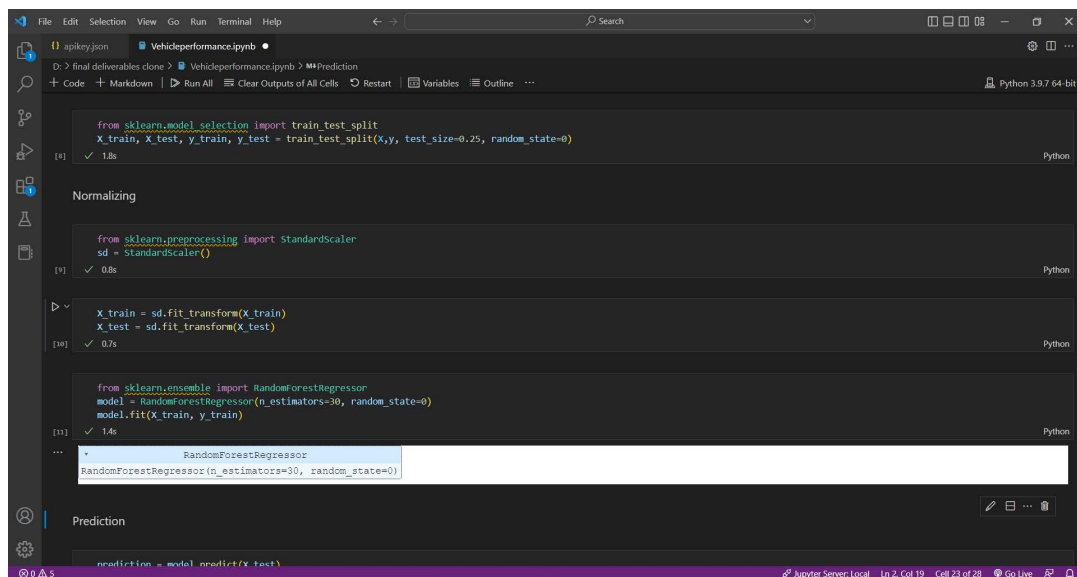


PROJECT DEVELOPMENT PHASE

DELIVERY OF SPRINT-2

DATE	4 OCTOBER 2022
TEAM ID	PNT2022TMID15686
PROJECT NAME	Machine Learning based Vehicle Performance Analyzer
MAXIMUM MARK	4 Marks

- **Choosing appropriate model**



The screenshot displays a Jupyter Notebook interface with the following code cells:

```
from sklearn.model_selection import train_test_split
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.25, random_state=0)
```

Output: 1.8s

Normalizing

```
from sklearn.preprocessing import StandardScaler
sd = StandardScaler()
```

Output: 0.8s

```
X_train = sd.fit_transform(X_train)
X_test = sd.fit_transform(X_test)
```

Output: 0.7s

```
from sklearn.ensemble import RandomForestRegressor
model = RandomForestRegressor(n_estimators=30, random_state=0)
model.fit(X_train, y_train)
```

Output: 1.4s

RandomForestRegressor

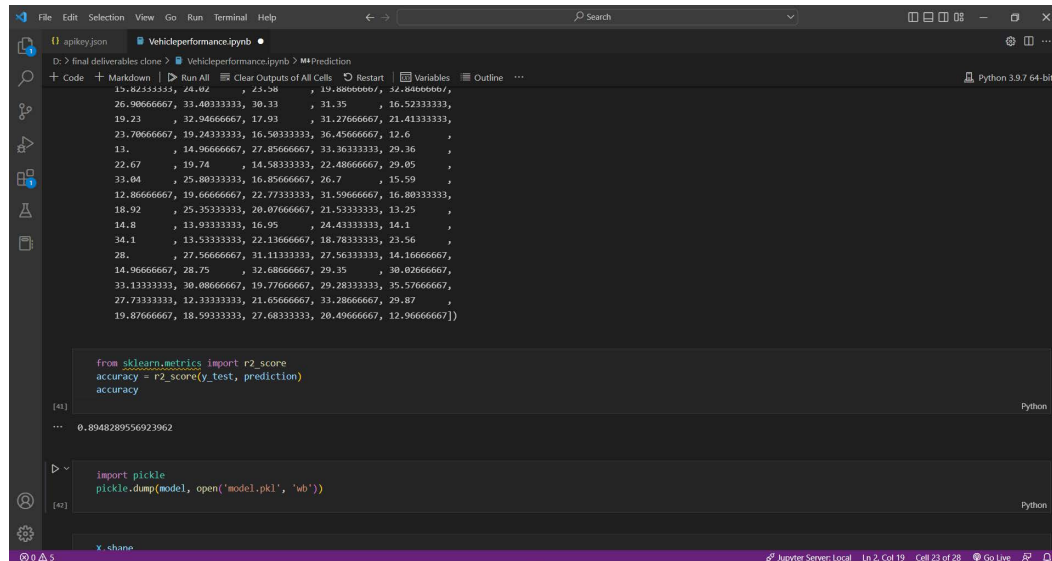
```
RandomForestRegressor(n_estimators=30, random_state=0)
```

Prediction

```
prediction = model.predict(X_test)
```

The notebook is titled "VehiclePerformance.ipynb" and shows the process of splitting data, normalizing it, training a RandomForestRegressor model, and making predictions.

- Dumping to pickle file



The screenshot shows a Jupyter Notebook window with the following content:

```
D:\> final deliverables clone > Vehicleperformance.ipynb > M4Prediction
```

The notebook contains a list of numerical data points (likely a dataset) and two code cells:

```
[41]: from sklearn.metrics import r2_score
      accuracy = r2_score(y_test, prediction)
      accuracy
Out[41]: 0.8948289556923962
```

```
[42]: import pickle
      pickle.dump(model, open('model.pkl', 'wb'))
```

The status bar at the bottom indicates the user is 'x.shane' and the kernel is 'kaggle Server: Local'.