Week 5: Cloud and API deployment

Name, Batch code: LISUM10: 30

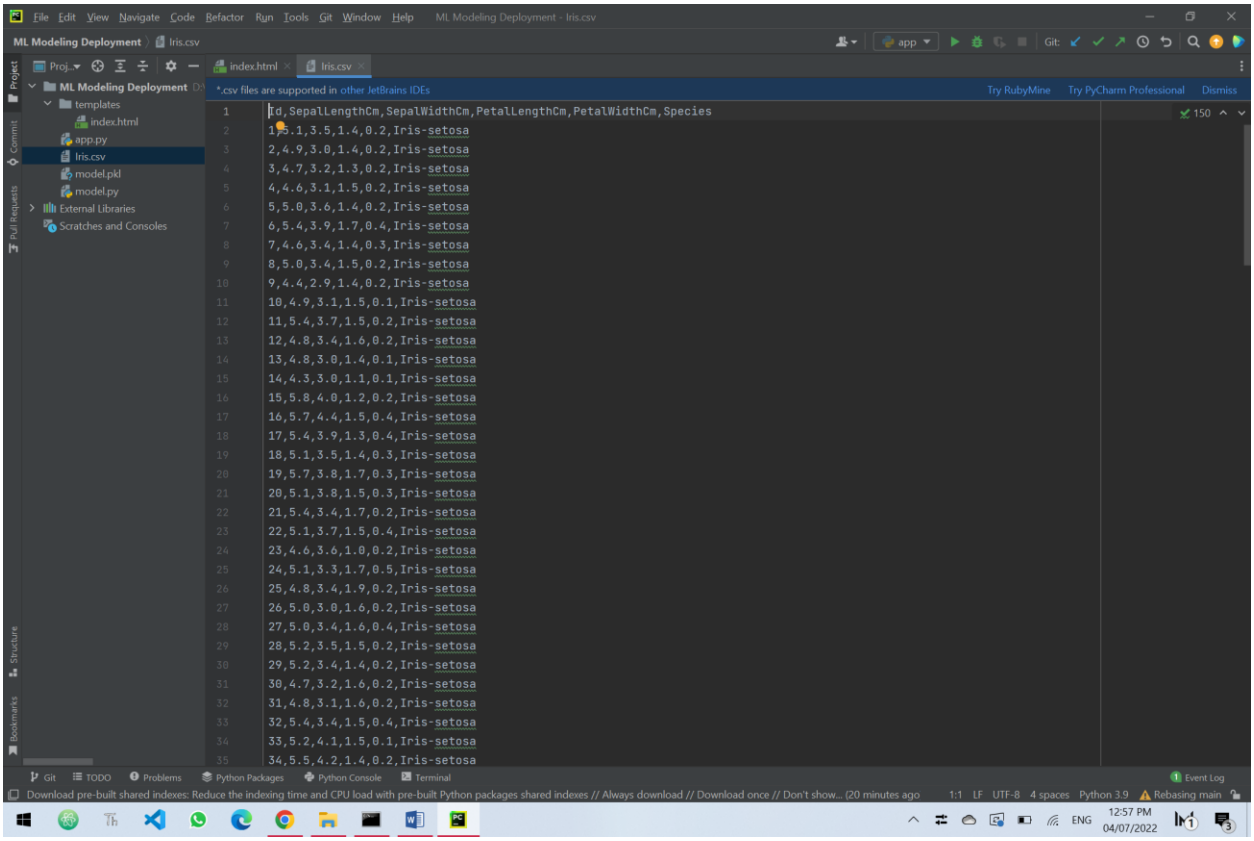
Submission date: 27/07/2022

Submitted to : Data Glacier

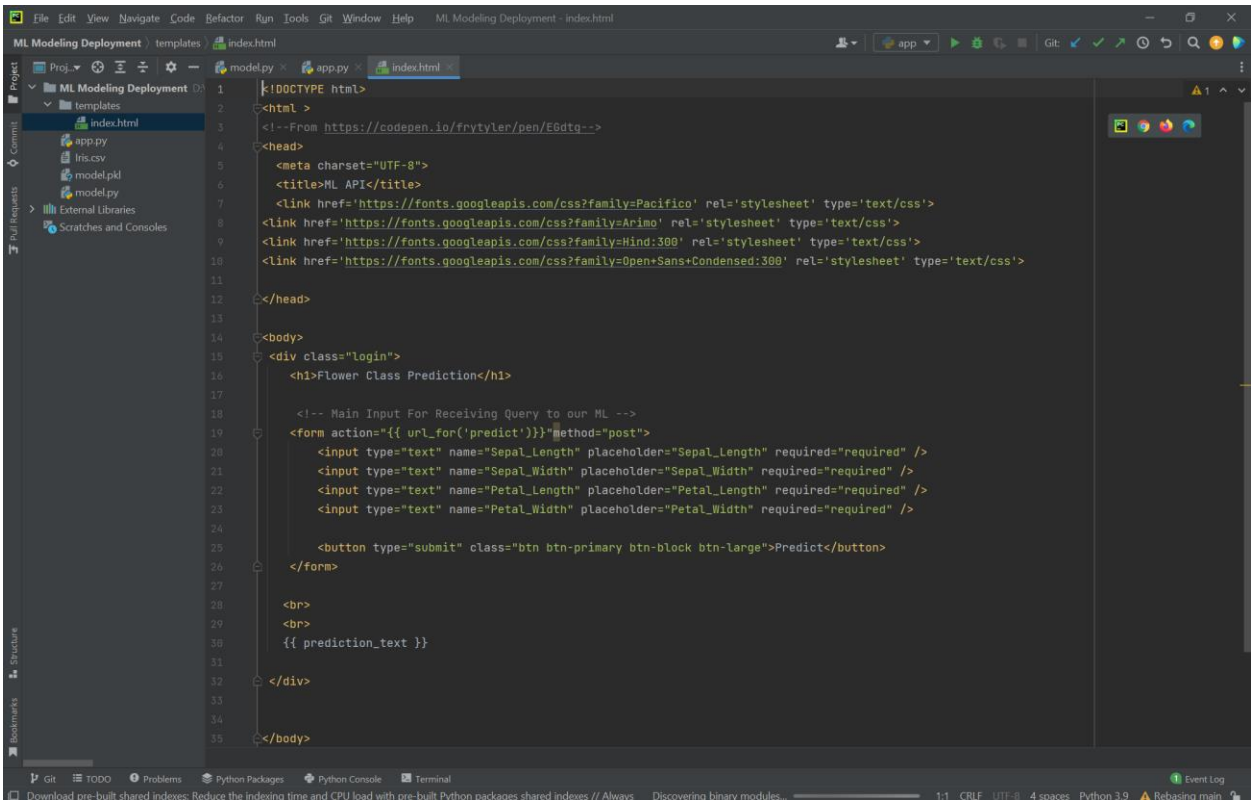
Done by: Shaimaa Al-khawlani

Snapshot of each step of deployment:

1. **Download toy data.**

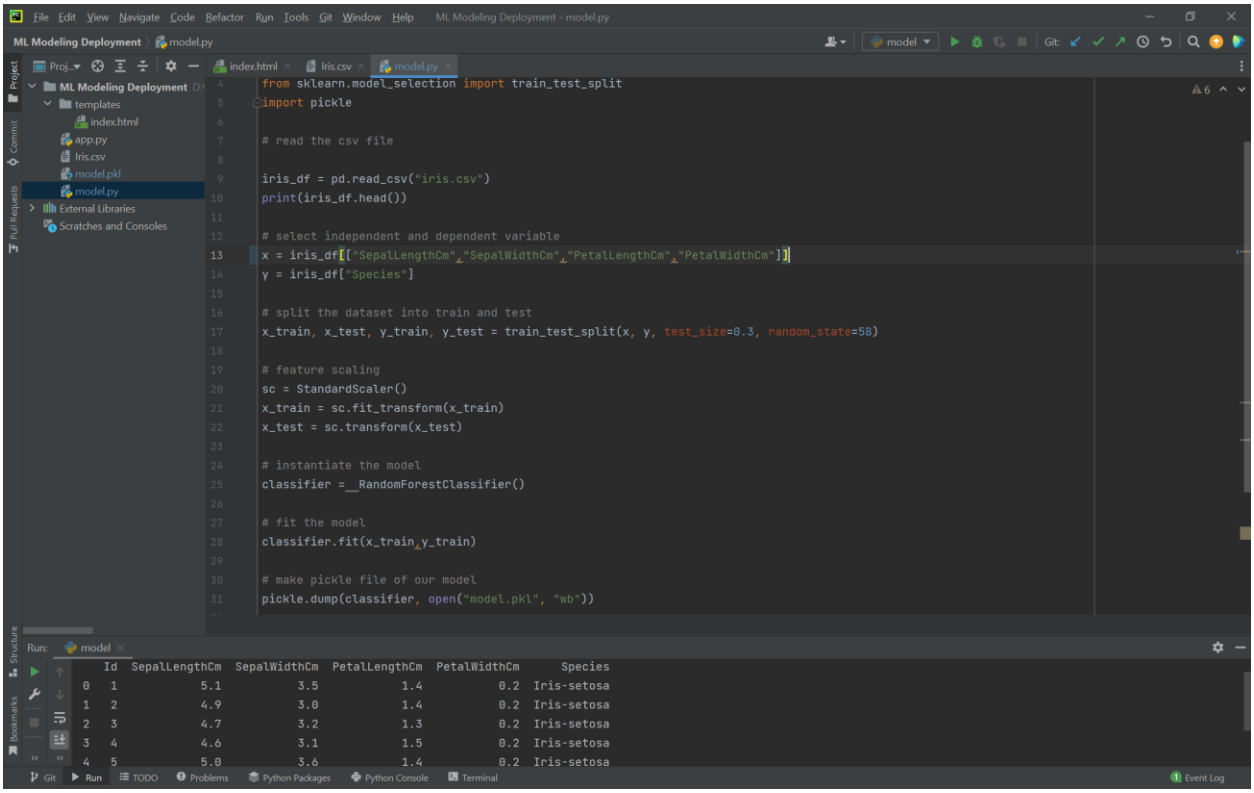


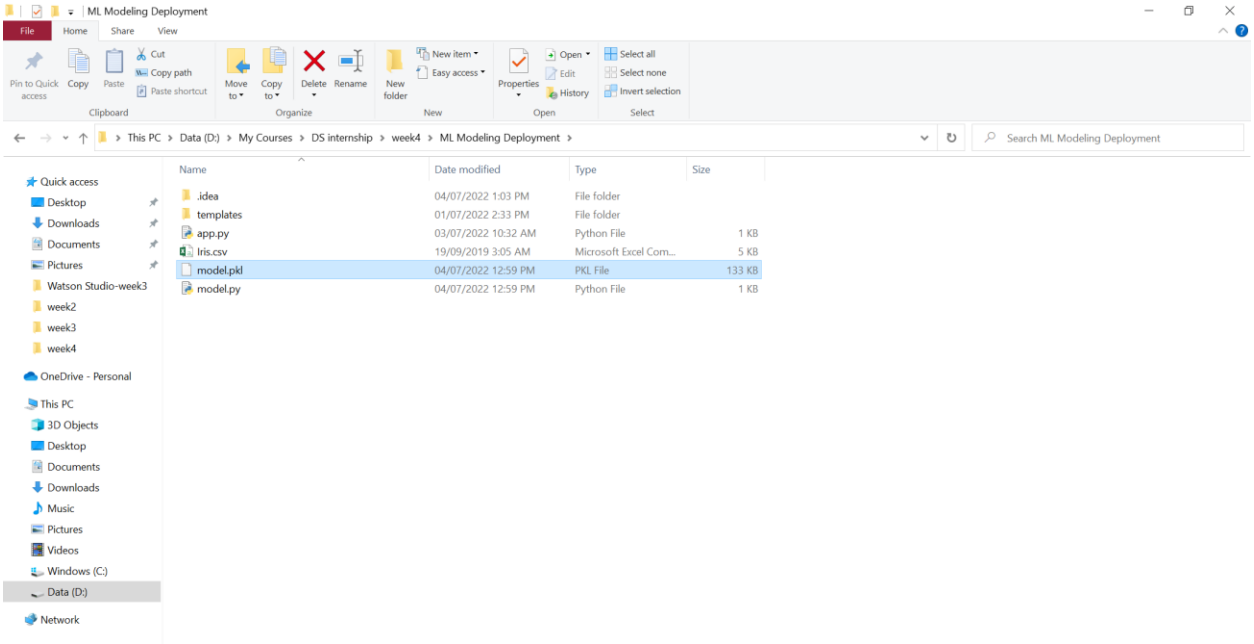
2. **Create HTML index page which contains the input texts of each feature in the toy data.**



