

Deployment Documentation

Name:

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Batch code:

LISUM26

Submission date:

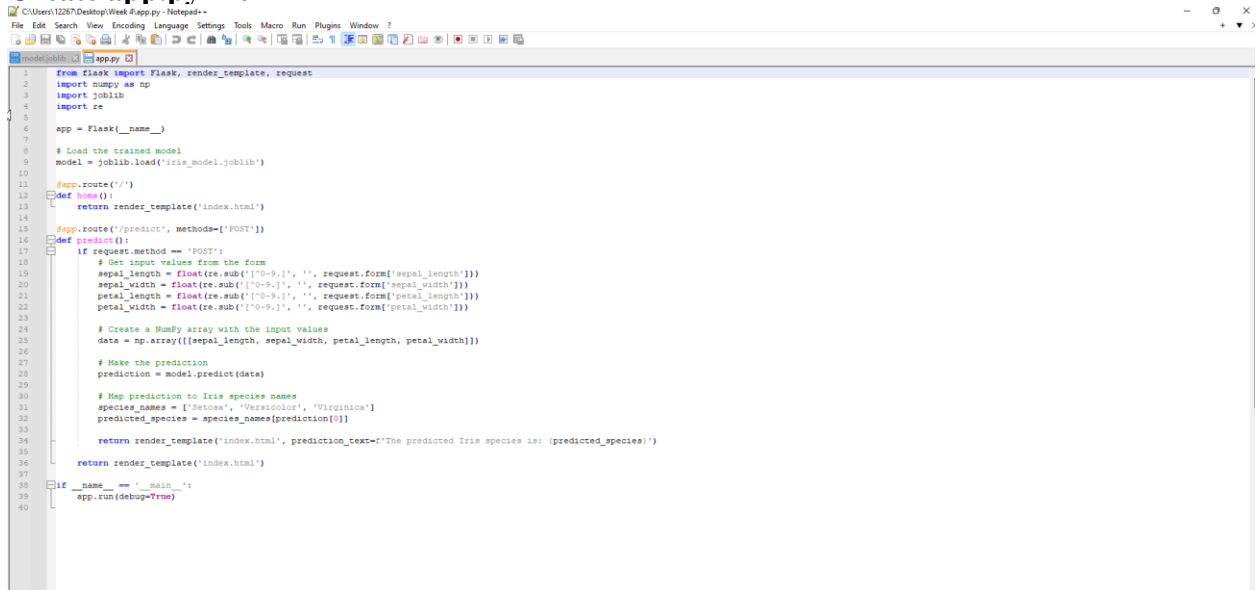
11-01-2023

Submitted to:

