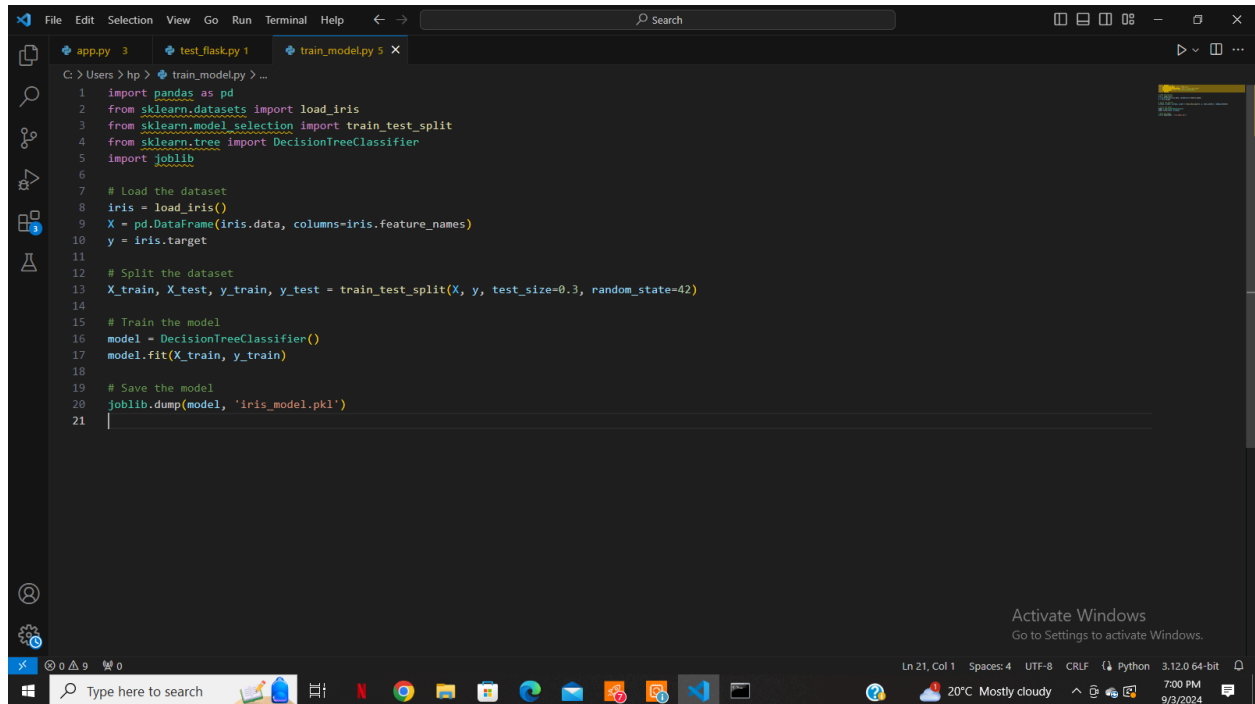


Name: Noella Mutuku

Batch code: LISUM31

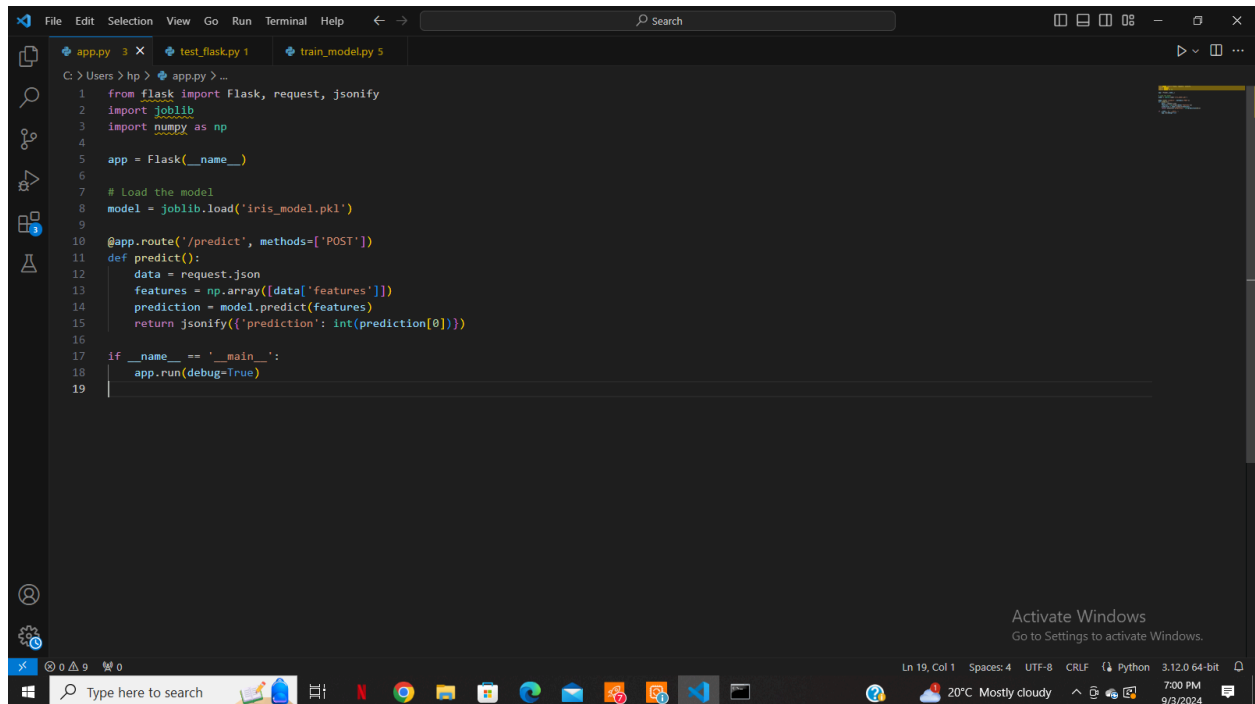
Submission date: 9/3/2024

Submitted to: Data Glacier



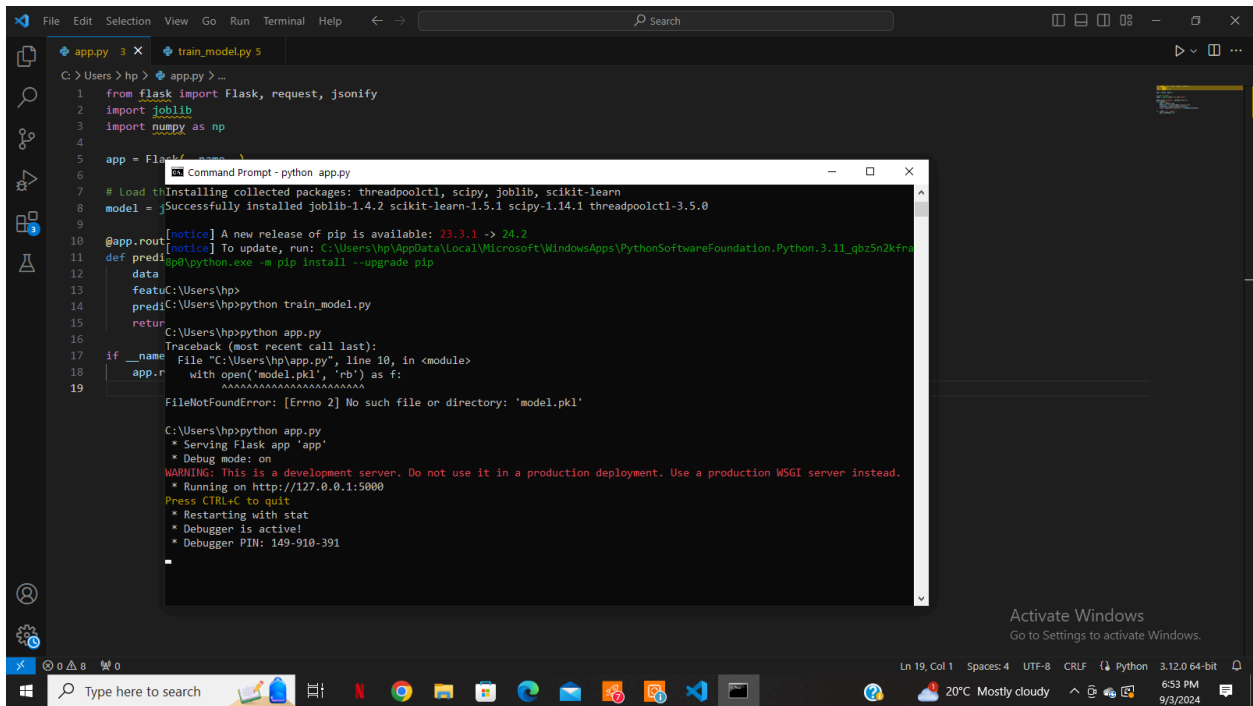
This screenshot shows a Visual Studio Code editor window with a file explorer on the left and a terminal at the bottom. The active file is `train_model.py`, which contains Python code for training a Decision Tree Classifier on the Iris dataset. The code imports `pandas`, `sklearn.datasets`, `sklearn.model_selection`, `sklearn.tree`, and `joblib`. It loads the Iris dataset, splits it into training and testing sets, trains a `DecisionTreeClassifier` model, and saves it as `iris_model.pkl`. The terminal shows the command `C:\Users\hp> python train_model.py` and the file explorer shows the `train_model.py` file.

```
1 import pandas as pd
2 from sklearn.datasets import load_iris
3 from sklearn.model_selection import train_test_split
4 from sklearn.tree import DecisionTreeClassifier
5 import joblib
6
7 # Load the dataset
8 iris = load_iris()
9 X = pd.DataFrame(iris.data, columns=iris.feature_names)
10 y = iris.target
11
12 # Split the dataset
13 X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.3, random_state=42)
14
15 # Train the model
16 model = DecisionTreeClassifier()
17 model.fit(X_train, y_train)
18
19 # Save the model
20 joblib.dump(model, 'iris_model.pkl')
21
```