3. **Create the model.py**

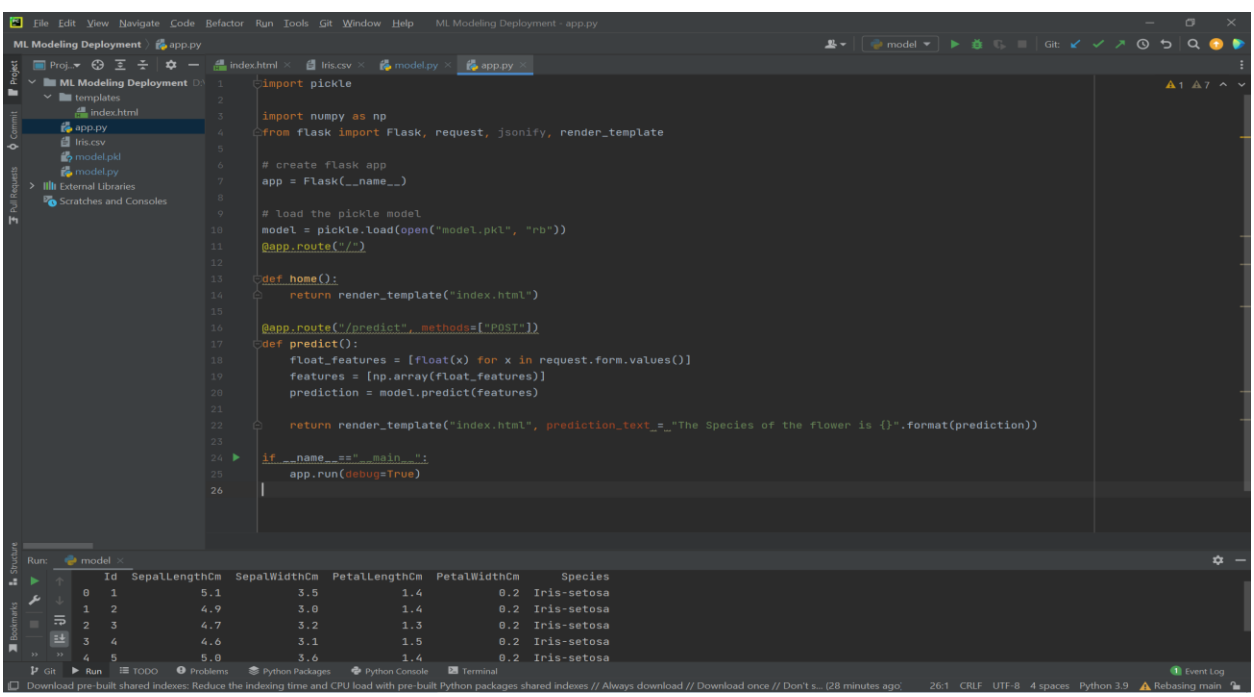
- **Read CSV file.**
- **Select independent and dependent variables.**
- **Split dataset into train and test**
- **Feature scaling.**
- **Instantiate the model.**
- **Fit the model**
- **Create pickle file.**