Data Glacier

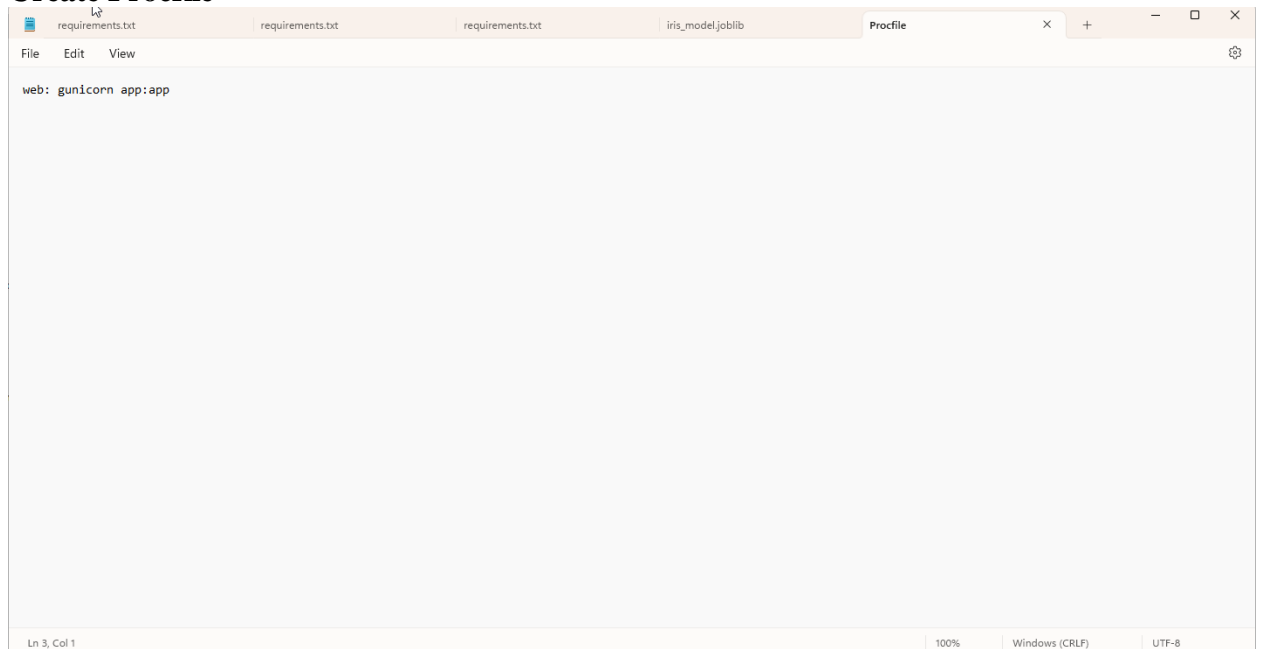
Steps of Deployment:

1. Create app.py file



```
1 from flask import Flask, render_template, request
2 import numpy as np
3 import joblib
4 import re
5
6 app = Flask(__name__)
7
8 # Load the trained model
9 model = joblib.load('iris_model.joblib')
10
11 @app.route('/')
12 def home():
13     return render_template('index.html')
14
15 @app.route('/predict', methods=['POST'])
16 def predict():
17     if request.method == 'POST':
18         # Get input values from the form
19         sepal_length = float(re.sub('[^0-9.]+', '', request.form['sepal_length']))
20         sepal_width = float(re.sub('[^0-9.]+', '', request.form['sepal_width']))
21         petal_length = float(re.sub('[^0-9.]+', '', request.form['petal_length']))
22         petal_width = float(re.sub('[^0-9.]+', '', request.form['petal_width']))
23
24         # Create a NumPy array with the input values
25         data = np.array([sepal_length, sepal_width, petal_length, petal_width])
26
27         # Make the prediction
28         prediction = model.predict(data)
29
30         # Map prediction to Iris species names
31         species_names = ['Setosa', 'Versicolour', 'Virginica']
32         predicted_species = species_names[prediction[0]]
33
34         return render_template('index.html', prediction_text='The predicted Iris species is: (predicted_species)')
35
36     return render_template('index.html')
37
38 if __name__ == '__main__':
39     app.run(debug=True)
40
```

