Week 5: Cloud and API deployment

Name: Sebastián J. Castro
Batch code: LISP01
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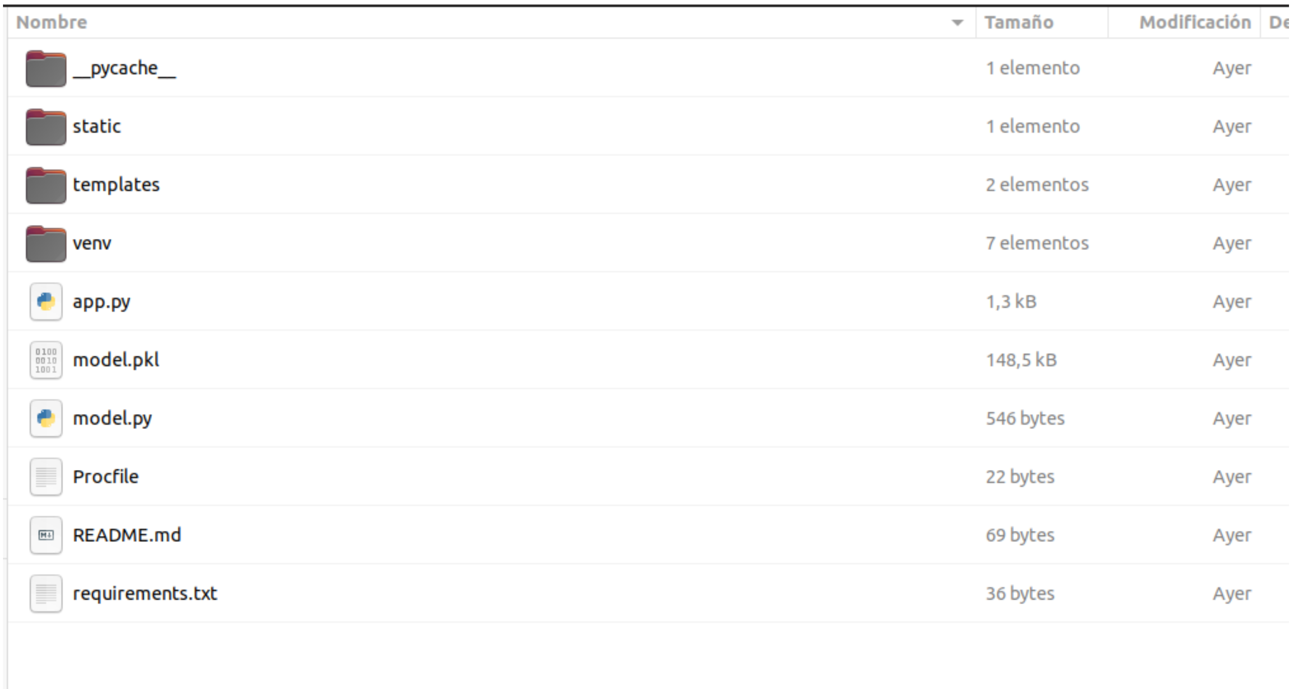
Submitted to: Data Glacier

Project structure:

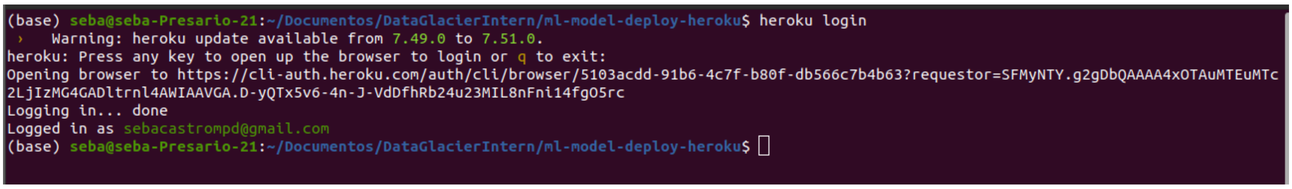
1. __pycache__ (folder)
2. static/css (folder)
    -style.css
3. templates (folder)
    -index.html
    -predict.html
4. venv (folder)
5. Procfile
6. README.md
7. app.py
8. model.pkl
9. model.py
10. requirements.txt



