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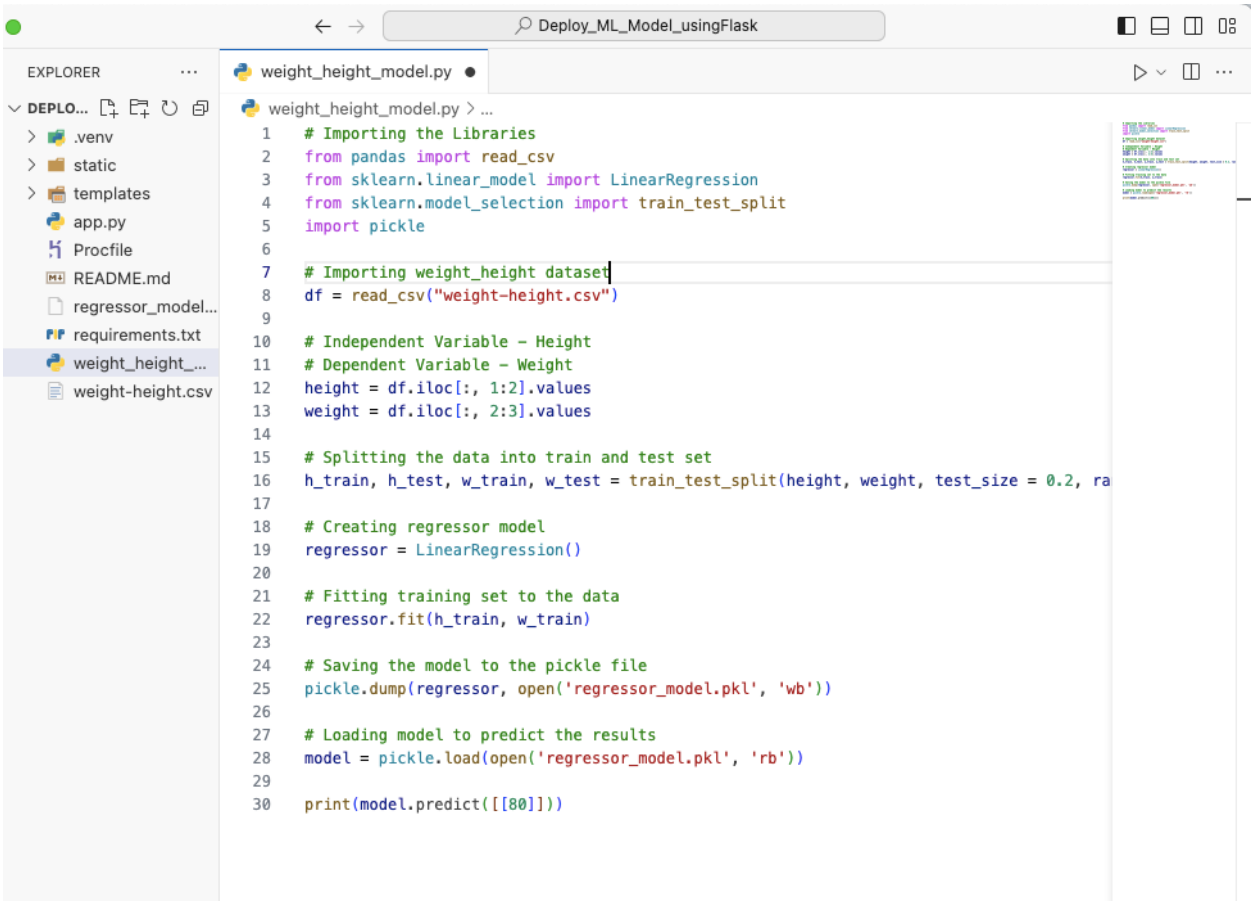
Batch code: LISU35
Submission Date: 07/25/2024
Submitted to: Data Glacier

ML Model Deployment on Flask

Step 1:
Create ML model & Save trained model using pickle library:

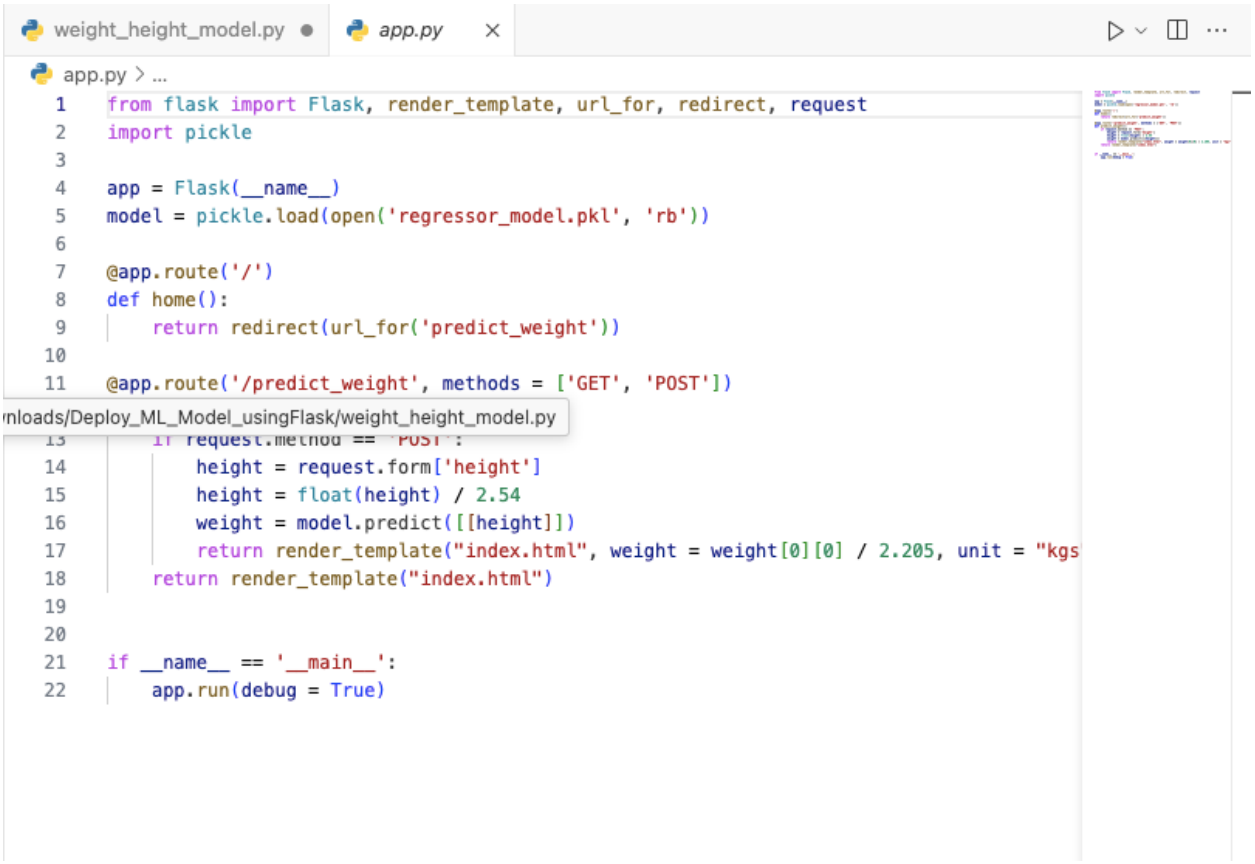


Predicting the weight of a person based on their height using Linear Regression model. The given height & weight unit in csv is inches & pounds. After the training the model, used pickle library to save the model.

