
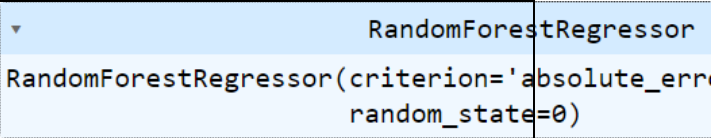
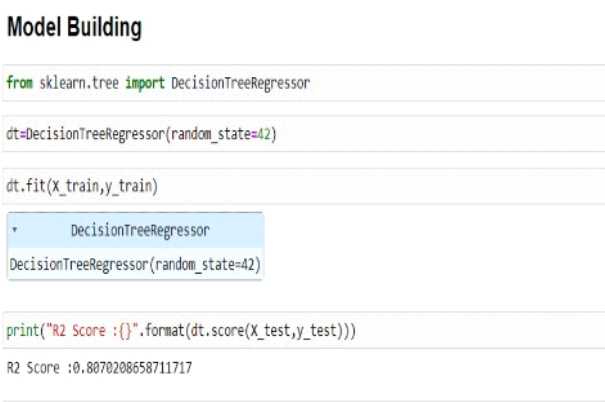
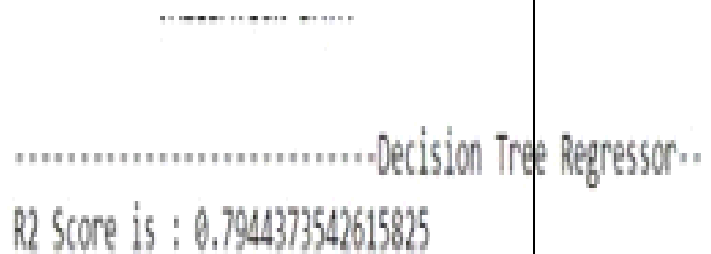


Model Development Phase Template

Date	16 july 2024
Team ID	740033
Project Title	Car Performance Prediction Using ML
Maximum Marks	4 Marks

Mode l	Classification Report	Accuracy
Random forest classifier	 <p>random forest regressor</p> <pre>[] from sklearn.ensemble import RandomForestRegressor</pre> <pre>rf= RandomForestRegressor(n_estimators=10, rf.fit(x_train,y_train)</pre> <pre><ipython-input-48-5710e01e300c>:2: DataCon rf.fit(x_train,y_train)</pre> <pre>RandomForestRegressor(criterion='absolute_ random_state=0)</pre>	 <p>RandomForestRegressor</p> <pre>RandomForestRegressor(criterion='absolute_err random_state=0)</pre>
Decision Tree classifier	 <p>Model Building</p> <pre>from sklearn.tree import DecisionTreeRegressor</pre> <pre>dt=DecisionTreeRegressor(random_state=42)</pre> <pre>dt.fit(x_train,y_train)</pre> <pre>DecisionTreeRegressor DecisionTreeRegressor(random_state=42)</pre> <pre>print("R2 Score :{}".format(dt.score(X_test,y_test)))</pre> <pre>R2 Score :0.8070208658711717</pre>	 <p>Decision Tree Regressor</p> <p>R2 Score is : 0.7944373542615825</p>

Initial Model Training Code, Model Validation and Evaluation Report

The initial model training code will be showcased in the future through a screenshot. The model validation and evaluation report will include classification reports, accuracy, and confusion matrices for multiple models, presented through respective screenshots.

Initial Model Training Code:

```
from sklearn.model_selection import train_test_split
x_train,x_test,y_train,y_test=train_test_split(x,y,test_size=
```

Model Validation and Evaluation Report:

Extra Tree classifi er		
	<pre>from sklearn.ensemble import ExtraTreesRegressor</pre>	
	<pre>et_regressor = ExtraTreesRegressor(n_estimators=100, max_depth=10, random_state=23)</pre>	
	<pre>et_regressor.fit(X_train, y_train)</pre>	
	<div>✖ ExtraTreesRegressor ExtraTreesRegressor(max_depth=10, random_state=23)</div>	
	<pre>print("R2 Score :{}".format(et_regressor.score(X_test,y_test)))</pre>	
	<pre>R2 Score :0.8989213134566164</pre>	

-----Extra Trees Regressor
R2 Score is : 0.8937335681153357