Nombre	Tamaño	Modificación	De
__pycache__	1 elemento	Ayer	
static	1 elemento	Ayer	
templates	2 elementos	Ayer	
venv	7 elementos	Ayer	
app.py	1,3 kB	Ayer	
model.pkl	148,5 kB	Ayer	
model.py	546 bytes	Ayer	
Procfile	22 bytes	Ayer	
README.md	69 bytes	Ayer	
requirements.txt	36 bytes	Ayer	

Step 1. Model deployment in Heroku: Login

Taking into account the app developed in Flask week 4 (with iris species toy dataset), now it will be deployed at Heroku. So, the first step is to install Heroku and sign in. Once we have created the account we are ready to log in and start creating the web app.



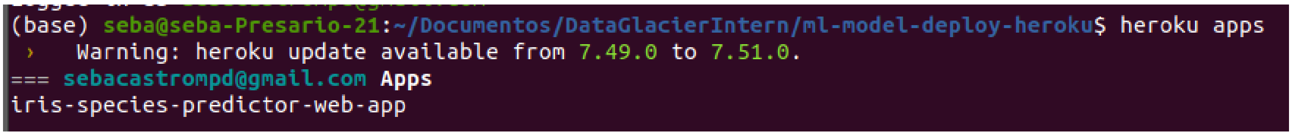
```
(base) seba@seba-Presario-21:~/Documentos/DataGlacierIntern/ml-model-deploy-heroku$ heroku login
 ›   Warning: heroku update available from 7.49.0 to 7.51.0.
heroku: Press any key to open up the browser to login or q to exit:
Opening browser to https://cli-auth.heroku.com/auth/cli/browser/5103acdd-91b6-4c7f-b80f-db566c7b4b63?requestor=SFMyNTY.g2gDbQAAAA4xOTAuMTEuMTc
2LjIzMG4GADltrnl4AWIAAVGA.D-yQTx5v6-4n-J-VdDfhRb24u23MIL8nFni14fgO5rc
Logging in... done
Logged in as sebacastrompd@gmail.com
(base) seba@seba-Presario-21:~/Documentos/DataGlacierIntern/ml-model-deploy-heroku$ 
```

Step 2: Creating Web App at Heroku

Then, we create the web app. We can do it directly from the terminal with the next code:

heroku apps: name_of_app

The name of the app is: iris-species-predictor-web-app

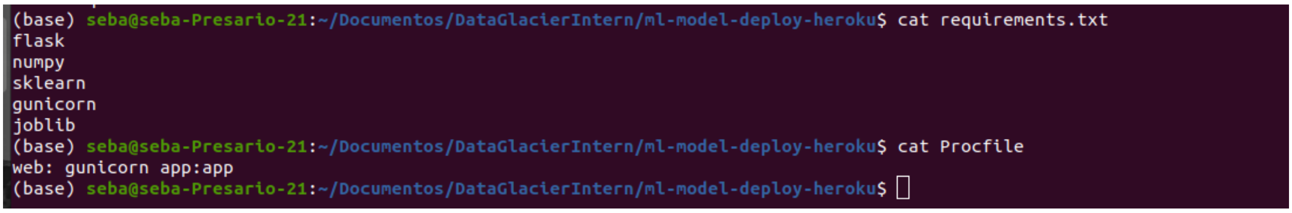


```
(base) seba@seba-Presario-21:~/Documentos/DataGlacierIntern/ml-model-deploy-heroku$ heroku apps
 ›   Warning: heroku update available from 7.49.0 to 7.51.0.
=== sebacastrompd@gmail.com Apps
iris-species-predictor-web-app
```

Step 3: Creating important files: Procfile and requirements.txt

Heroku requires Procfile to be present in the root directory of your application. It will tell Heroku how to run the application. This file must be a simple file with no extension.

