LISUM10: 30

Week4: Deployment on Flask

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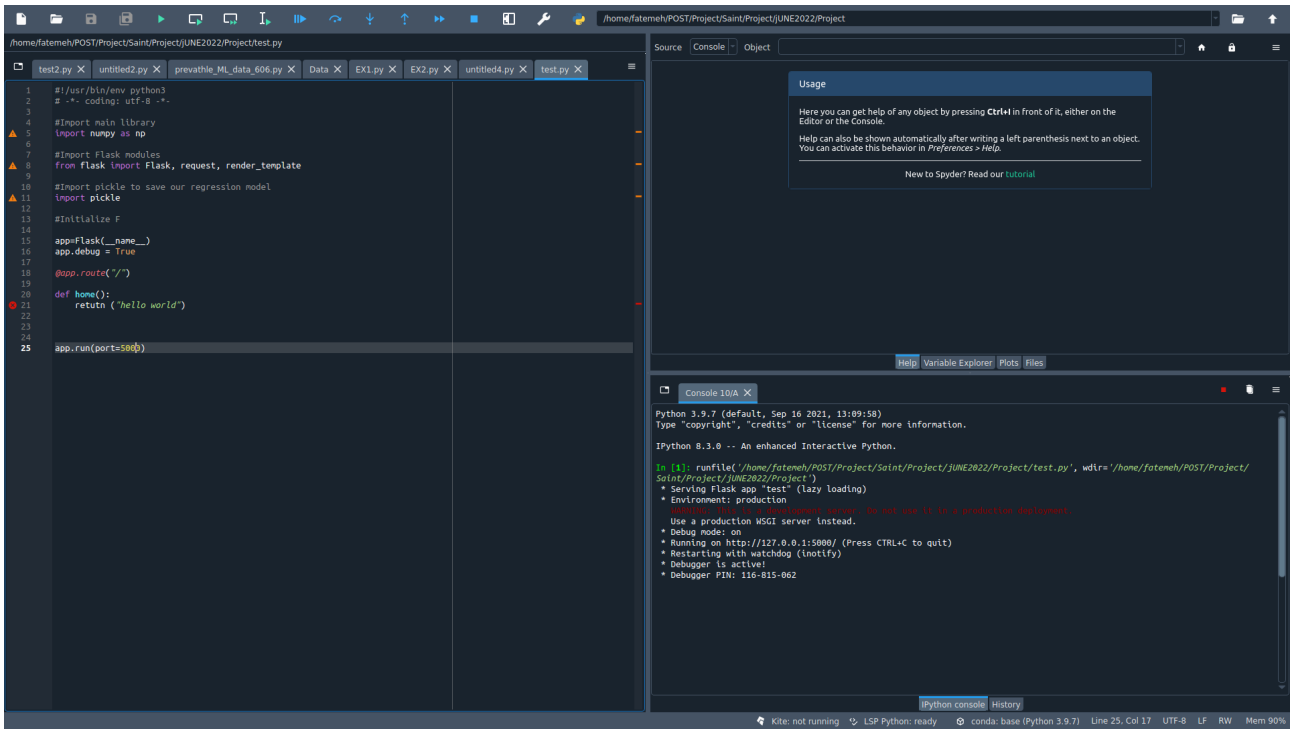

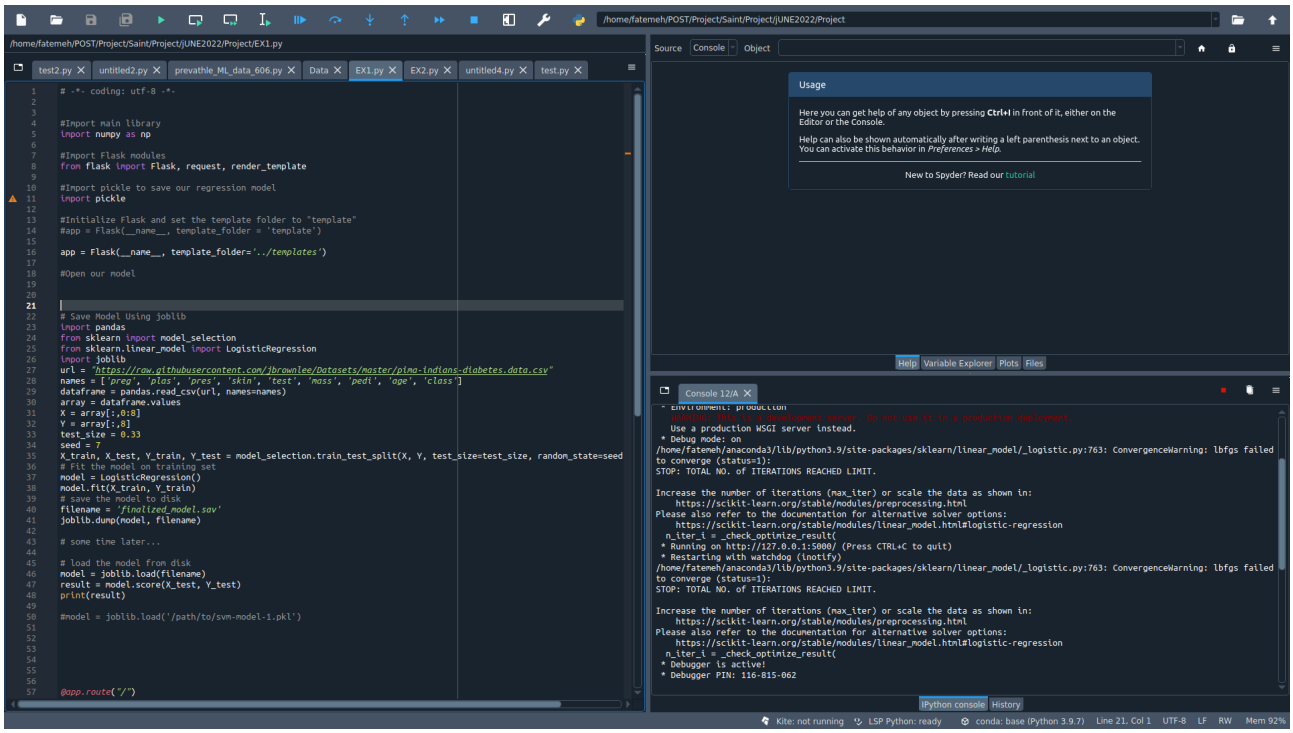
/home/fatemeh/POST/Project/Saint/Project/jUNE2022/Project
/home/fatemeh/POST/Project/Saint/Project/jUNE2022/Project/EX1.py
test2.py
untitled2.py
prevathle_ML_data_606.py
Data
EX1.py
EX2.py
untitled4.py
test.py
-*- coding: utf-8 -*-
#Import main library
import numpy as np
#Import Flask modules
from flask import Flask, request, render_template
#Import pickle to save our regression model
import pickle
#Initialize Flask and set the template folder to "template"
#app = Flask(__name__, template_folder = 'template')
app = Flask(__name__, template_folder='../templates')
#Open our model
# Save Model Using joblib
import pandas
from sklearn import model_selection
from sklearn.linear_model import LogisticRegression
import joblib
url = "https://raw.githubusercontent.com/jbrownlee/Datasets/master/pima-indians-diabetes.data.csv"
names = ['preg', 'plas', 'pres', 'skin', 'test', 'mass', 'pedi', 'age', 'class']
dataframe = pandas.read_csv(url, names=names)
array = dataframe.values
X = array[:,0:8]
Y = array[:,8]
test_size = 0.33
seed = 7
X_train, X_test, Y_train, Y_test = model_selection.train_test_split(X, Y, test_size=test_size, random_state=seed
# Fit the model on training set
model = LogisticRegression()
model.fit(X_train, Y_train)
# save the model to disk
filename = 'finalized_model.sav'
joblib.dump(model, filename)
# some time later...
# load the model from disk
model = joblib.load(filename)
result = model.score(X_test, Y_test)
print(result)
#model = joblib.load('/path/to/svm-model-1.pkl')
@app.route("/")
Source
Console
Object
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 12/A
* Environment: production
WARNING: This is a development server. Do not use it in a production deployment.