This screenshot shows a Visual Studio Code editor window with a file explorer on the left and a terminal at the bottom. The active file is `app.py`, which contains Python code for a Flask web application. The code imports `Flask`, `request`, `jsonify`, `joblib`, and `numpy`. It loads the `iris_model.pkl` file and defines a `predict` endpoint that takes a JSON request, extracts the features, and returns the prediction. The terminal shows the command `C:\Users\hp> python app.py` and the file explorer shows the `app.py` file.

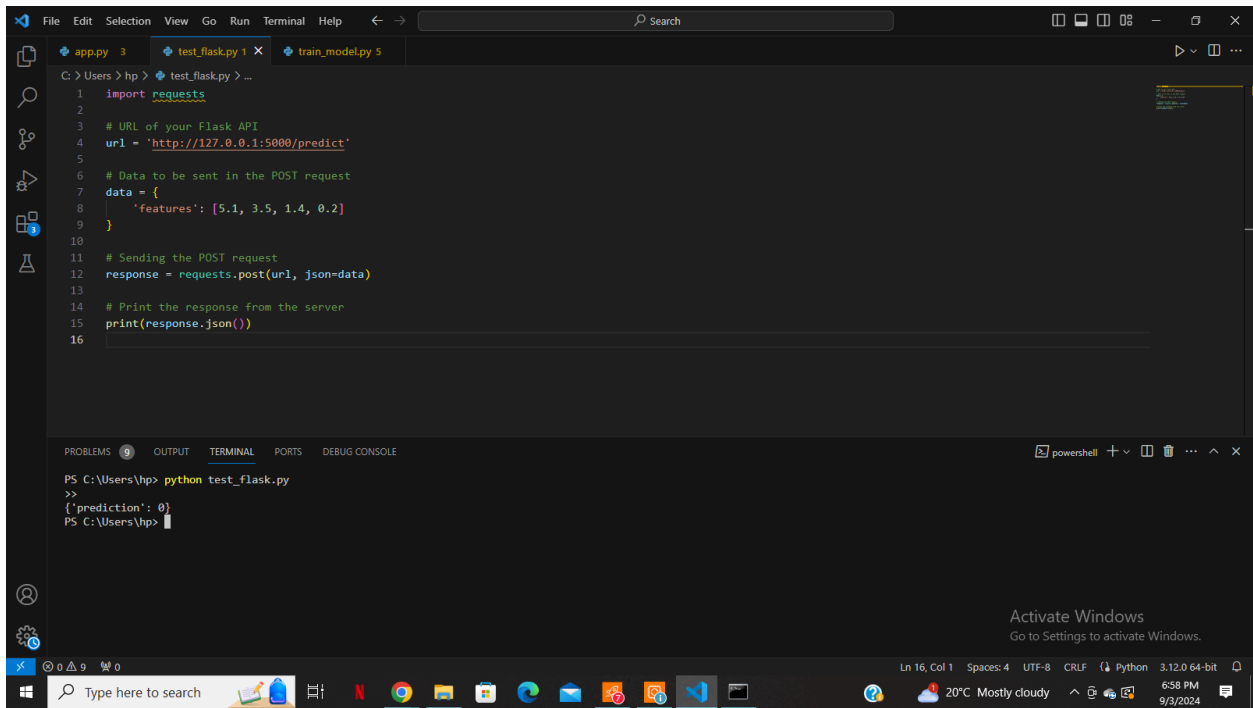
```
1 from flask import Flask, request, jsonify
2 import joblib
3 import numpy as np
4
5 app = Flask(__name__)
6
7 # Load the model
8 model = joblib.load('iris_model.pkl')
9
10 @app.route('/predict', methods=['POST'])
11 def predict():
12     data = request.json
13     features = np.array([data['features']])
14     prediction = model.predict(features)
15     return jsonify({'prediction': int(prediction[0])})
16
17 if __name__ == '__main__':
18     app.run(debug=True)
19
```



```
C:\Users\hp> python app.py
1 from flask import Flask, request, jsonify
2 import joblib
3 import numpy as np
4
5 app = Flask(__name__)
6
7 # Load the trained model
8 model = joblib.load('model.pkl')
9
10 @app.route('/predict', methods=['POST'])
11 def predict():
12     data = request.get_json()
13     features = data['features']
14     prediction = model.predict(features)
15     return jsonify({'prediction': prediction})
16
17 if __name__ == '__main__':
18     app.run(debug=True)
```