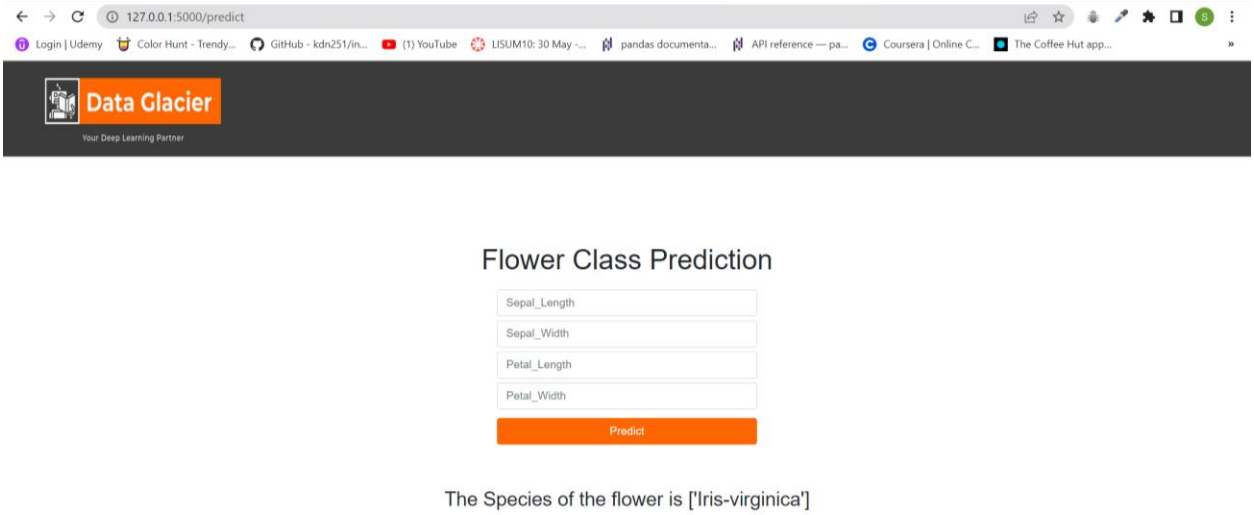




4. Create app.py

- **Create flask app**
- **Load pickle model**




127.0.0.1:5000/predict
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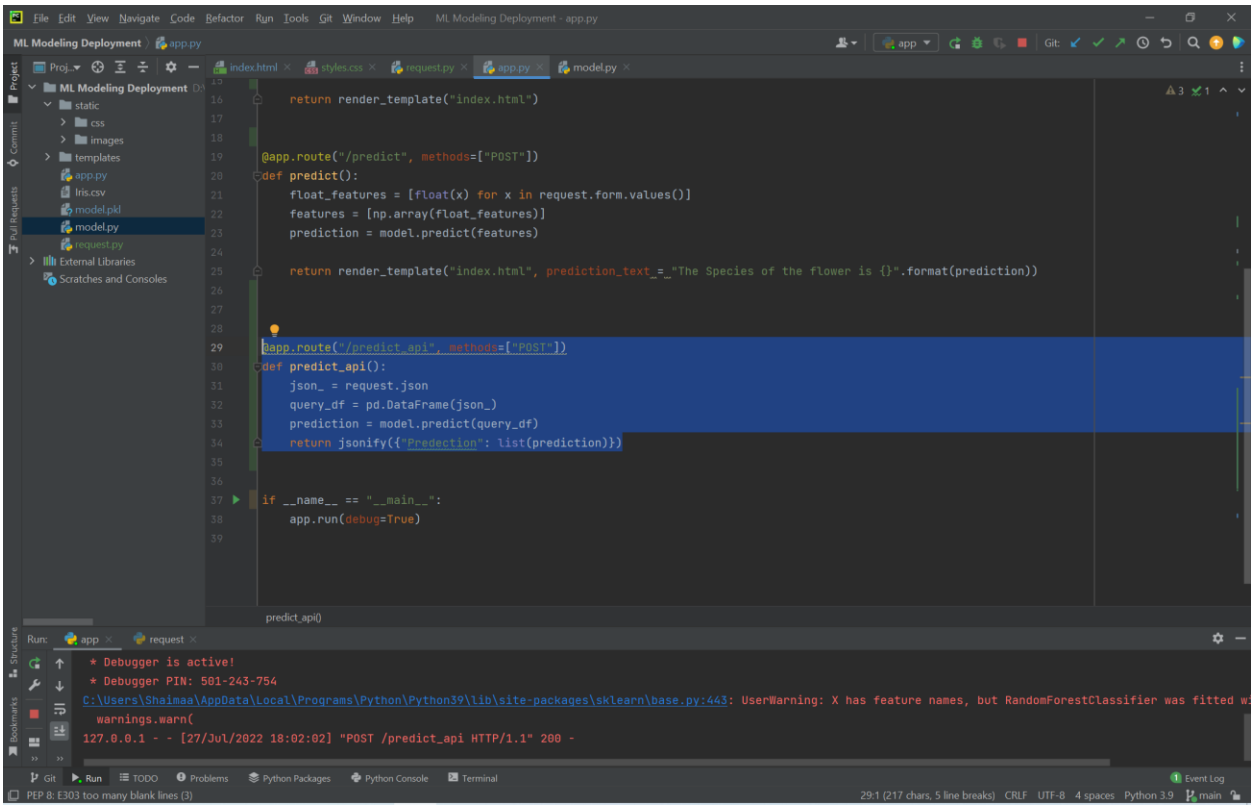
Sepal_Length
Sepal_Width
Petal_Length
Petal_Width
Predict
The Species of the flower is ['Iris-virginica']

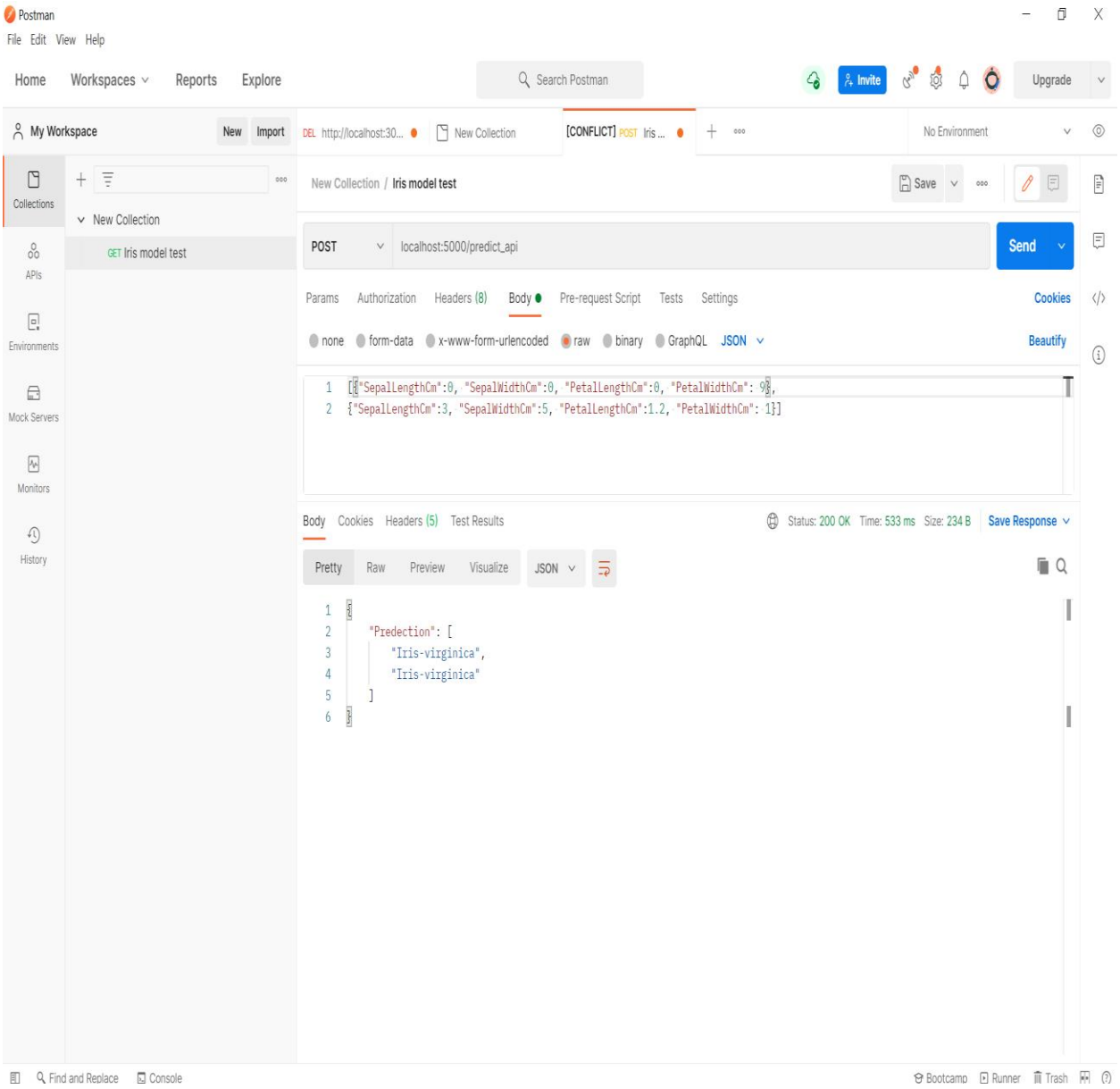
API deployment

1. **Define API Method**

```
@app.route("/predict_api", methods=["POST"])
def predict_api():
    json_ = request.json
    query_df = pd.DataFrame(json_)
    prediction = model.predict(query_df)
    return jsonify({"Predection": list(prediction)})
```