Use a production WSGI server instead.
* Debug mode: on
/home/fatemeh/anaconda3/lib/python3.9/site-packages/sklearn/linear_model/_logistic.py:763: ConvergenceWarning: lbfgs failed to converge (status=1):
STOP: TOTAL NO. of ITERATIONS REACHED LIMIT.
Increase the number of iterations (max_iter) or scale the data as shown in:
https://scikit-learn.org/stable/modules/preprocessing.html
Please also refer to the documentation for alternative solver options:
https://scikit-learn.org/stable/modules/linear_model.html#logistic-regression
n_iter_i = _check_optimize_result(
* Running on http://127.0.0.1:5000/ (Press CTRL+C to quit)
* Restarting with watchdog (inotify)
/home/fatemeh/anaconda3/lib/python3.9/site-packages/sklearn/linear_model/_logistic.py:763: ConvergenceWarning: lbfgs failed to converge (status=1):
STOP: TOTAL NO. of ITERATIONS REACHED LIMIT.
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https://scikit-learn.org/stable/modules/preprocessing.html
Please also refer to the documentation for alternative solver options:
https://scikit-learn.org/stable/modules/linear_model.html#logistic-regression
n_iter_i = _check_optimize_result(
* Debugger is active!
* Debugger PIN: 116-815-062
IPython console
History
Kite: not running
LSP Python: ready
conda: base (Python 3.9.7)
Line 21, Col 1
UTF-8
LF
RW
Mem 92%

```
# -*- coding: utf-8 -*-


#Import main library
import numpy as np

#Import Flask modules
from flask import Flask, request, render_template

#Import pickle to save our regression model
import pickle

#Initialize Flask and set the template folder to "template"
#app = Flask(__name__, template_folder = 'template')

app = Flask(__name__, template_folder='../templates')

#Open our model



# Save Model Using joblib
import pandas
from sklearn import model_selection
from sklearn.linear_model import LogisticRegression
```

```
import joblib
url = "https://raw.githubusercontent.com/jbrownlee/Datasets/master/pima-indians-diabetes.data.csv"
names = ['preg', 'plas', 'pres', 'skin', 'test', 'mass', 'pedi', 'age', 'class']
dataframe = pandas.read_csv(url, names=names)
array = dataframe.values
X = array[:,0:8]
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test_size = 0.33
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X_train, X_test, Y_train, Y_test = model_selection.train_test_split(X, Y, test_size=test_size, random_state=seed)
# Fit the model on training set
model = LogisticRegression()
model.fit(X_train, Y_train)
# save the model to disk
filename = 'finalized_model.sav'
joblib.dump(model, filename)

# some time later...

# load the model from disk
model = joblib.load(filename)
result = model.score(X_test, Y_test)
print(result)

#model = joblib.load('/path/to/svm-model-1.pkl')
```

```
@app.route("/")
def home():
    return render_template('home.html')

@app.route("/about/")
def about():
    return render_template('about.html')

# if __name__=="__main__":
#     app.run(debug=True)




# #model = pickle.load(open('model.pkl','rb'))

# #create our "home" route using the "index.html" page
# @app.route('/')
# def home():
#     return render_template('index.html')

# #Set a post method to yield predictions on page
# @app.route('/', methods = ['POST'])
def predict():

    #obtain all form values and place them in an array, convert into integers
    int_features = [int(x) for x in request.form.values()]
    #Combine them all into a final numpy array
    final_features = [np.array(int_features)]
```

```
    #predict the price given the values inputted by user
    prediction = model.predict(final_features)

    #Round the output to 2 decimal places
    output = round(prediction[0], 2)

    #If the output is negative, the values entered are unreasonable to the context of the application
    #If the output is greater than 0, return prediction
    if output < 0:
        return render_template('index.html', prediction_text = "Predicted Price is negative, values entered not reasonable")
    elif output >= 0:
        return render_template('index.html', prediction_text = 'Predicted Price of the house is: $ {}'.format(output))

#Run app
if __name__ == "__main__":
    app.run(debug=True)
```