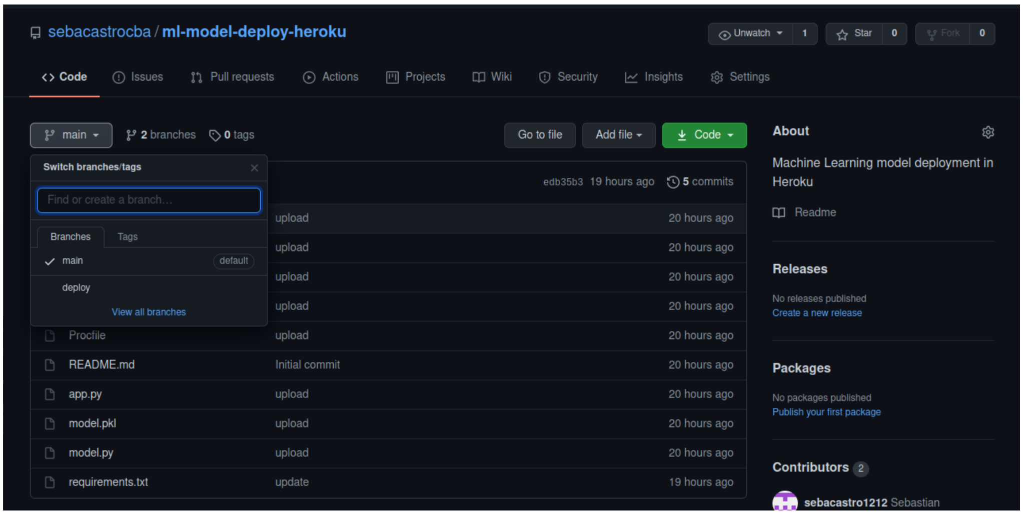
requirements.txt will install all the necessary dependencies to run the code. It will tell heroku that this project will require all these libraries to run the application correctly.



```
(base) seba@seba-Presario-21:~/Documentos/DataGlacierIntern/ml-model-deploy-heroku$ cat requirements.txt
flask
numpy
sklearn
gunicorn
joblib
(base) seba@seba-Presario-21:~/Documentos/DataGlacierIntern/ml-model-deploy-heroku$ cat Procfile
web: gunicorn app:app
(base) seba@seba-Presario-21:~/Documentos/DataGlacierIntern/ml-model-deploy-heroku$ 
```

Step 4: Creating github repository

In this step we create a github repository with the files and folder that are mentioned before. And created a branch named “deploy” in order to connect this branch with Heroku dashboard.



edb35b3 19 hours ago 5 commits

	upload	20 hours ago
	upload	20 hours ago
	upload	20 hours ago
	upload	20 hours ago
Procfile	upload	20 hours ago
README.md	Initial commit	20 hours ago
app.py	upload	20 hours ago
model.pkl	upload	20 hours ago
model.py	upload	20 hours ago
requirements.txt	update	19 hours ago

