submission: 25/07/2021

Title: Perform Regression on the Toyota Corolla Data Set.

Problem Statement:

Prepare a prediction model for profit of Corolla data.
Do transformations if needed for getting better predictions of price and
make a table containing R^2 value for each prepared model.

Consider only the below columns and prepare a prediction model for predicting Price.

Corolla<-
Corolla[c("Price","Age_08_04","KM","HP","cc","Doors","Gears","Quarterly_Tax","Weight")]

Model -- model of the car
Price -- Offer Price in EUROs
Age_08_04 -- Age in months as in August 2004
Mfg_Month -- Manufacturing month (1-12)
Mfg_Year   -- Manufacturing Year
KM -- Accumulated Kilometers on odometer
Fuel_Type   -- Fuel Type (Petrol, Diesel, CNG)
HP -- Horse Power
Met_Color   -- Metallic Color? (Yes=1, No=0)
Color -- Color (Blue, Red, Grey, Silver, Black, etc.)
Automatic   -- Automatic ((Yes=1, No=0)
cc -- Cylinder Volume in cubic centimeters
Doors -- Number of doors
Cylinders   -- Number of cylinders
Gears -- Number of gear positions
Quarterly_Tax -- Quarterly road tax in EUROs
Weight -- Weight in Kilograms
Mfr_Guarantee -- Within Manufacturer's Guarantee period (Yes=1, No=0)
BOVAG_Guarantee -- BOVAG (Dutch dealer network) Guarantee (Yes=1, No=0)
Guarantee_Period --   Guarantee period in months
ABS -- Anti-Lock Brake System (Yes=1, No=0)
Airbag_1 -- Driver_Airbag (Yes=1, No=0)
Airbag_2 -- Passenger Airbag (Yes=1, No=0)
Airco -- Airconditioning (Yes=1, No=0)
Automatic_airco -- Automatic Airconditioning (Yes=1, No=0)
Boardcomputer -- Boardcomputer (Yes=1, No=0)
CD_Player -- CD Player (Yes=1, No=0)

Central_Lock -- Central Lock (Yes=1, No=0)
Powered_Windows -- Powered Windows (Yes=1, No=0)
Power_Steering -- Power Steering (Yes=1, No=0)
Radio -- Radio (Yes=1, No=0)
Mistlamps   -- Mistlamps (Yes=1, No=0)
Sport_Model -- Sport Model (Yes=1, No=0)
Backseat_Divider -- Backseat Divider (Yes=1, No=0)
Metallic_Rim --Metallic Rim (Yes=1, No=0)
Radio_cassette -- Radio Cassette (Yes=1, No=0)
Tow_Bar -- Tow Bar (Yes=1, No=0)

Instructions for submission:

1. Save the file with PRN_<Name>.
2. Convert ipynb file into PDF and upload.
3. Add the skill activity details header at the beginning of the file.