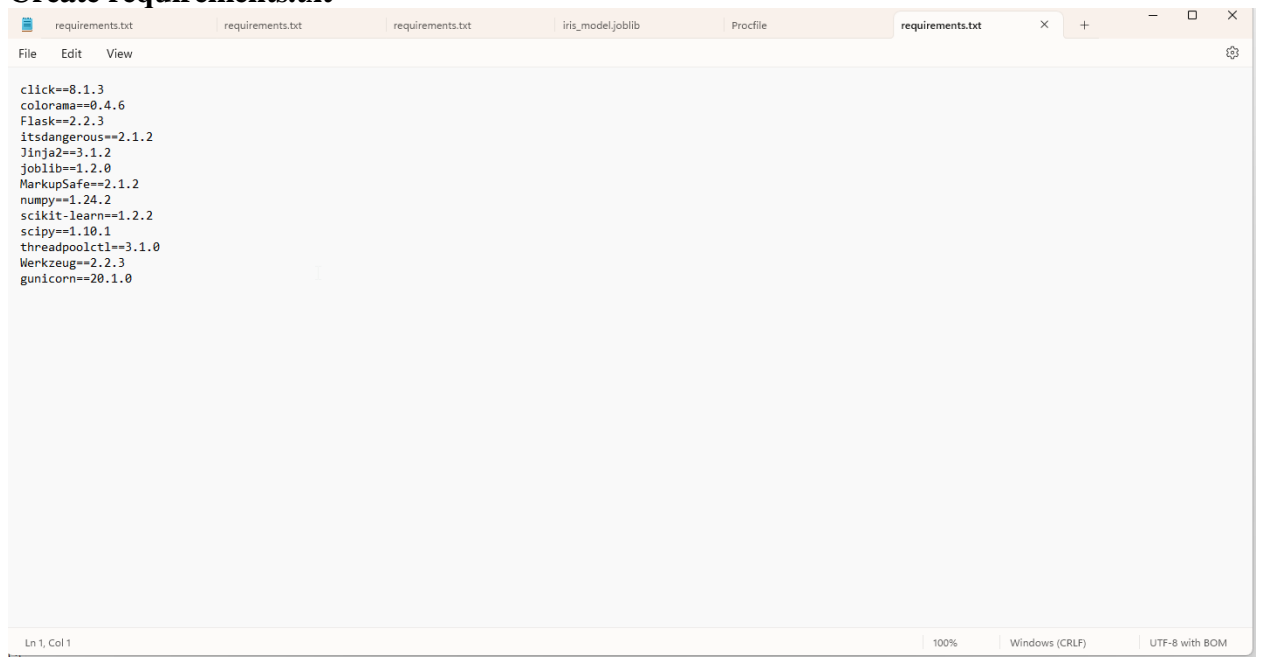
2. Create Procfile



The screenshot shows a code editor window with multiple tabs. The active tab is 'Procfile'. The editor contains the text 'web: gunicorn app:app'. The status bar at the bottom indicates 'Ln 3, Col 1', '100%', 'Windows (CRLF)', and 'UTF-8'.

```
web: gunicorn app:app
```

3. Create requirements.txt



The screenshot shows a code editor window with multiple tabs. The active tab is 'requirements.txt'. The editor contains a list of package versions. The status bar at the bottom indicates 'Ln 1, Col 1', '100%', 'Windows (CRLF)', and 'UTF-8 with BOM'.

```
click==8.1.3
colorama==0.4.6
Flask==2.2.3
itsdangerous==2.1.2
Jinja2==3.1.2
joblib==1.2.0
MarkupSafe==2.1.2
numpy==1.24.2
scikit-learn==1.2.2
scipy==1.10.1
threadpoolctl==3.1.0
Werkzeug==2.2.3
gunicorn==20.1.0
```