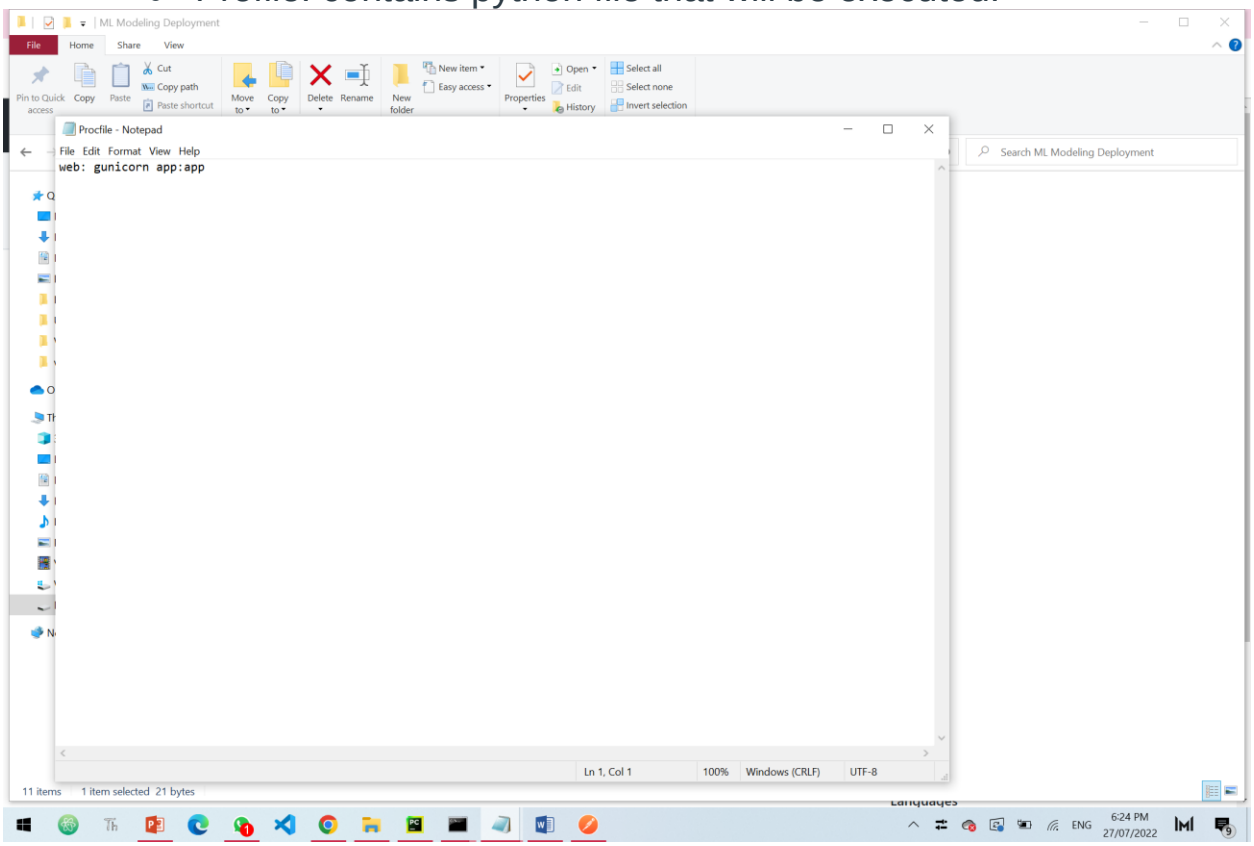


2. Test API With Postman

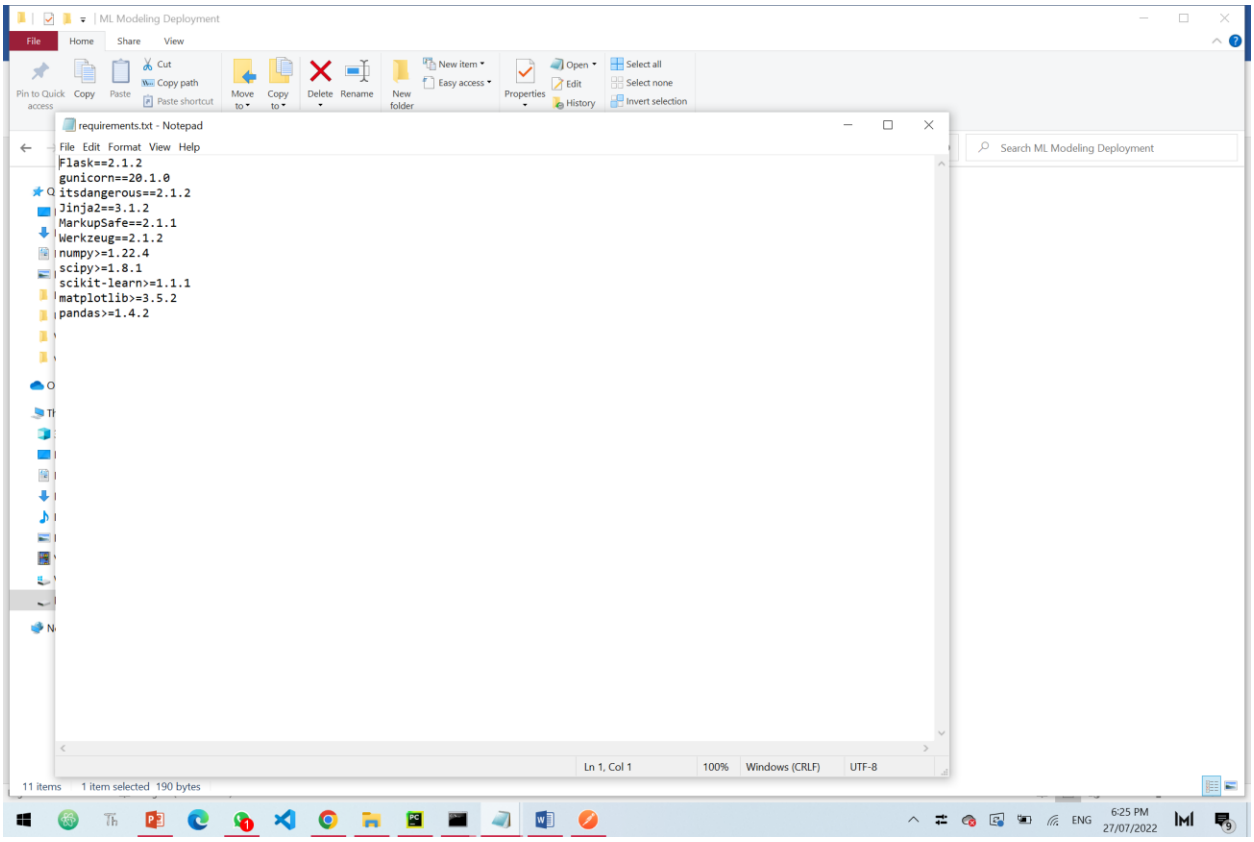


Deploy the model on any open source cloud Heroku

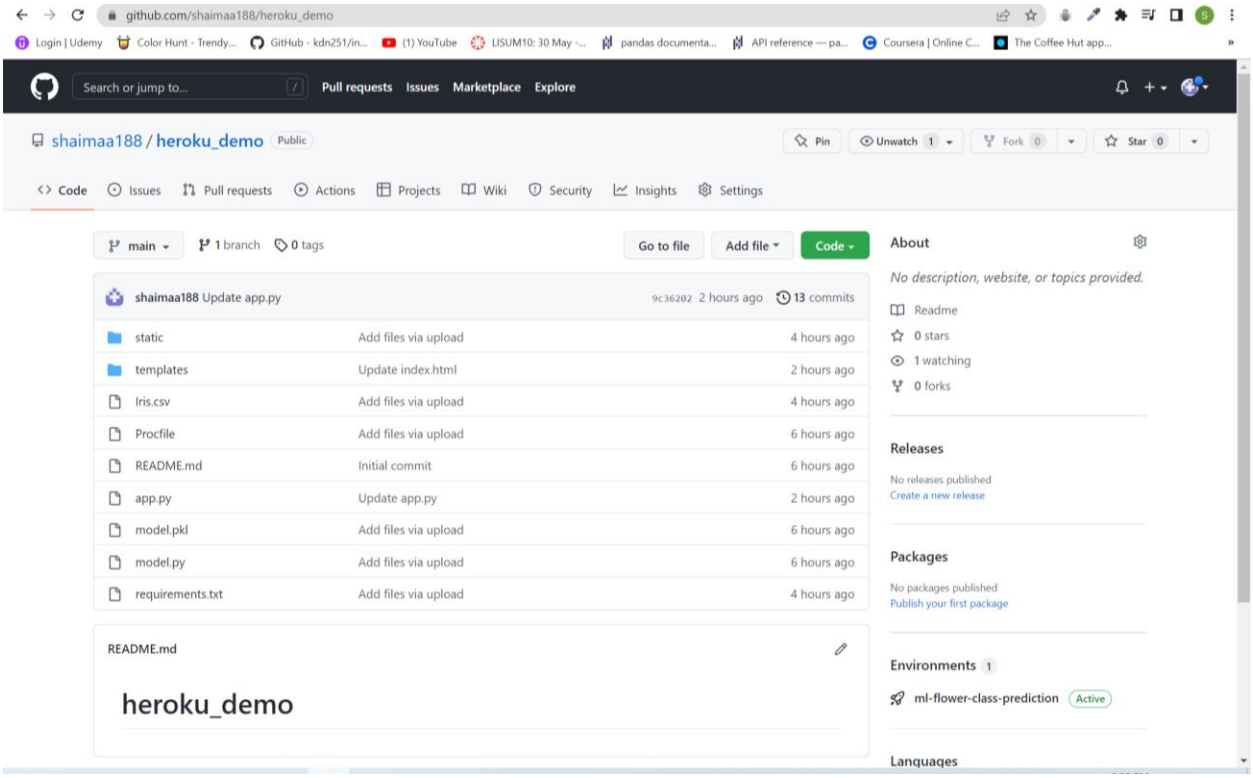