Step 2:

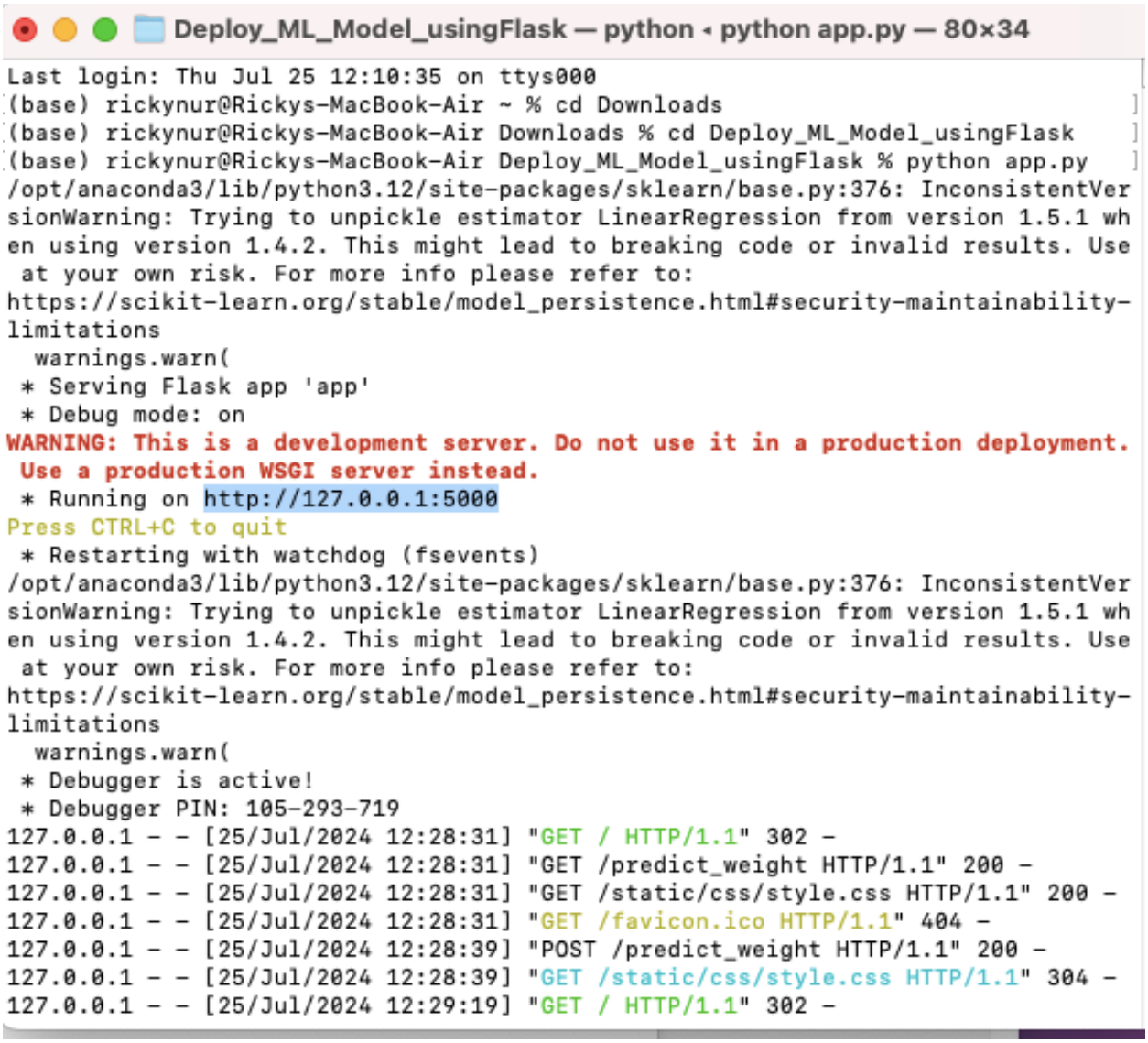
Import necessary libraries, created a flask instance named app and loaded the pretrained model. The (‘/’) redirect to the “predict_weight” route whoever tried to access base URL of the app will redirected that route. “/predict_weight” route accepts GET & POST request.

When the form is submitted (HTTP POST request), it retrieves the height from the form data and converts the height from centimeters to inches. Converts the predicted weight from pounds to kilograms. Renders the index.html template with the predicted weight and the unit (kgs). When accessed via a GET request, it simply renders the index.html template without any prediction result.