4. Run commands in command prompt

```
Administrator Command Prompt - heroku login - heroku gh:remote -> iris-data-set-app - heroku open - heroku logs
Microsoft Windows [Version 10.0.22000.2538]
(c) Microsoft Corporation. All rights reserved.

C:\Windows\System32>cd C:\Users\12267\Desktop\Week 4

C:\Users\12267\Desktop\Week 4>pip freeze > requirements.txt

C:\Users\12267\Desktop\Week 4>
C:\Users\12267\Desktop\Week 4>git init
Initialized empty Git repository in C:\Users\12267\Desktop\Week 4\.git\

C:\Users\12267\Desktop\Week 4>git add .
C:\Users\12267\Desktop\Week 4>git commit -m "Initial commit"
[master (root-commit) e04f328] Initial commit
 8 files changed, 228 insertions(+)
 create mode 108664 Procfile
 create mode 108664 Week 4 Deployment of Flask.pdf
 create mode 108664 __pycache__/_app.cpython-311.pyc
 create mode 108664 iris_model.joblib
 create mode 108664 requirements.txt
 create mode 108664 static/static.css
 create mode 108664 templates/index.html

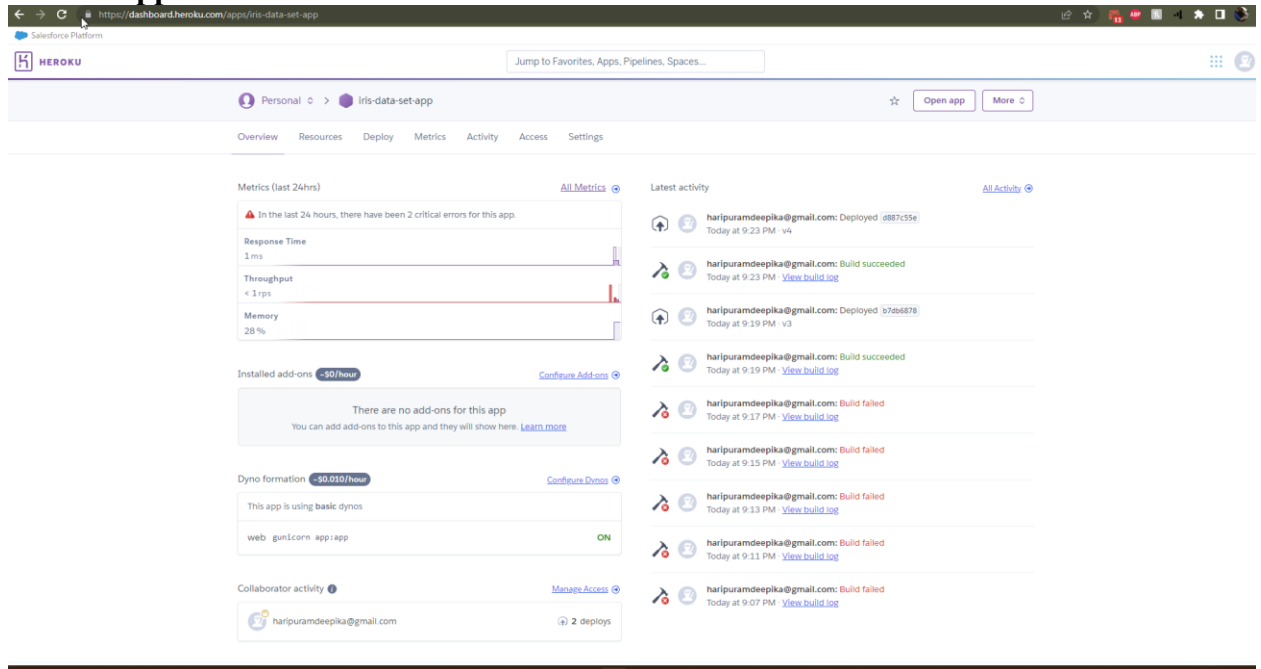
C:\Users\12267\Desktop\Week 4>heroku login
heroku: Press any key to open the browser to login or q to exit:
Opening browser to https://cli-auth.heroku.com/auth/cli/browser/6903ec01-d0a4-4010-b55a-9ebc0bf390d2?requestor=SPfNYNTY_g2gD6Q4AAABX0QQUtQ3LjESHC4yTjVuBgQdQDNlWIAAFBgA_u0oLRsdKR0UG_gnJLatQcSBEHLP6Hb9MXeHo_I
Logging in... done
Logged in as haripurandeeplika@gmail.com

C:\Users\12267\Desktop\Week 4>heroku git:remote -s iris-data-set-app
set git remote heroku to https://git.heroku.com/iris-data-set-app.git

Administrator Command Prompt - heroku login - heroku gh:remote -> iris-data-set-app - heroku open - heroku logs
C:\Users\12267\Desktop\Week 4>git push heroku master
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 4 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 340 bytes | 340.00 KiB/s, done.
Total 3 (delta 2), reused 0 (delta 0), pack-reused 0
remote: Updated 0 paths from 2c2c2f4
remote: Compressing source files... done.
remote: Building source:
remote:
remote: ----- Building on the Heroku-22 stack
remote: ----- Using buildpack: heroku/python
remote: ----- Python app detected
remote: ----- No Python version was specified. Using the same version as the last build: python-3.11.6
remote: ----- To use a different version, see: https://devcenter.heroku.com/articles/python-runtimes
remote: ----- Requirements file has been changed, clearing cached dependencies
remote: ----- Installing python-3.11.6
remote: ----- Installing pip 21.2.1, setuptools 68.0.0 and wheel 0.41.0
remote: ----- Installing SQLite3
remote: ----- Installing requirements with pip
remote: Collecting click==8.1.3 (from -r requirements.txt (line 1))
remote:   Downloading click-8.1.3-py3-none-any.whl (96 kB)
