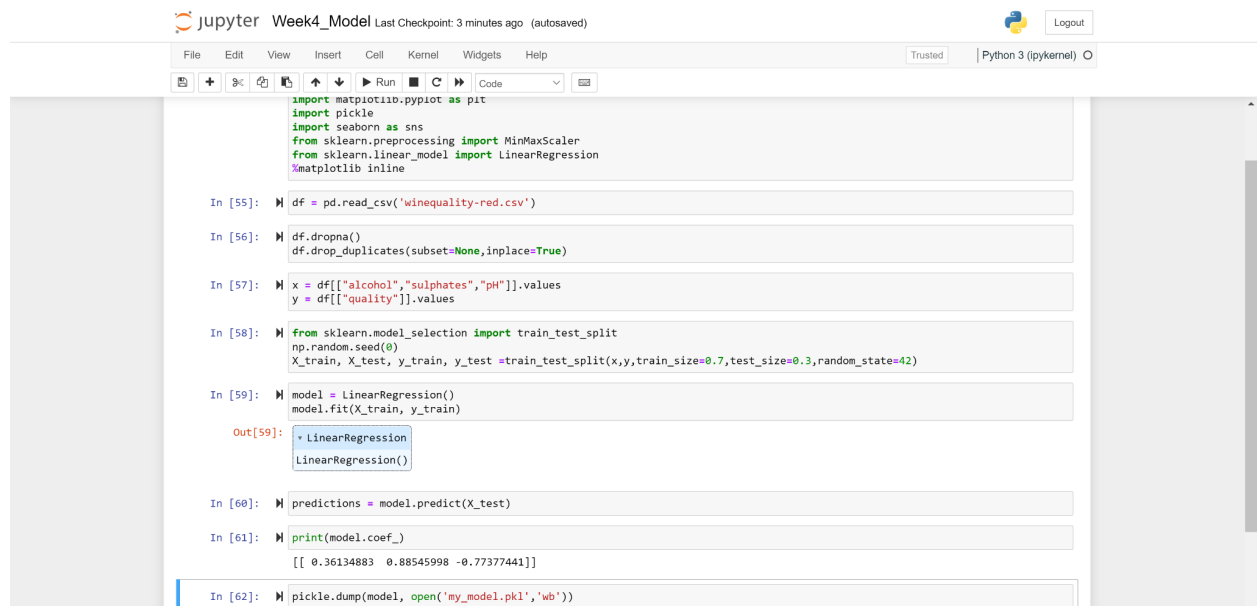


Jane Condon
LISUM11: 30
07/27/2022

<https://github.com/janecondon/Data-Glacier-Internship-Week-4.git>



Jupyter Week4_Model Last Checkpoint: 3 minutes ago (autosaved)

```
import matplotlib.pyplot as plt
import pickle
import seaborn as sns
from sklearn.preprocessing import MinMaxScaler
from sklearn.linear_model import LinearRegression
%matplotlib inline

In [55]: df = pd.read_csv('winequality-red.csv')

In [56]: df.dropna()
df.drop_duplicates(subset=None, inplace=True)

In [57]: x = df[['alcohol', 'sulphates', 'pH']].values
y = df[['quality']].values

In [58]: from sklearn.model_selection import train_test_split
np.random.seed(0)
X_train, X_test, y_train, y_test = train_test_split(x, y, train_size=0.7, test_size=0.3, random_state=42)

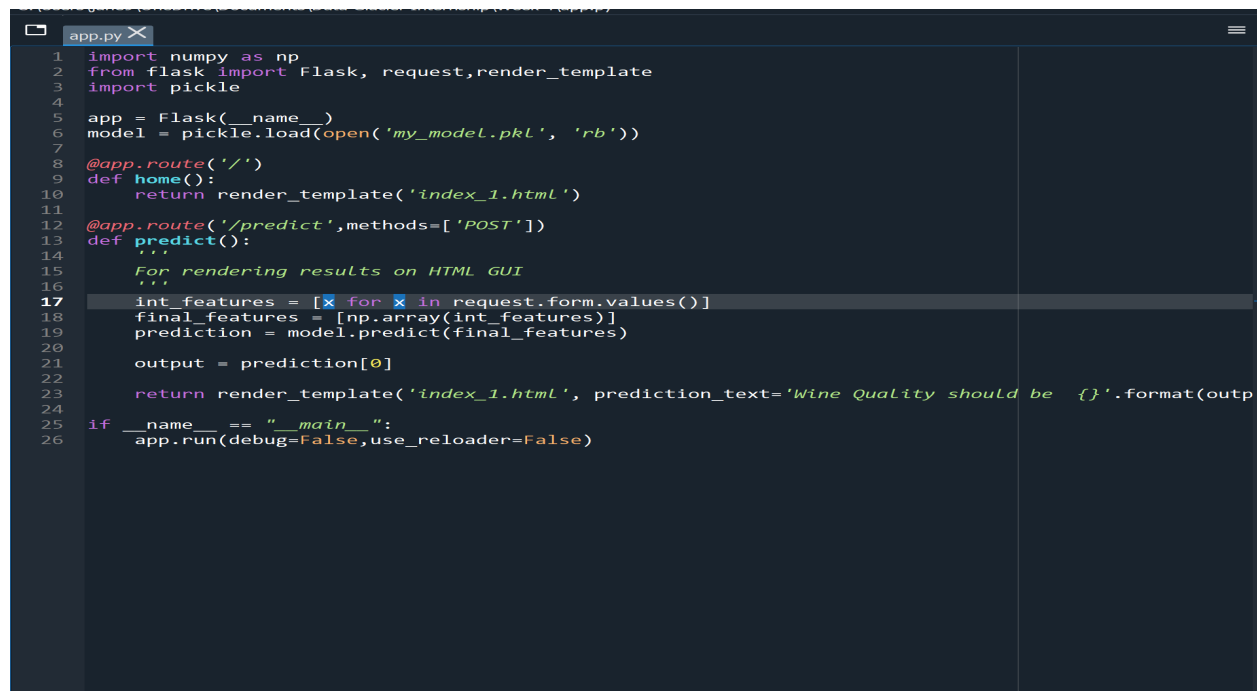
In [59]: model = LinearRegression()
model.fit(X_train, y_train)

Out[59]: LinearRegression()
LinearRegression()

In [60]: predictions = model.predict(X_test)

In [61]: print(model.coef_)
[[ 0.36134883  0.88545998 -0.77377441]]

In [62]: pickle.dump(model, open('my_model.pkl', 'wb'))
```




```
app.py
1 import numpy as np
2 from flask import Flask, request, render_template
3 import pickle
4
5 app = Flask(__name__)
6 model = pickle.load(open('my_model.pkl', 'rb'))
7
8 @app.route('/')
9 def home():
10     return render_template('index_1.html')
11
12 @app.route('/predict', methods=['POST'])
13 def predict():
14     """