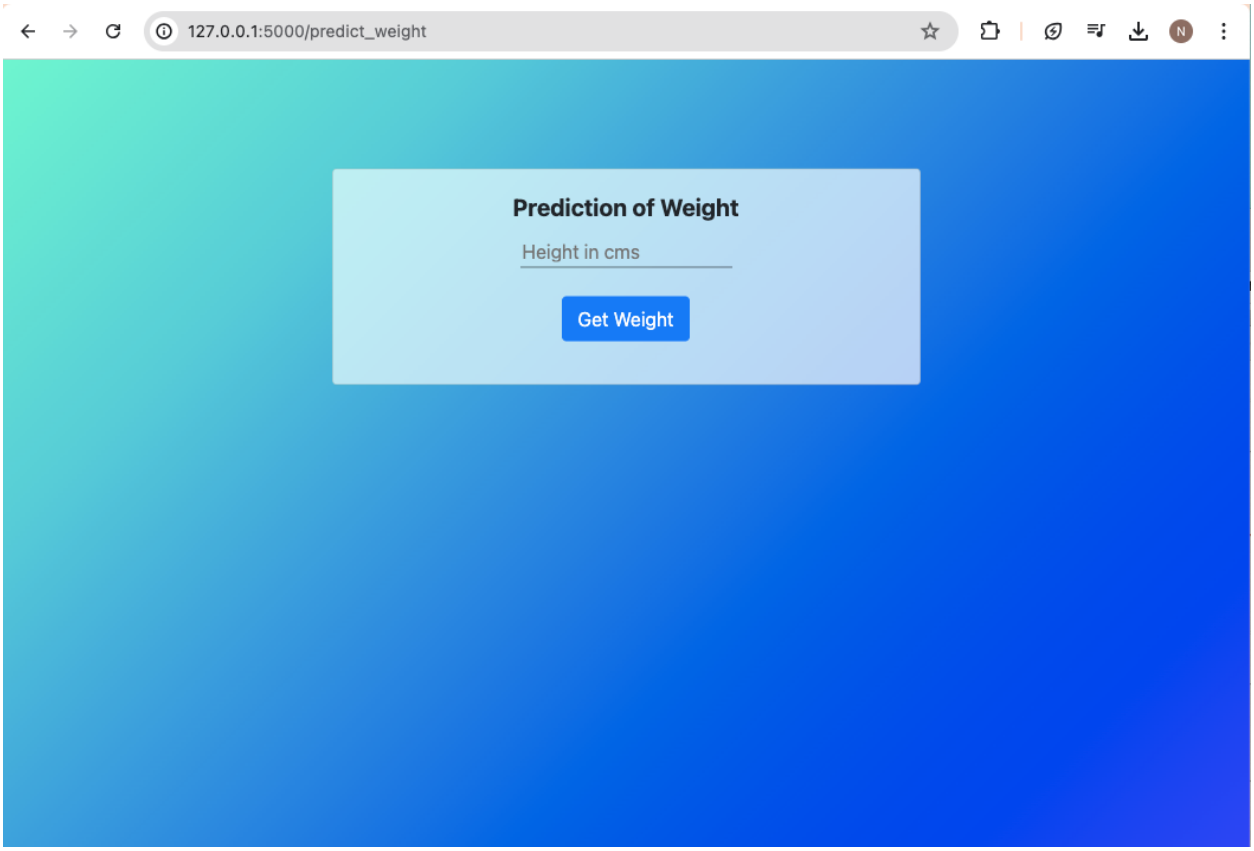


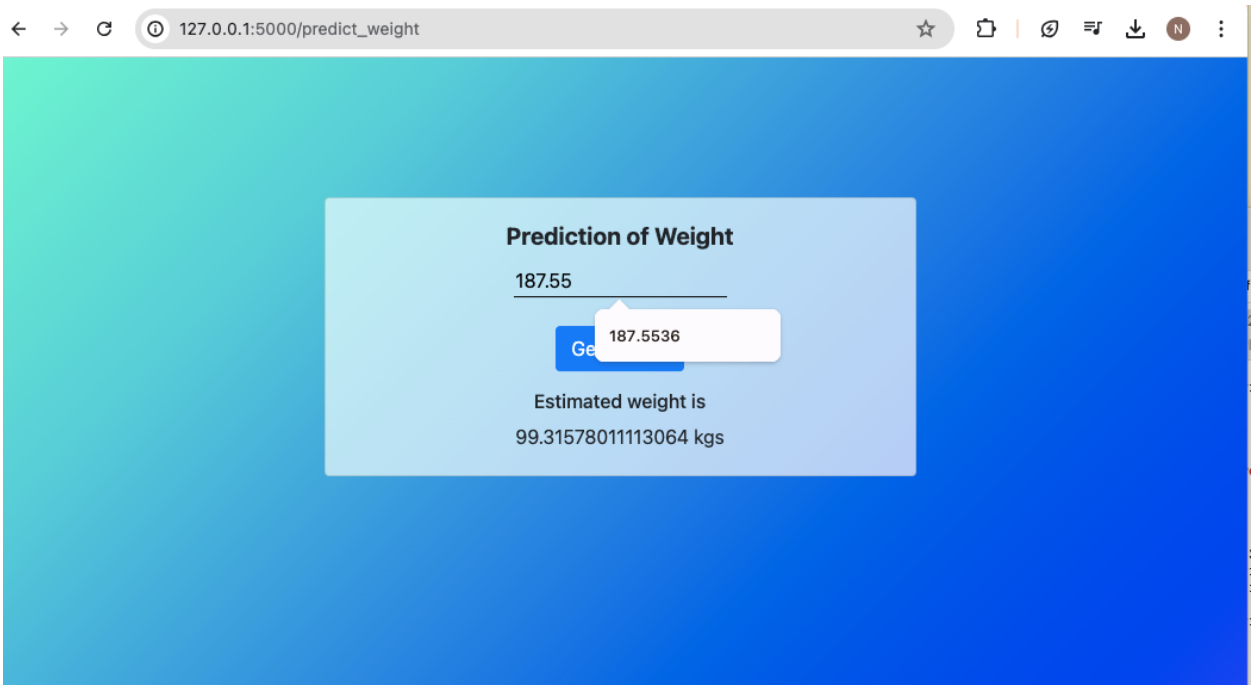

```python
from flask import Flask, render_template, url_for, redirect, request
import pickle

app = Flask(__name__)
model = pickle.load(open('regressor_model.pkl', 'rb'))

@app.route('/')
def home():
    return redirect(url_for('predict_weight'))

@app.route('/predict_weight', methods = ['GET', 'POST'])
    if request.method == 'POST':
        height = request.form['height']
        height = float(height) / 2.54
        weight = model.predict([[height]])
        return render_template("index.html", weight = weight[0][0] / 2.205, unit = "kgs
    return render_template("index.html")


if __name__ == '__main__':
    app.run(debug = True)
```