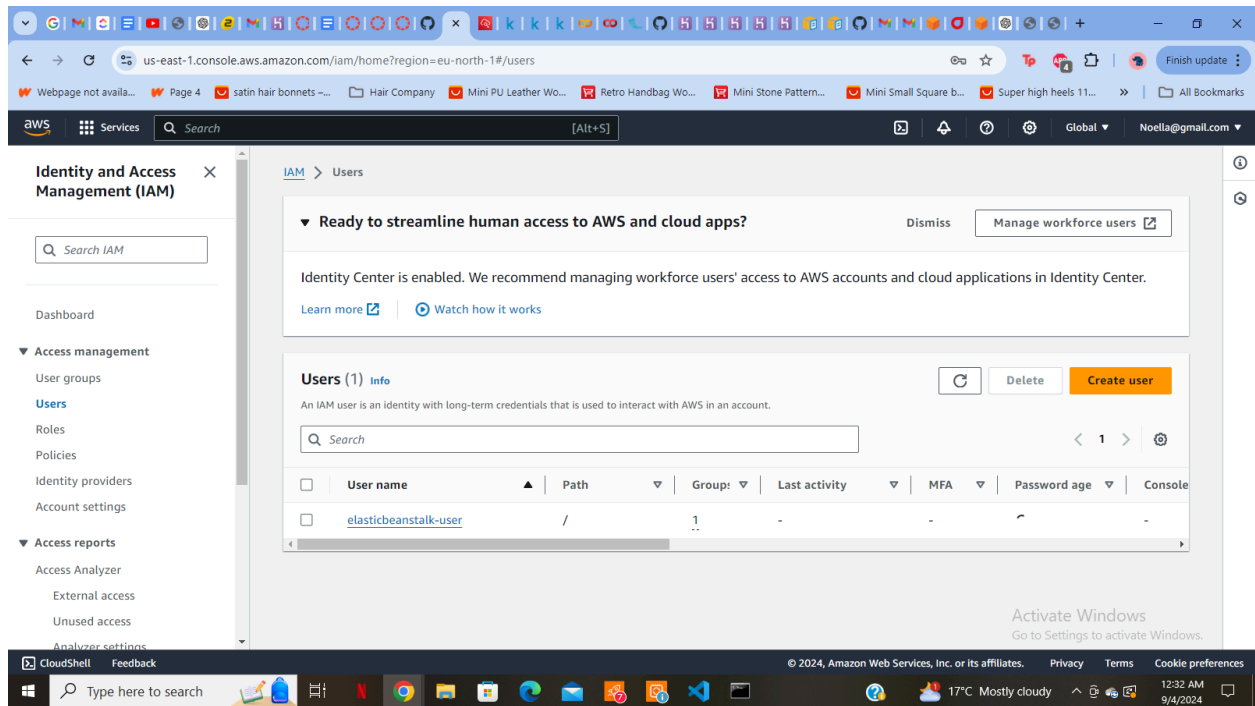
```
C:\Users\hp> python train_model.py
Installing collected packages: threadpoolctl, scipy, joblib, scikit-learn
Successfully installed joblib-1.4.2 scikit-learn-1.5.1 scipy-1.14.1 threadpoolctl-3.5.0

[notice] A new release of pip is available: 23.3.1 -> 24.2
[notice] To update, run: C:\Users\hp\AppData\Local\Microsoft\WindowsApps\PythonSoftwareFoundation.Python.3.11_qbz5n2kfra...
C:\Users\hp> pip install --upgrade pip
C:\Users\hp> python train_model.py
C:\Users\hp> python app.py
* 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 stat
* Debugger is active!
* Debugger PIN: 149-910-391
```



```
C:\Users\hp> python test_flask.py
1 import requests
2
3 # URL of your Flask API
4 url = 'http://127.0.0.1:5000/predict'
5
6 # Data to be sent in the POST request
7 data = {
8     'features': [5.1, 3.5, 1.4, 0.2]
9 }
10
11 # Sending the POST request
12 response = requests.post(url, json=data)
13
14 # Print the response from the server
15 print(response.json())
16
```

```
PS C:\Users\hp> python test_flask.py
>>
{'prediction': 0}
PS C:\Users\hp>
```



