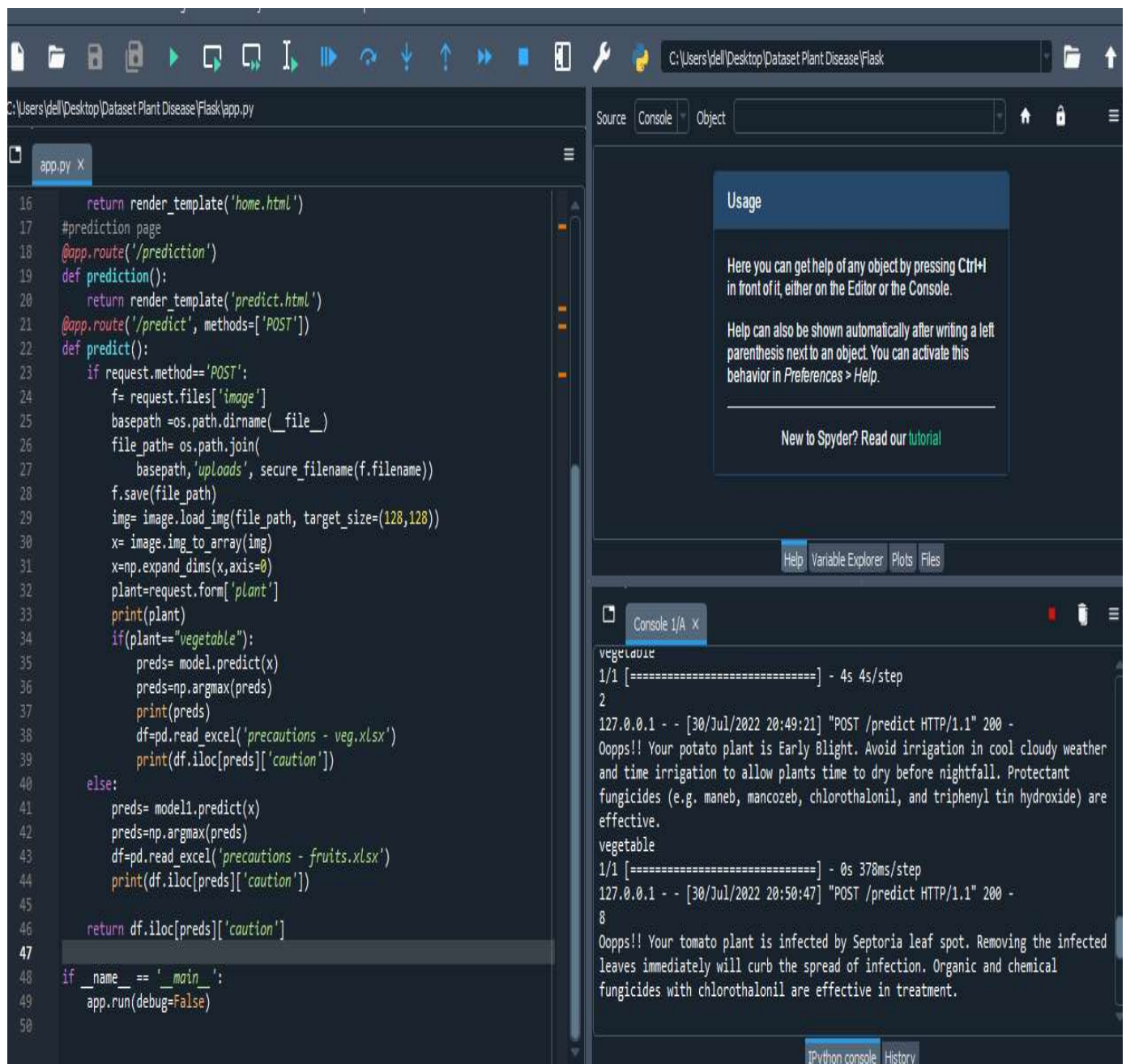


Output Screenshot after running app.py code in Spyder



```
16     return render_template('home.html')
17 #prediction page
18 @app.route('/prediction')
19 def prediction():
20     return render_template('predict.html')
21 @app.route('/predict', methods=['POST'])
22 def predict():
23     if request.method == 'POST':
24         f = request.files['image']
25         basepath = os.path.dirname(__file__)
26         file_path = os.path.join(
27             basepath, 'uploads', secure_filename(f.filename))
28         f.save(file_path)
29         img = image.load_img(file_path, target_size=(128,128))
30         x = image.img_to_array(img)
31         x = np.expand_dims(x, axis=0)
32         plant = request.form['plant']
33         print(plant)
34         if (plant == "vegetable"):
35             preds = model.predict(x)
36             preds = np.argmax(preds)
37             print(preds)
38             df = pd.read_excel('precautions - veg.xlsx')
39             print(df.iloc[preds]['caution'])
40         else:
41             preds = model1.predict(x)
42             preds = np.argmax(preds)
43             df = pd.read_excel('precautions - fruits.xlsx')
44             print(df.iloc[preds]['caution'])
45
46     return df.iloc[preds]['caution']
47
48 if __name__ == '__main__':
49     app.run(debug=False)
50
```

Usage

Here you can get help of any object by pressing **Ctrl+I** in front of it, either on the Editor or the Console.