15     For rendering results on HTML GUI
16     """
17     int_features = [int(x) for x in request.form.values()]
18     final_features = [np.array(int_features)]
19     prediction = model.predict(final_features)
20
21     output = prediction[0]
22
23     return render_template('index_1.html', prediction_text='Wine Quality should be {}'.format(output))
24
25 if __name__ == "__main__":
26     app.run(debug=False, use_reloader=False)
```

```
In [19]: runfile('C:/Users/jane9/OneDrive/Documents/Data Glacier Internship/Week 4/app.py', wdir='C:/
Users/jane9/OneDrive/Documents/Data Glacier Internship/Week 4')
* Serving Flask app "app" (lazy loading)
* Environment: production
  WARNING: This is a development server. Do not use it in a production deployment.
  Use a production WSGI server instead.
* Debug mode: off
C:\Users\jane9\anaconda3\lib\site-packages\sklearn\base.py:310: UserWarning: Trying to unpickle
estimator LinearRegression from version 1.1.1 when using version 0.24.2. This might lead to breaking
code or invalid results. Use at your own risk.
  warnings.warn(
* Running on http://127.0.0.1:5000/ (Press CTRL+C to quit)
```

Predict Wine Quality

Predict

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Predict Wine Quality

Predict

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Predict Wine Quality

Alcohol

Sulphates

pH

Predict

Wine Quality should be [5.01537514]



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