us-east-1.console.aws.amazon.com/iam/home?region=eu-north-1#/groups

Identity and Access Management (IAM)

Search IAM

Dashboard

Access management

- User groups
- Users
- Roles
- Policies
- Identity providers
- Account settings

Access reports

- Access Analyzer
- External access
- Unused access
- Analyzer settings

User groups (1) info

A user group is a collection of IAM users. Use groups to specify permissions for a collection of users.

Search

<input type="checkbox"/>	Group name	Users	Permissions	Creation time
<input type="checkbox"/>	ElasticBeanDevelopers	1	Defined	1 hour ago

Activate Windows
Go to Settings to activate Windows.

my_flask_app

File Edit Selection View Go Run Terminal Help

EXPLORER

- MY_FLASK_APP
 - .elasticbeanstalk
 - aws-elastic-beanstalk-cli-setup
 - venv
 - Include
 - Lib
 - Scripts
 - pyvenv.cfg
 - .gitignore
 - app.py
 - ignore.gitignore
 - iris_model.pkl
 - Profile
 - requirements.txt
 - runtime.txt
 - train_model.py

```
1 from flask import Flask, request, jsonify
2 import joblib
3 import numpy as np
```

Command Prompt

```
C:\Users\hp\Downloads\my_flask_app>eb init
Do you wish to continue with CodeCommit? (Y/n): n
Do you want to set up SSH for your instances? (Y/n): n
C:\Users\hp\Downloads\my_flask_app>eb deploy myflaskappenv
Creating application version archive "app-8d10-240904_001547494701".
Uploading myflaskapp/app-8d10-240904_001547494701.zip to S3. This may take a while.
iris_model.pkl Upload Complete.
ERROR: InvalidParameterValueError - No Application Version named 'app-8d10-240904_001547494701' found.
C:\Users\hp\Downloads\my_flask_app>sudo apt install nginx
'sudo' is not recognized as an internal or external command,
operable program or batch file.
C:\Users\hp\Downloads\my_flask_app>eb init -p python-3.11 myflaskapp1
Application myflaskapp1 has been created.
C:\Users\hp\Downloads\my_flask_app>eb create myflaskapp1env
Creating application version archive "app-8d10-240904_002108169989".
Uploading myflaskapp1/app-8d10-240904_002108169989.zip to S3. This may take a while.
Upload Complete.
Environment details for: myflaskapp1env
Application name: myflaskapp1
Region: us-west-2
Deployed Version: app-8d10-240904_002108169989
Environment ID: e-4e3jswitk
Platform: aws:elasticbeanstalk:us-west-2::platform/Python 3.11 running on 64bit Amazon Linux 2023/4.1.3
Tier: WebServer-Standard-1.0
CNAME: UNKNOWN
```

Import "sklearn.datasets" could not be resolved from source Pylance(reportMissingModuleSource) [Ln 1, Col 1]

Import "sklearn.ensemble" could not be resolved from source Pylance(reportMissingModuleSource) [Ln 2, Col 1]

Import "joblib" could not be resolved Pylance(reportMissingImports) [Ln 3, Col 8]

Import "sklearn.exceptions" could not be resolved from source Pylance(reportMissingModuleSource) [Ln 5, Col 1]

Restart Visual Studio Code to apply the latest update.

Update Now Release Notes

Go to Settings to activate Windows.

