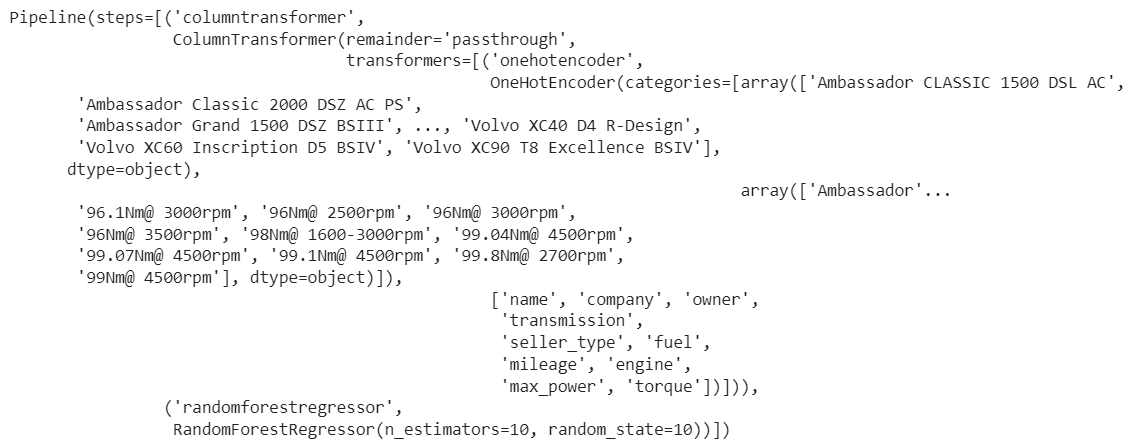
**Choosing the model to be a Decision tree regressor:**

from sklearn.ensemble import RandomForestRegressor

Rf = RandomForestRegressor(n\_estimators = 10, random\_state = 10)

Rf = make\_pipeline(columns\_trans, Rf)

Rf.fit(X\_train, Y\_train)



Rf\_train\_pred = Rf.predict(X\_train)

Rf\_test\_pred = Rf.predict(X\_test)

# R Square

r2\_score = metrics.r2\_score(Y\_train, Rf\_train\_pred)

print(f"Training: R Square: {r2\_score}")

# Cross Validation

cross\_val = cross\_val\_score(Rf ,X\_train ,Y\_train ,cv=5)

print(f"Training: Cross Validation: {cross\_val}")

# R Square

r2\_score = metrics.r2\_score(Y\_test, Rf\_test\_pred)

print(f"Testing: R Square: {r2\_score}")

# Cross Validation

cross\_val = cross\_val\_score(Rf ,X\_test ,Y\_test, cv=5)

print(f"Testing: Cross Validation: {cross\_val}")