About

Machine Learning model deployment in Heroku

Releases

No releases published

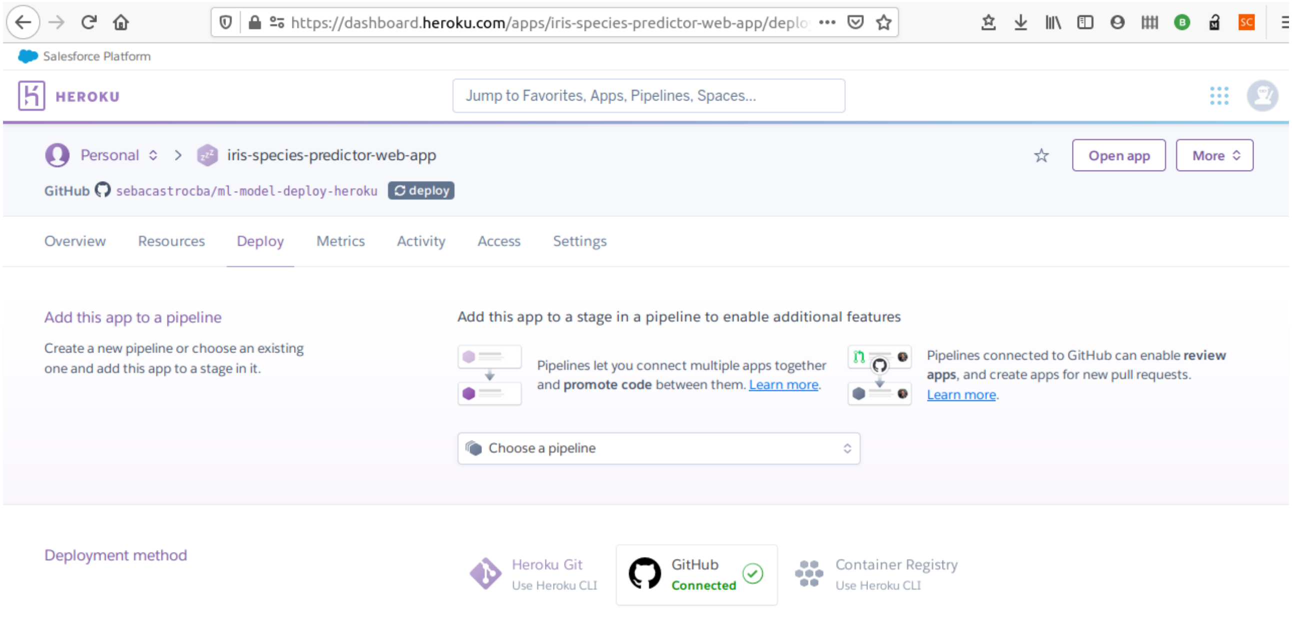
Packages

No packages published

Contributors 2

sebacastro1212 Sebastian

Step 5: connect the repository created before and select the deploy branch for enabling the automatic deployment. To do that, go to the deploy tab in the dashboard:


https://dashboard.heroku.com/apps/iris-species-predictor-web-app/deplo
Salesforce Platform
HEROKU
Jump to Favorites, Apps, Pipelines, Spaces...
Personal
iris-species-predictor-web-app
Open app
More
GitHub sebacastrocba/ml-model-deploy-heroku
deploy
Overview
Resources
Deploy
Metrics
Activity
Access
Settings

Add this app to a pipeline

Create a new pipeline or choose an existing one and add this app to a stage in it.

Add this app to a stage in a pipeline to enable additional features

Pipelines let you connect multiple apps together and **promote code** between them. Learn more.

Pipelines connected to GitHub can enable **review apps**, and create apps for new pull requests. Learn more.