Help can also be shown automatically after writing a left parenthesis next to an object. You can activate this behavior in *Preferences > Help*.

New to Spyder? Read our [tutorial](#)

Help Variable Explorer Plots Files

Console 1/A x

```
vegetable
1/1 [=====] - 4s 4s/step
2
127.0.0.1 - - [30/Jul/2022 20:49:21] "POST /predict HTTP/1.1" 200 -
Oops!! Your potato plant is Early Blight. Avoid irrigation in cool cloudy weather
and time irrigation to allow plants time to dry before nightfall. Protectant
fungicides (e.g. maneb, mancozeb, chlorothalonil, and triphenyl tin hydroxide) are
effective.
vegetable
1/1 [=====] - 0s 378ms/step
127.0.0.1 - - [30/Jul/2022 20:50:47] "POST /predict HTTP/1.1" 200 -
8
Oops!! Your tomato plant is infected by Septoria leaf spot. Removing the infected
leaves immediately will curb the spread of infection. Organic and chemical
fungicides with chlorothalonil are effective in treatment.
```

IPython console History

Prediction of Disease after Running in Web Browser



← → ↻ 127.0.0.1:5000/prediction

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Plant

Vegetable

Choose...



Prediction: Ooops!! Your potato plant is Early Blight. Avoid irrigation in cool cloudy weather and time irrigation to allow plants time to dry before nightfall. Protectant fungicides (e.g. maneb, mancozeb, chlorothalonil, and triphenyl tin hydroxide) are effective.

