

Week 5 Assignment: Cloud and API deployment

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The following document will show the steps that were necessary to complete the task for week 5.

- **Step 1:** create structure and folders for the assignment. This structure must to be similar to,

```
-- checkpoints
---- model_freddy.pkl
-- model
---- Week4_model.py
-- static
---- css
----- template.css
---- images
----- img.jpg
-- templates
---- index.html
-- Procfile
-- README.md
-- requirements.txt
-- script.py
```

 checkpoints	24/3/2021 8:18 p. m.	Carpeta de archivos	
 model	24/3/2021 8:18 p. m.	Carpeta de archivos	
 static	26/3/2021 5:12 p. m.	Carpeta de archivos	
 templates	24/3/2021 8:18 p. m.	Carpeta de archivos	
 Procfile	24/3/2021 8:18 p. m.	Archivo	1 KB
 README.md	24/3/2021 8:18 p. m.	Archivo MD	1 KB
 requirements	24/3/2021 8:18 p. m.	Documento de te...	1 KB
 script	26/3/2021 4:54 p. m.	Python File	1 KB

Each folder contains,

1. **checkpoints:** contains the model saved in a pkl format.
2. **model:** contains a python script that was used to generate the model and work with the simple dataset.

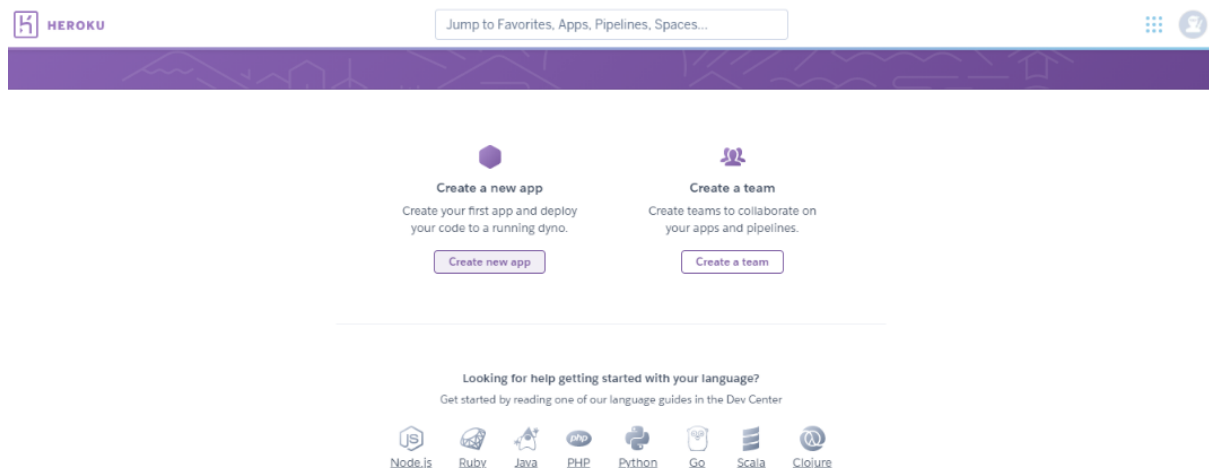
3. **static:** contains two folders, one for css files and the second for images that will be used in the html file.
4. **templates:** contains a html file ("index.html") which will provide an interface for the user.

The "Procfile" is a file that is important at the moment to deploy in Heroku. The "README.md" file is a file that will be used in the description of the repository of Github. The "requirements.txt" file is useful to know which packages the API will use. The "script.py" file is the main file for the project, it contains the code for the API.

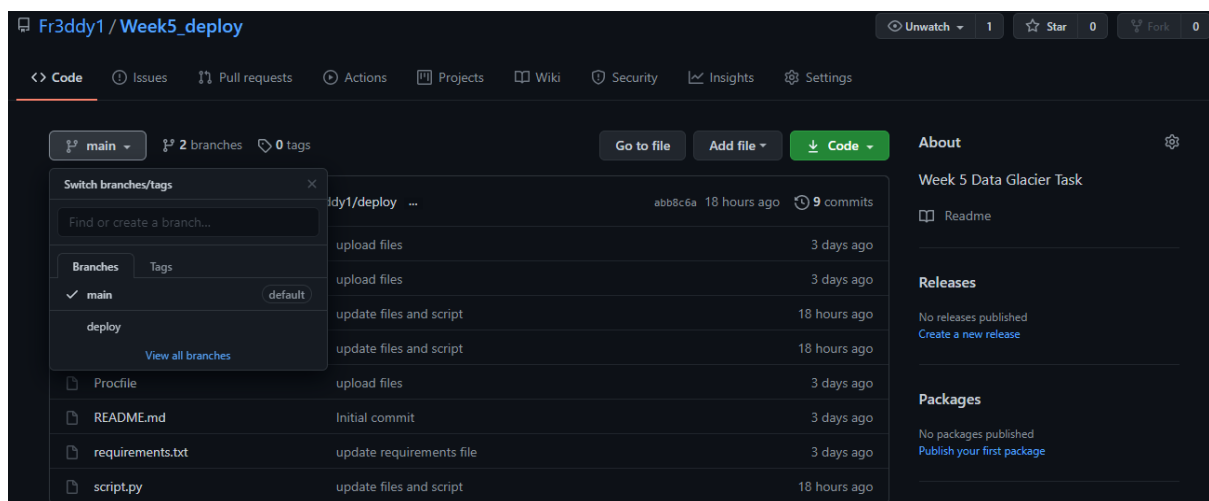
- **Step 2:** Create an account on the web page of Heroku.