remote: Collecting colorama==0.4.6 (from -r requirements.txt (line 2))
remote:   Downloading colorama-0.4.6-py2.py3-none-any.whl (25 kB)
remote: Collecting Flask==2.2.3 (from -r requirements.txt (line 3))
remote:   Downloading Flask-2.2.3-py3-none-any.whl (101 kB)
remote: Collecting itsdangerous==2.1.2 (from -r requirements.txt (line 4))
remote:   Downloading itsdangerous-2.1.2-py3-none-any.whl (15 kB)
remote: Collecting Jinja2==3.1.2 (from -r requirements.txt (line 5))
remote:   Downloading Jinja2-3.1.2-py3-none-any.whl (133 kB)
remote: Collecting joblib==1.2.0 (from -r requirements.txt (line 6))
remote:   Downloading joblib-1.2.0-py3-none-any.whl (297 kB)
remote: Collecting MarkupSafe==2.1.2 (from -r requirements.txt (line 7))
remote:   Downloading MarkupSafe-2.1.2-cp311-cp311-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (27 kB)
remote: Collecting numpy==1.24.2 (from -r requirements.txt (line 8))
remote:   Downloading numpy-1.24.2-cp311-cp311-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (17.3 MB)
remote: Collecting scikit-learn==1.2.2 (from -r requirements.txt (line 9))
remote:   Downloading scikit-learn-1.2.2-cp311-cp311-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (9.6 MB)
remote: Collecting scipy==1.10.1 (from -r requirements.txt (line 10))
remote:   Downloading scipy-1.10.1-cp311-cp311-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (34.1 MB)
remote: Collecting threadpoolctl==3.1.0 (from -r requirements.txt (line 11))
remote:   Downloading threadpoolctl-3.1.0-py3-none-any.whl (14 kB)
remote: Collecting Werkzeug==2.2.3 (from -r requirements.txt (line 12))
remote:   Downloading Werkzeug-2.2.3-py3-none-any.whl (233 kB)
remote: Collecting gunicorn==20.1.0 (from -r requirements.txt (line 13))
remote:   Downloading gunicorn-20.1.0-py3-none-any.whl (79 kB)
remote: Installing collected packages: threadpoolctl, numpy, MarkupSafe, joblib, itsdangerous, gunicorn, colorama, click, werkzeug, scipy, Jinja2, scikit-learn, Flask
remote: Successfully installed Flask-2.2.3 Jinja2-3.1.2 MarkupSafe-2.1.2 Werkzeug-2.2.3 click-8.1.3 colorama-0.4.6 gunicorn-20.1.0 itsdangerous-2.1.2 joblib-1.2.0 numpy-1.24.2 scikit-learn-1.2.2 scipy-1.10.1 threadpoolctl-3.1.0
remote: ----- Discovering process types
remote: Procfile declares types => web
remote:
remote: ----- Compressing...
remote: Done: 90M
remote: ----- Launching...
remote: Released v4
remote: https://iris-data-set-app-efb31f83d6fa.herokuapp.com/ deployed to Heroku
remote:
remote: Verifying deploy... done.
To https://git.heroku.com/iris-data-set-app.git
b7d6687..d807c55 master -> master

C:\Users\12267\Desktop\Week 4>
```

5. Heroku app overview



6. Heroku app link



Iris Species Predictor

Sepal Length:

Sepal Width:

Petal Length:

Petal Width: