

Decision Tree Regression

Importing the libraries

```
import numpy as np
import matplotlib.pyplot as plt
import pandas as pd
```

Importing the dataset


```
dataset = pd.read_csv('Data.csv')
X = dataset.iloc[:, :-1].values
y = dataset.iloc[:, -1].values
```

Splitting the dataset into the Training set and Test set

```
from sklearn.model_selection import train_test_split
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size = 0.2, random_state = 0)
```


Training the Decision Tree Regression model on the Training set

```
from sklearn.tree import DecisionTreeRegressor
regressor = DecisionTreeRegressor(random_state = 0)
regressor.fit(X_train, y_train)
```

 `DecisionTreeRegressor`
`DecisionTreeRegressor(random_state=0)`


Predicting the Test set results

```
y_pred = regressor.predict(X_test)
np.set_printoptions(precision=2)
print(np.concatenate((y_pred.reshape(len(y_pred),1), y_test.reshape(len(y_test),1)),1))
```

 `[[431.28 431.23]`
`[459.59 460.01]`
`[460.06 461.14]`
`...`
`[471.46 473.26]`
`[437.76 438.]`
`[462.74 463.28]]`

Evaluating the Model Performance

```
from sklearn.metrics import r2_score
r2_score(y_test, y_pred)
```

 `0.922905874177941`