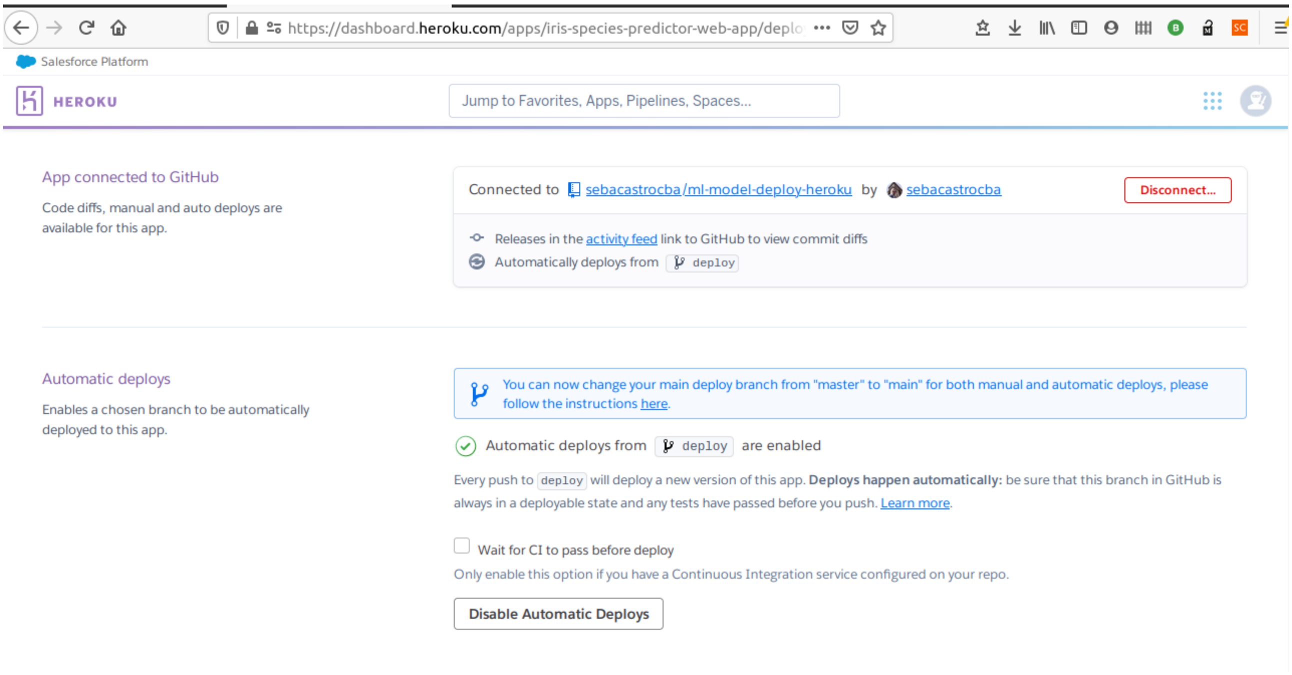
Choose a pipeline

Deployment method

Heroku Git
Use Heroku CLI

GitHub
Connected

Container Registry
Use Heroku CLI


https://dashboard.heroku.com/apps/iris-species-predictor-web-app/deplo
Salesforce Platform
HEROKU
Jump to Favorites, Apps, Pipelines, Spaces...

App connected to GitHub

Code diffs, manual and auto deploys are available for this app.

Connected to sebacastrocba/ml-model-deploy-heroku by sebacastrocba

Disconnect...

Releases in the activity feed link to GitHub to view commit diffs

Automatically deploys from `deploy`

Automatic deploys

Enables a chosen branch to be automatically deployed to this app.

You can now change your main deploy branch from "master" to "main" for both manual and automatic deploys, please follow the instructions here.

Automatic deploys from `deploy` are enabled

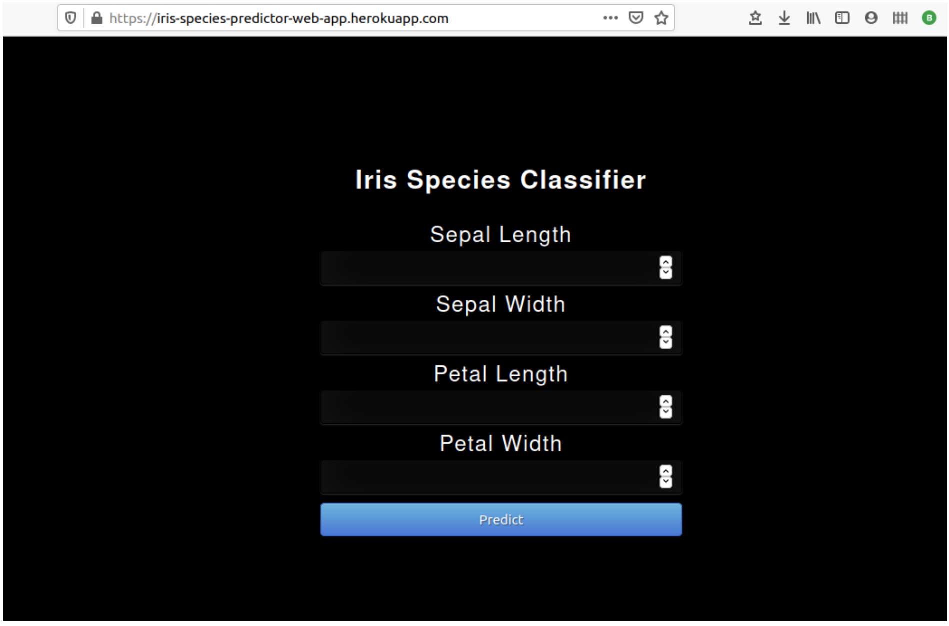
Every push to `deploy` will deploy a new version of this app. **Deploys happen automatically:** be sure that this branch in GitHub is always in a deployable state and any tests have passed before you push. Learn more.

□ Wait for CI to pass before deploy

Only enable this option if you have a Continuous Integration service configured on your repo.

Disable Automatic Deploys

Step 5: wait for the process of deployment and then go to the url of the web app and use it.



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