1. Create the following files:
    - Profile: contains python file that will be executed.



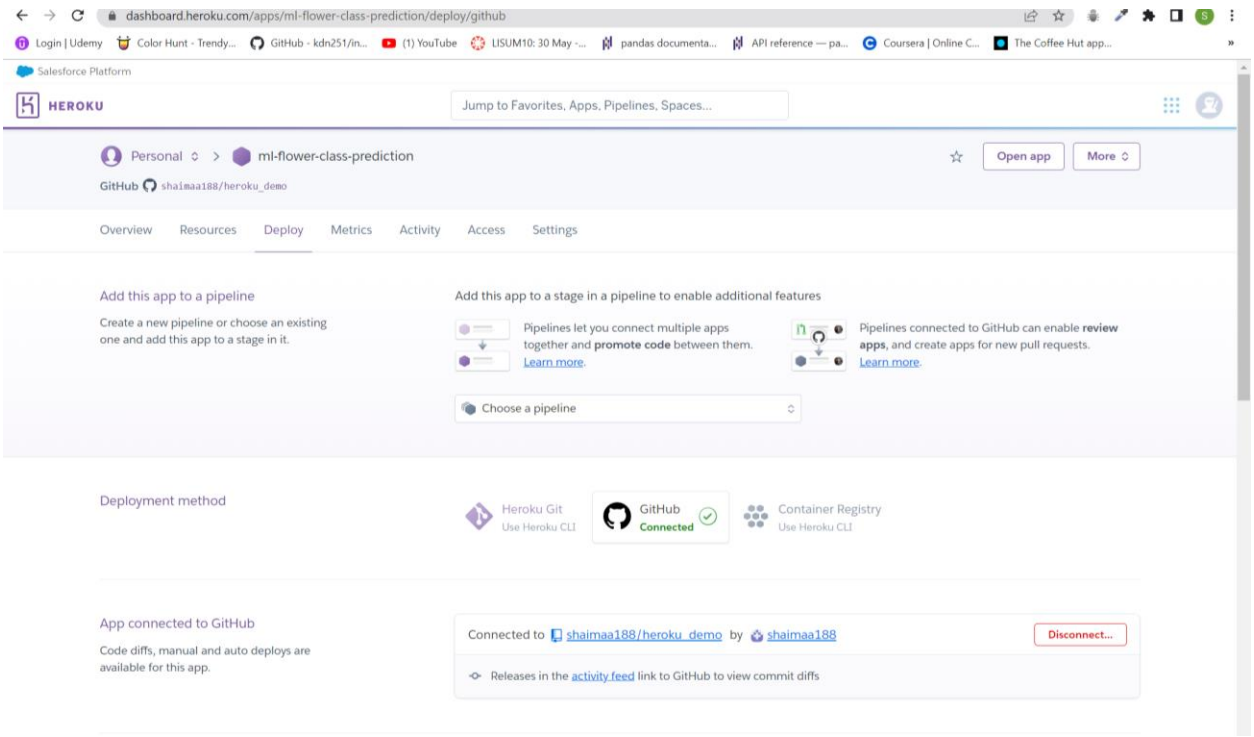
    - Requirements: contains the packages installed with versions that will be read by heroku



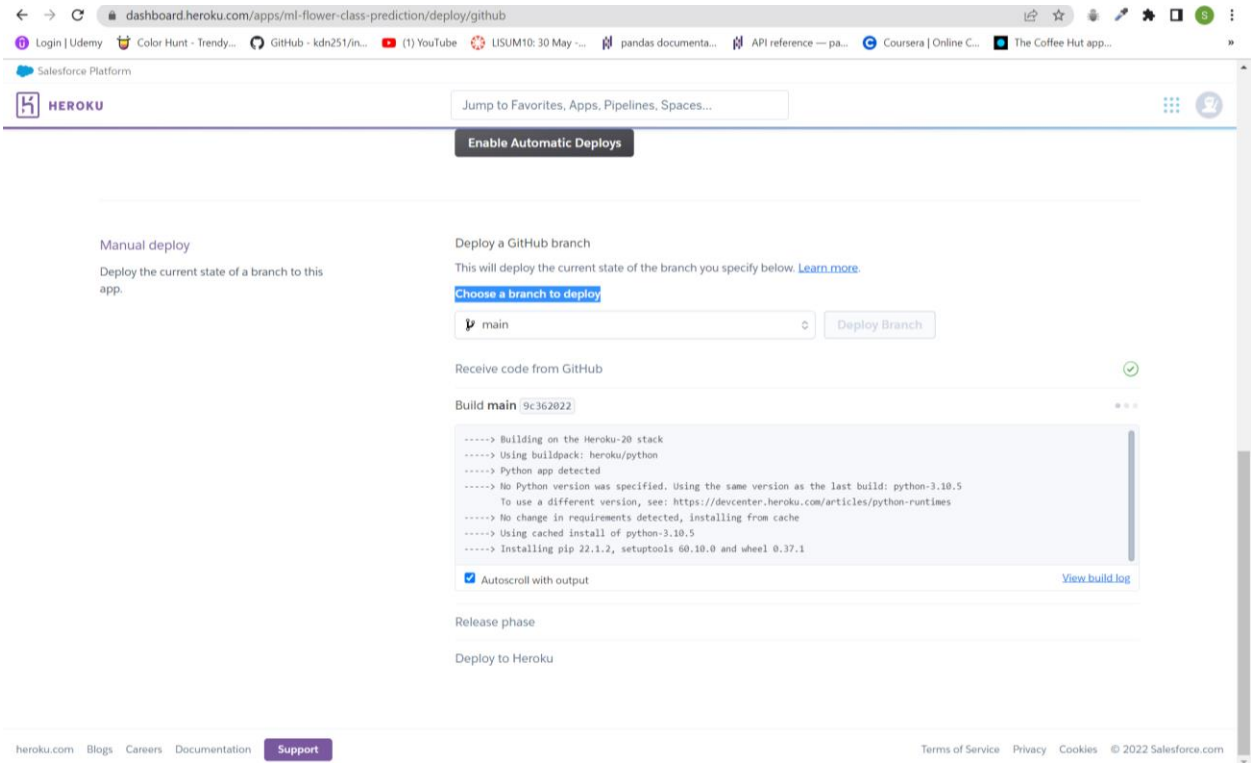
2. Upload files of the model in GitHub



3. Sign in Heroku website and connect with GitHub and the required repostiry.



4. Choose Deploy branch


dashboard.heroku.com/apps/ml-flower-class-prediction/deploy/github
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Manual deploy
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Deploy a GitHub branch
This will deploy the current state of the branch you specify below. Learn more.
Choose a branch to deploy
main
Deploy Branch
Receive code from GitHub
Build main 9c362022
-----> Building on the Heroku-20 stack
-----> Using buildpack: heroku/python
-----> Python app detected
-----> No Python version was specified. Using the same version as the last build: python-3.10.5
To use a different version, see: https://devcenter.heroku.com/articles/python-runtimes
-----> No change in requirements detected, installing from cache
-----> Using cached install of python-3.10.5
-----> Installing pip 22.1.2, setuptools 60.10.0 and wheel 0.37.1
Autoscroll with output
View build log
Release phase
Deploy to Heroku
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Careers
Documentation
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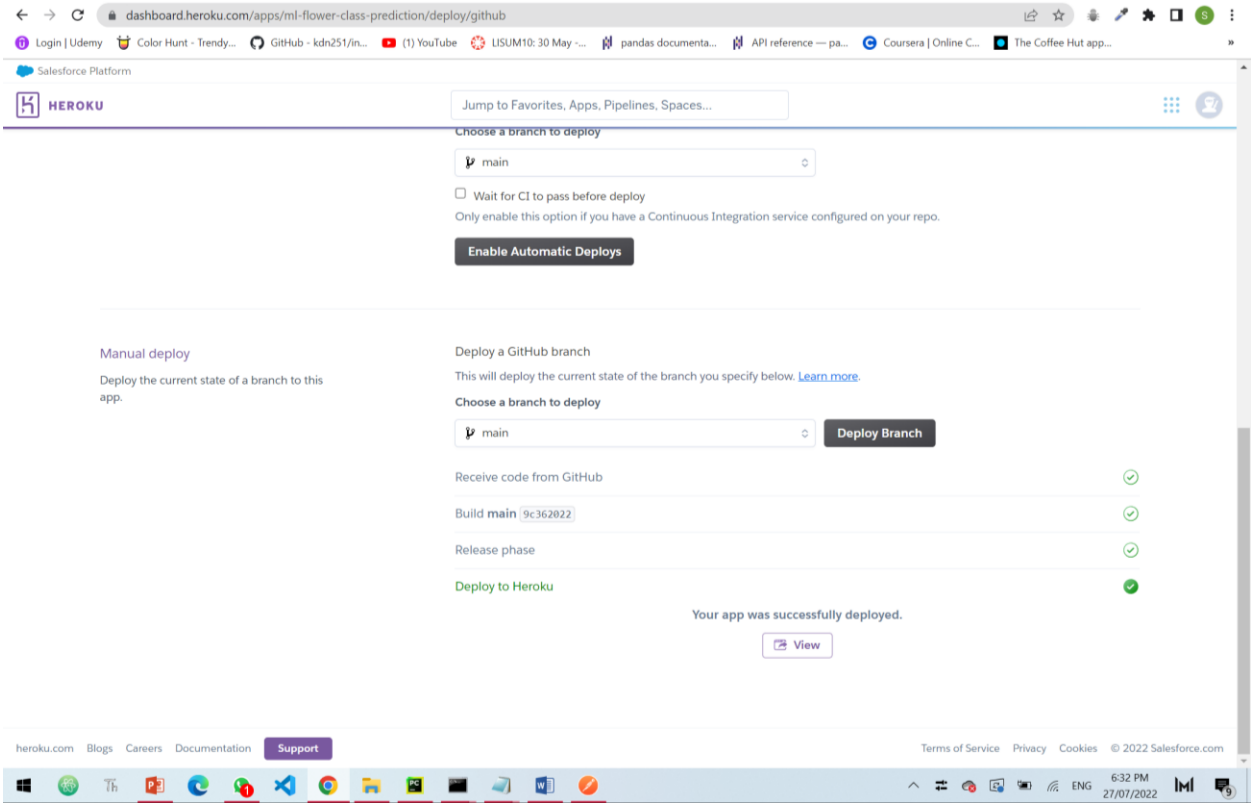
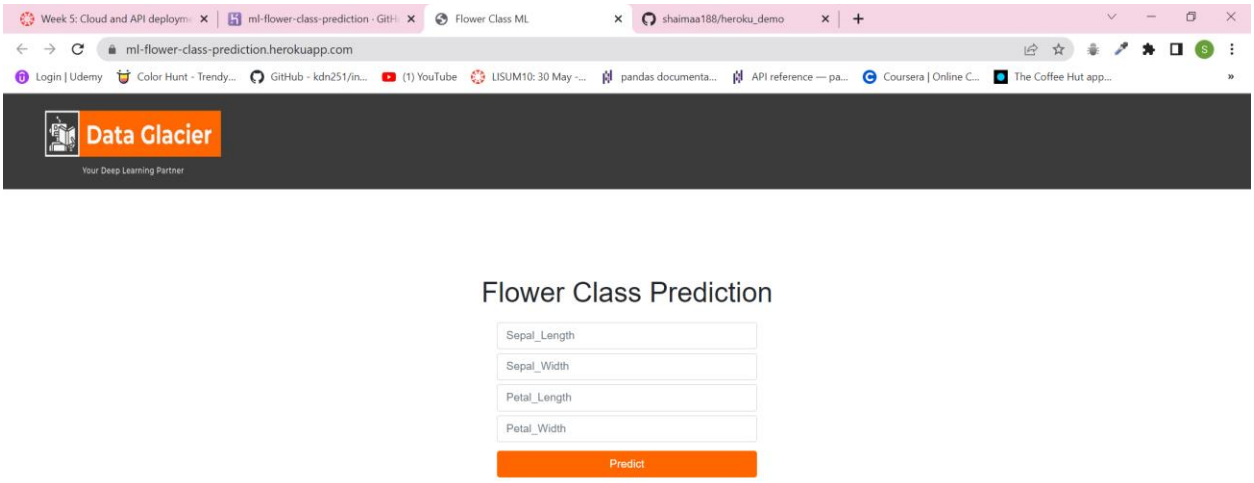
Ready