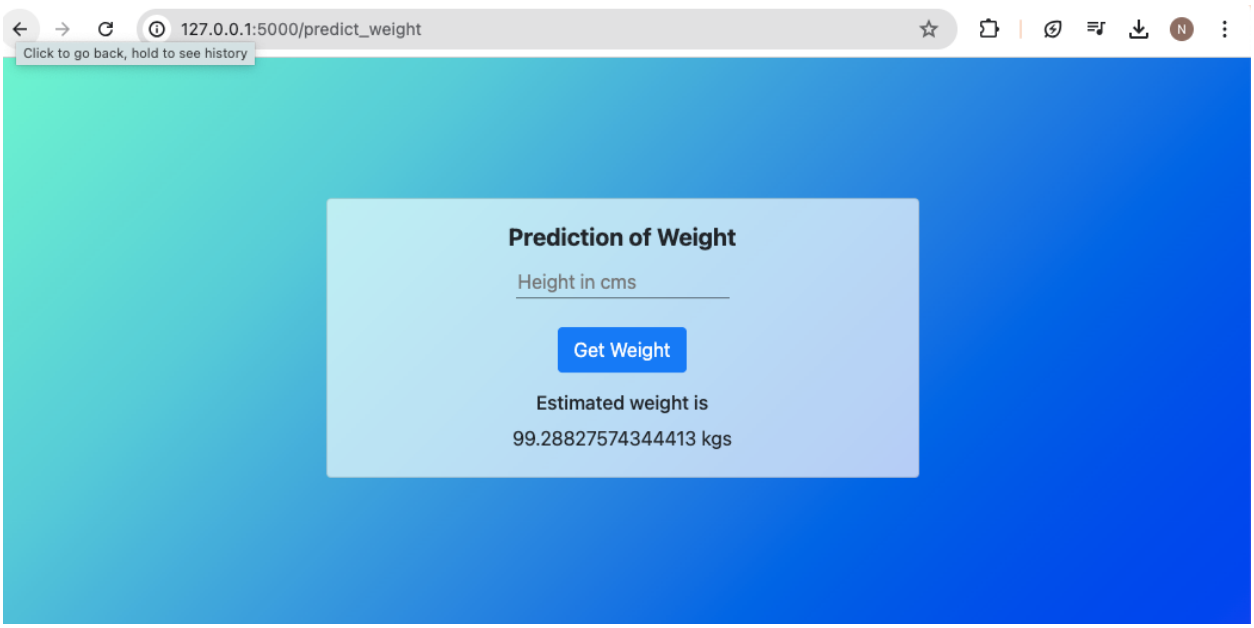
Step 3:
Run app.py in cmd


Deploy_ML_Model_usingFlask — python ◂ python app.py — 80×34
Last login: Thu Jul 25 12:10:35 on ttys000
(base) rickynur@Rickys-MacBook-Air ~ % cd Downloads
(base) rickynur@Rickys-MacBook-Air Downloads % cd Deploy_ML_Model_usingFlask
(base) rickynur@Rickys-MacBook-Air Deploy_ML_Model_usingFlask % python app.py
/opt/anaconda3/lib/python3.12/site-packages/sklearn/base.py:376: InconsistentVersionWarning: Trying to unpickle estimator LinearRegression from version 1.5.1 when using version 1.4.2. This might lead to breaking code or invalid results. Use at your own risk. For more info please refer to:
https://scikit-learn.org/stable/model_persistence.html#security-maintainability-limitations
warnings.warn(
* Serving Flask app 'app'
* Debug mode: on
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
* Running on http://127.0.0.1:5000
Press CTRL+C to quit
* Restarting with watchdog (fsevents)
/opt/anaconda3/lib/python3.12/site-packages/sklearn/base.py:376: InconsistentVersionWarning: Trying to unpickle estimator LinearRegression from version 1.5.1 when using version 1.4.2. This might lead to breaking code or invalid results. Use at your own risk. For more info please refer to:
https://scikit-learn.org/stable/model_persistence.html#security-maintainability-limitations
warnings.warn(
* Debugger is active!
* Debugger PIN: 105-293-719
127.0.0.1 - - [25/Jul/2024 12:28:31] "GET / HTTP/1.1" 302 -
127.0.0.1 - - [25/Jul/2024 12:28:31] "GET /predict_weight HTTP/1.1" 200 -
127.0.0.1 - - [25/Jul/2024 12:28:31] "GET /static/css/style.css HTTP/1.1" 200 -
127.0.0.1 - - [25/Jul/2024 12:28:31] "GET /favicon.ico HTTP/1.1" 404 -
127.0.0.1 - - [25/Jul/2024 12:28:39] "POST /predict_weight HTTP/1.1" 200 -
127.0.0.1 - - [25/Jul/2024 12:28:39] "GET /static/css/style.css HTTP/1.1" 304 -
127.0.0.1 - - [25/Jul/2024 12:29:19] "GET / HTTP/1.1" 302 -

Outcome:


127.0.0.1:5000/predict_weight
Prediction of Weight
Height in cms
Get Weight


127.0.0.1:5000/predict_weight
Prediction of Weight
187.55
187.5536
Estimated weight is
99.31578011113064 kgs


127.0.0.1:5000/predict_weight
Click to go back, hold to see history
Prediction of Weight
Height in cms
Get Weight
Estimated weight is
99.28827574344413 kgs