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Changes	Time	Difficulty
Tryout several training split and 75% training have the lowest error with 0.38	30 mins	3
Switch to other versions like lasso and ridge but get lower accuracy. Switched back to base version	40 mins	4
Try predicting house price using house data but the model were not able to perform due to location of house which is not in numerical value	50 mins	5

In [22]:
```
import pandas as pd
import numpy as np
from sklearn.model_selection import train_test_split
from sklearn.linear_model import LinearRegression, Ridge, Lasso, ElasticNet
from sklearn.metrics import mean_squared_error, r2_score,accuracy_score
```

In [24]:
```
df = pd.read_csv('wine_data.csv')
```

In [44]:
```
X = df.iloc[:, :-1]  # exclude quality
y = df["quality"]

# Split dataset
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.25, random

model = LinearRegression()

model.fit(X_train, y_train)

predictions = model.predict(X_test)

mse = mean_squared_error(y_test, predictions)
r2 = r2_score(y_test, predictions)
print(f'Mean Squared Error: {mse}')
print(f'R² Score: {r2}')
```

```
Mean Squared Error: 0.38830173868689216
R² Score: 0.3722831200818111
```