5. Access the web page with below link

https://ml-flower-class-prediction.herokuapp.com/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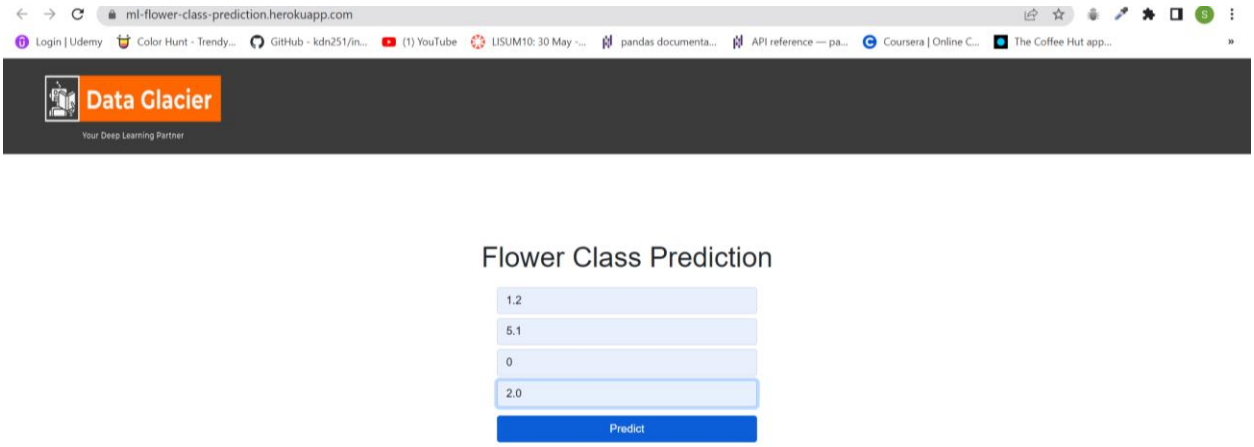
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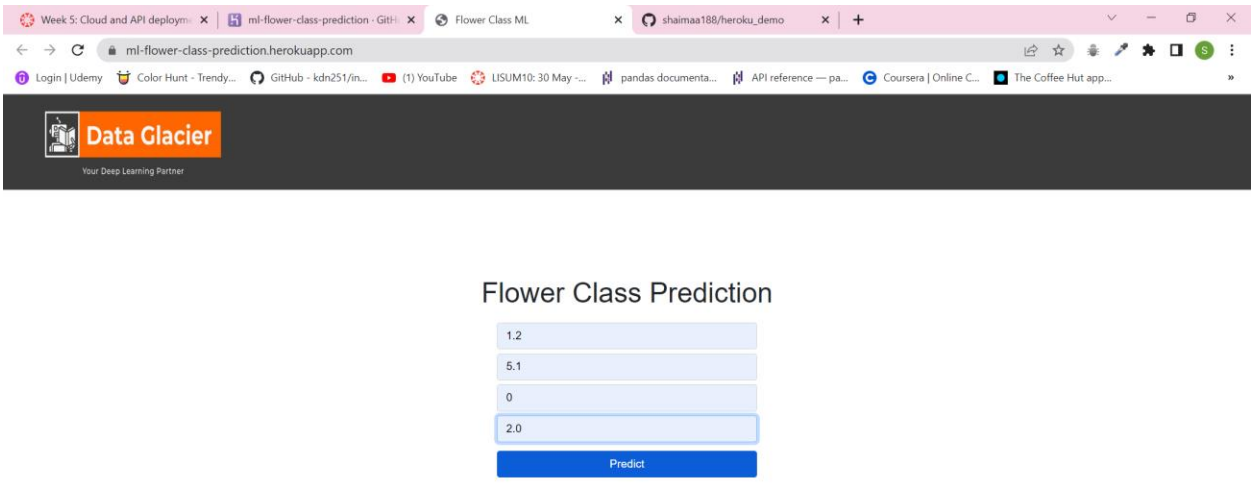
Predict



The result displayed successfully