Accept the terms of the service,

In the Heroku dashboard create an app,



- **Step 3:** create a repository on github with the files and folder that are mentioned in step 1. And created a branch named “deploy” in order to connect this branch with the Heroku dashboard.




- **Step 4:** connect the deploy branch to the Heroku dashboard. To do that, yo must go to the “Deploy” tab in the dashboard,

[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

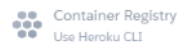


Pipelines let you connect multiple apps together and **promote code** between them. [Learn more](#)



Pipelines connected to GitHub can enable **review apps**, and create apps for new pull requests. [Learn more](#)

Deployment method



Then connect the repository and deploy the app with the “Deploy branch” button,

App connected to GitHub

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


Connected to [Fr3ddy1/Week5_deploy](#) by [Fr3ddy1](#)

[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.

☐ 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](#)

Manual deploy

Deploy the current state of a branch to this app.

Deploy a GitHub branch

This will deploy the current state of the branch you specify below. [Learn more](#)

Choose a branch to deploy

[deploy](#)

[Deploy Branch](#)

- **Step 5:** wait for the process of deployment and then go to the url of the web app (<https://web-app-university.herokuapp.com/>) and use it, do a pair of examples in order to see the results.

The screenshot shows a web browser window with the URL `web-app-university.herokuapp.com`. The page has a blue gradient background with white text. The title is "Predictive model of a process University selection". Below the title is a subtitle: "This model will predict whether candidates would get admitted to a prestigious university." The main inputs are listed on the left: "gmat:" (grade at Graduate Management Admission Test), "gpa:" (grade Point Average), and "work_experience:" (number of years of experience at work). On the right, under "Student's information", there are three input fields for "Gmat", "Gpa", and "Work experience", followed by a "Predict" button. Below the inputs, the result is explained: "The result will be," followed by "Admitted:" (represented by the value of '1') and "Rejected:" (represented by the value of '0').

Predictive model of a process University selection

This model will predict whether candidates would get admitted to a prestigious university.

The main inputs are,

- **gmat:**
grade at Graduate Management Admission Test.
- **gpa:**
grade Point Average.
- **work_experience:**
number of years of experience at work.

Student's information

Gmat

Gpa

Work experience

The result will be,

- **Admitted:**
represented by the value of '1'.
- **Rejected:**
represented by the value of '0'.

Example of approved student:

This screenshot shows the same web application interface as the previous one, but with example data entered in the input fields. The "Gmat" field contains "740", the "Gpa" field contains "3.7", and the "Work experience" field contains "4". The "Predict" button is still present. The result section now shows "The final decision of the University should be 1", indicating the student is approved.

Predictive model of a process University selection

This model will predict whether candidates would get admitted to a prestigious university.

The main inputs are,

- **gmat:**
grade at Graduate Management Admission Test.
- **gpa:**
grade Point Average.
- **work_experience:**
number of years of experience at work.

Student's information

Gmat

Gpa

Work experience

The result will be,

- **Admitted:**
represented by the value of '1'.
- **Rejected:**
represented by the value of '0'.

The final decision of the University should be 1

Example of rejected student:

Predictive model of a process University selection

This model will predict whether candidates would get admitted to a prestigious university.

The main inputs are,

- **gmat:**
grade at Graduate Management Admission Test.
- **gpa:**
grade Point Average.
- **work_experience:**
number of years of experience at work.

The result will be,

- **Admitted:**
represented by the value of '1'.
- **Rejected:**
represented by the value of '0'.

Student's information

690

2.3

1

Predict

The final decision of the University should be 0