Model_Building_Vegetable by using IBM Watson Studio

IBM Watson Studio Search in your workspaces Buy Gunjan Mishra's Account

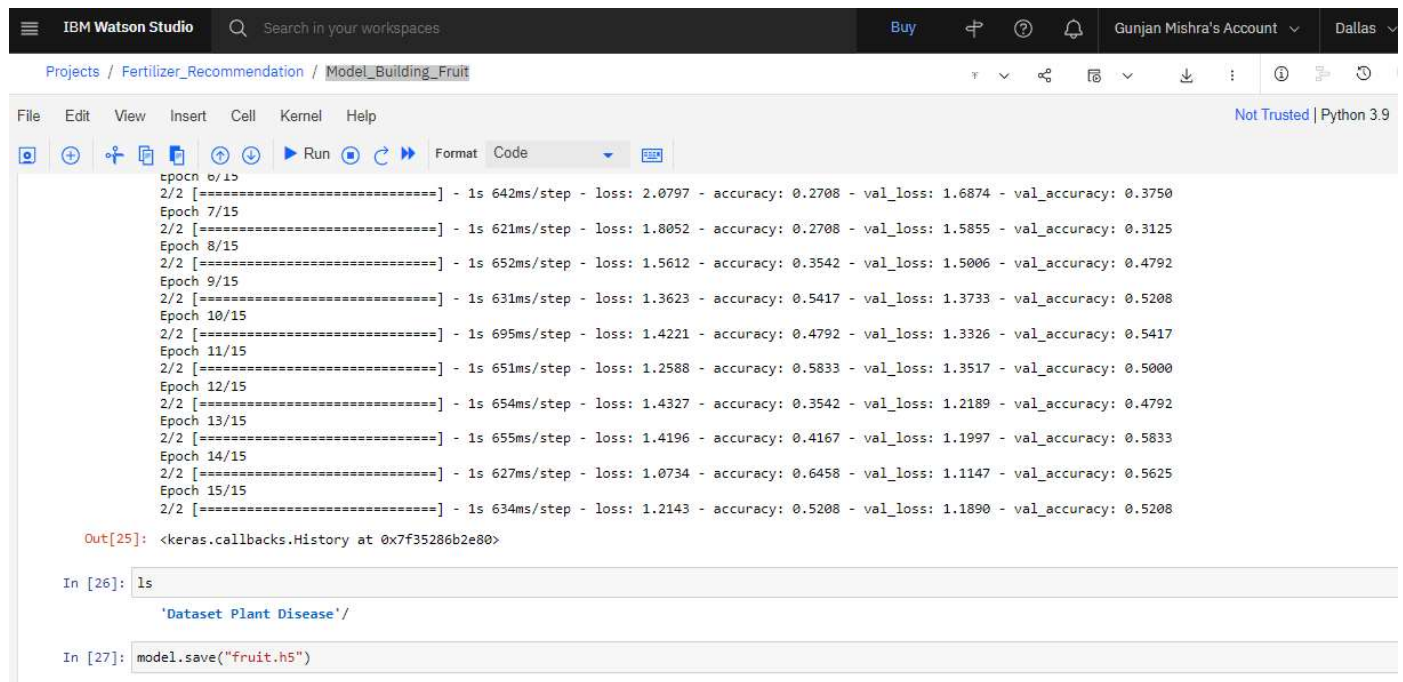
Projects / Fertilizer_Recommendation / Model_Building_Vegetable

```
40/40 [=====] - 25s 620ms/step - loss: 0.7264 - accuracy: 0.7635 - val_loss: 0.6876 - val_accuracy: 0.7487
Epoch 12/20
40/40 [=====] - 25s 619ms/step - loss: 0.6911 - accuracy: 0.7594 - val_loss: 0.6973 - val_accuracy: 0.7604
Epoch 13/20
40/40 [=====] - 25s 625ms/step - loss: 0.6041 - accuracy: 0.7865 - val_loss: 0.6739 - val_accuracy: 0.7656
Epoch 14/20
40/40 [=====] - 25s 626ms/step - loss: 0.5687 - accuracy: 0.7927 - val_loss: 0.7125 - val_accuracy: 0.7565
Epoch 15/20
40/40 [=====] - 25s 621ms/step - loss: 0.6672 - accuracy: 0.7635 - val_loss: 0.5650 - val_accuracy: 0.7969
Epoch 16/20
40/40 [=====] - 25s 622ms/step - loss: 0.6671 - accuracy: 0.7615 - val_loss: 0.8610 - val_accuracy: 0.6966
Epoch 17/20
40/40 [=====] - 25s 617ms/step - loss: 0.6873 - accuracy: 0.7677 - val_loss: 0.6384 - val_accuracy: 0.7734
Epoch 18/20
40/40 [=====] - 25s 618ms/step - loss: 0.6039 - accuracy: 0.8042 - val_loss: 0.5854 - val_accuracy: 0.7930
Epoch 19/20
40/40 [=====] - 24s 605ms/step - loss: 0.5822 - accuracy: 0.7948 - val_loss: 0.6740 - val_accuracy: 0.7513
Epoch 20/20
40/40 [=====] - 25s 613ms/step - loss: 0.5235 - accuracy: 0.8066 - val_loss: 0.4447 - val_accuracy: 0.8451

Out[11]: <keras.callbacks.History at 0x7f79480f3340>

In [12]: model.save('vegetable.h5')
```

Model_Building_Fruit by using IBM Watson Studio



```
epoch 6/15
2/2 [=====] - 1s 642ms/step - loss: 2.0797 - accuracy: 0.2708 - val_loss: 1.6874 - val_accuracy: 0.3750
Epoch 7/15
2/2 [=====] - 1s 621ms/step - loss: 1.8052 - accuracy: 0.2708 - val_loss: 1.5855 - val_accuracy: 0.3125
Epoch 8/15
2/2 [=====] - 1s 652ms/step - loss: 1.5612 - accuracy: 0.3542 - val_loss: 1.5006 - val_accuracy: 0.4792
Epoch 9/15
2/2 [=====] - 1s 631ms/step - loss: 1.3623 - accuracy: 0.5417 - val_loss: 1.3733 - val_accuracy: 0.5208
Epoch 10/15
2/2 [=====] - 1s 695ms/step - loss: 1.4221 - accuracy: 0.4792 - val_loss: 1.3326 - val_accuracy: 0.5417
Epoch 11/15
2/2 [=====] - 1s 651ms/step - loss: 1.2588 - accuracy: 0.5833 - val_loss: 1.3517 - val_accuracy: 0.5000
Epoch 12/15
2/2 [=====] - 1s 654ms/step - loss: 1.4327 - accuracy: 0.3542 - val_loss: 1.2189 - val_accuracy: 0.4792
Epoch 13/15
2/2 [=====] - 1s 655ms/step - loss: 1.4196 - accuracy: 0.4167 - val_loss: 1.1997 - val_accuracy: 0.5833
Epoch 14/15
2/2 [=====] - 1s 627ms/step - loss: 1.0734 - accuracy: 0.6458 - val_loss: 1.1147 - val_accuracy: 0.5625
Epoch 15/15
2/2 [=====] - 1s 634ms/step - loss: 1.2143 - accuracy: 0.5208 - val_loss: 1.1890 - val_accuracy: 0.5208

Out[25]: <keras.callbacks.History at 0x7f35286b2e80>

In [26]: ls

'Dataset Plant Disease'/

In [27]: model.save("fruit.h5")
```