

Data Glacier
Week 5 – Model Deployment on Heroku

Object

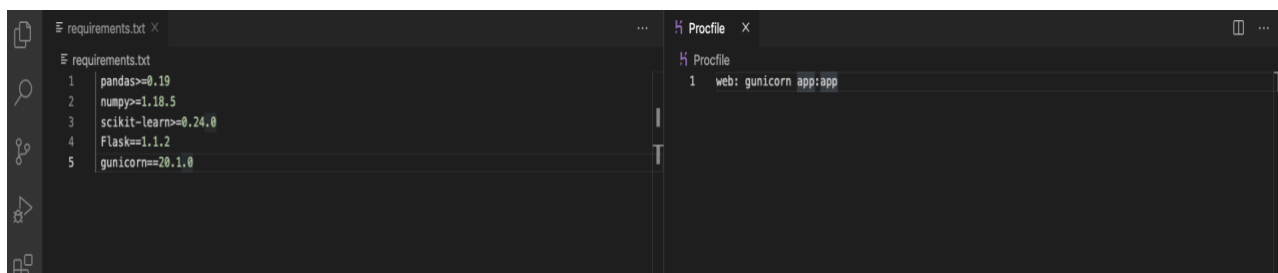
We are going to use the same model from week 4 that we trained to predict housing prices to deploy on Heroku. The steps are pretty straight forward so they will be shown below with an image for clarification.

Steps

First, we need to create two new files in our directory. The first file will be called “Procfile”, and the second file will be called “requirements.txt”.

The “Procfile” will contain the information for Heroku to know which file to run first and what the name of our Flask app is called. In our case the file and app are called the same, “app”.

The “requirements.txt” file will contain all the packages that we need to run the app.




```
requirements.txt
1 pandas>=0.19
2 numpy>=1.18.5
3 scikit-learn>=0.24.0
4 Flask==1.1.2
5 gunicorn==20.1.0




Procfile
1 web: gunicorn app:app
```


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The second step is to create a new repository in GitHub to store all the relevant files for the web application.



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 **laithadi / dataglacier-heroku-model-deployment**

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main 1 branch 0 tags

Go to file Add file Code

 **laithadi** Update requirements.txt 8ebc496 24 seconds ago 3 commits

templates	Rename index.html to templates/index.html	3 minutes ago
MLmodel.ipynb	Add files via upload	3 minutes ago
Procfile	Add files via upload	3 minutes ago
app.py	Add files via upload	3 minutes ago
model.pkl	Add files via upload	3 minutes ago
requirements.txt	Update requirements.txt	24 seconds ago

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Environments 1

 dg-homepriceprediction


Pending

Languages

- Jupyter Notebook 51.8%
- HTML 31.7%
- Python 16.5%

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Now, we log into our Heroku account and create a new app. We then connect to our repository through GitHub, deploy the branch, and wait for the requirements to install.

Deployment method

 Heroku Git
Use Heroku CLI


 GitHub
Connect to GitHub

 Container Registry
Use Heroku CLI

Connect to GitHub

Connect this app to GitHub to enable code diffs and deploys.

Search for a repository to connect to

 laithadi

repo-name

Search

Missing a GitHub organization? [Ensure Heroku Dashboard has team access.](#)

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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

 main

Deploy Branch

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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

 main

Deploy Branch

Receive code from GitHub

Build main a85be0de

```
1.15.0 threadpoolctl-2.1.0
-----> Discovering process types
Procfile declares types -> web
-----> Compressing...
Done: 129.2M
-----> Launching...
Released v3
https://dg-homepriceprediction.herokuapp.com/ deployed to Heroku
```

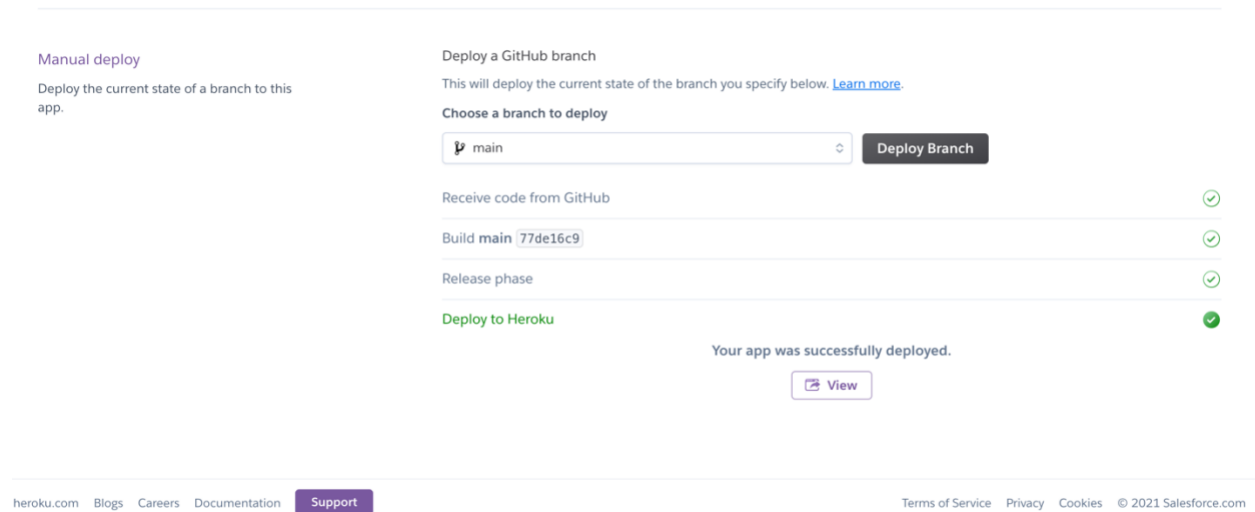
☒ Autoscroll with output [View build log](#)

Release phase

Deploy to Heroku

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The image shows the Heroku deployment interface. On the left, under 'Manual deploy', it says 'Deploy the current state of a branch to this app.' On the right, under 'Deploy a GitHub branch', it says 'This will deploy the current state of the branch you specify below. [Learn more.](#)' Below this, there's a dropdown menu showing 'main' and a 'Deploy Branch' button. A progress bar shows the following steps: 'Receive code from GitHub' (checked), 'Build main 77de16c9' (checked), 'Release phase' (checked), and 'Deploy to Heroku' (checked). At the bottom, it says 'Your app was successfully deployed.' with a 'View' button. The footer includes links for heroku.com, Blogs, Careers, Documentation, Support, Terms of Service, Privacy, Cookies, and © 2021 Salesforce.com.

Now our model is deployed, we can visit the link and test it out. As we can see in the image below, it fully works, and we have successfully deployed the modal on Heroku.



The image is a screenshot of a web browser with the address bar showing 'dg-homepriceprediction.herokuapp.com/predict'. The page title is 'Welcome to my first ML deployment using Flask!'. Below the title, there are several input fields for home features: 'Number of garages...', 'Number of fireplaces...', 'Number of baths...', 'Is home solar? (Yes: 1, No: 0)', 'Is home electric? (Yes: 1, No: 0)', 'Is home fiber? (Yes: 1, No: 0)', 'Glass doors? (Yes: 1, No: 0)', and 'Swimming pool? (Yes: 1, No: 0)'. A 'Predict Price' button is located below the 'Number of fireplaces...' field. The output shows 'House price should be \$ 43671.8'.