

# linear-regression-model

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```
[ ]: import pandas as pd
from sklearn.model_selection import train_test_split
from sklearn.linear_model import LinearRegression
from sklearn.metrics import mean_squared_error, r2_score
import pickle

# Load the dataset
df = pd.read_csv('Car_Price_Prediction.csv')

# Display the first few rows
print(df.head())

# Preprocess the data
# Encode categorical variables
df_encoded = pd.get_dummies(df, drop_first=True)

# Features and target
X = df_encoded.drop('Price', axis=1)
y = df_encoded['Price']

# Split the data
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2,random_state=42)

# Model
model = LinearRegression()
model.fit(X_train, y_train)

# Predictions
y_pred = model.predict(X_test)

# Evaluate
print('Model Evaluation:')
print('MSE:', mean_squared_error(y_test, y_pred))
print('R2:', r2_score(y_test, y_pred))

# Save the model
```

```
with open('model.pkl', 'wb') as f:  
    pickle.dump(model, f)
```