

# Week 4 - Deployment on Heroku

**Name:** Kashish Joshipura

**Batch No:** LISUM10

**Submission Date:** 5th July 2022

**Submitted to:** Data Glacier - LISUM10

## STEP 1 : Download the dataset from Kaggle

**Population by Country - 2020**

Data Code (220) Discussion (1) Metadata

158 New Notebook Download (8 KiB)

**population\_by\_country\_2020.csv** (15.89 KiB)

Detail Compact Column 10 of 11 columns

**About this file**

**File Description**

Below is a sortable list of countries by their population- 2020. There are 235 countries along with their population. And there are 11 columns each representing different features of countries. This is dataset is pretty new i.e 2020. Feel free to use the data set and play with it.

Country (or depe...	Population (2020)	Yearly Change	Net Change	Density (P/Km²)	Land A
This column contains different country's name (235 countries)	This column contains the population of different countries	This column contains the population change by yearly	This column contains the net change of the population	The column contains the density of the population	This column contains the land area in kilometers
235 unique values	801 1.44b	1.48 % 1.06 % 2% 1% Other (228) 97%	-383840 13.6m	0 26.3k	0
China	1440297825	0.39 %	5540090	153	9388211
India	1382345885	0.99 %	13586631	464	2973190
United States	331341050	0.59 %	1937734	36	9147420

**Data Explorer**

Version 4 (15.89 KiB)

population\_by\_country\_202...

## STEP 2 : app.py

```
1  #!/usr/bin/env python3
2  # -*- coding: utf-8 -*-
3  """
4  Created on Tue Jun 28 15:59:19 2022
5
6  @author: kashishhj
7  """
8
9
10 import numpy as np
11 from flask import Flask, request, render_template
12 import pickle
13
14 app = Flask(__name__)
15 model = pickle.load(open('model.pkl', 'rb'))
16
17 @app.route('/')
18 def home():
19     return render_template('index.html')
20
21 @app.route('/predict', methods=['POST'])
22 def predict():
23     """
24     For rendering results on HTML GUI
25     """
26     int_features = [int(x) for x in request.form.values()]
27     final_features = [np.array(int_features)]
28     prediction = model.predict(final_features)
29
30     output = round(prediction[0], 2)
31
32     return render_template('index.html', prediction_text='House price should be $ {}'.format(output))
33
34 if __name__ == "__main__":
35     app.run(debug=True)
```

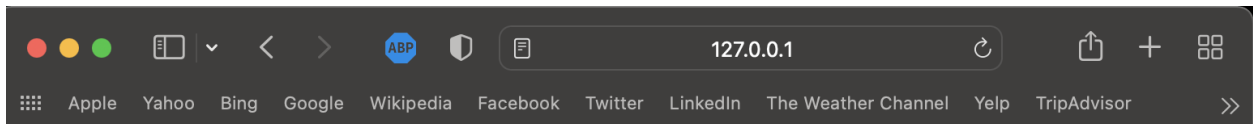
## STEP 3 : model.py

```
1  #!/usr/bin/env python3
2  # -*- coding: utf-8 -*-
3  """
4  Created on Tue Jun 28 16:10:09 2022
5
6  @author: kashishhj
7  """
8
9  # Importing the libraries
10 import numpy as np
11 import pandas as pd
12 import pickle
13
14 dataset = pd.read_csv('population.csv')
15
16 dataset['Population (2020)'].fillna(0, inplace=True)
17
18 dataset['Net Change'].fillna(dataset['Net Change'].mean(), inplace=True)
19
20 X = dataset.iloc[:, :3]
21
22 #Converting words to integer values
23 def convert_to_int(word):
24     word_dict = {'one':1, 'two':2, 'three':3, 'four':4, 'five':5, 'six':6, 'seven':7, 'eight':8,
25                 'nine':9, 'ten':10, 'eleven':11, 'twelve':12, 'zero':0, 0: 0}
26     return word_dict[word]
27
28 #X['Population (2020)'] = X['Population (2020)'].apply(lambda x : convert_to_int(x))
29
30 y = dataset.iloc[:, -1]
31
32 from sklearn.linear_model import LinearRegression
33 regressor = LinearRegression()
34
35 #Fitting model with trainig data
36 regressor.fit(X, y)
37
38 # Saving model to disk
39 pickle.dump(regressor, open('model.pkl', 'wb'))
40
41 # Loading model to compare the results
42 model = pickle.load(open('model.pkl', 'rb'))
43 print(model.predict([[2, 2200, 5]]))
44
```

STEP 4 : run in terminal using “python app.py”

```
(base) kashishhj@Kashishs-MBP-2 Desktop % python app.py
* Serving Flask app "app" (lazy loading)
* Environment: production
  WARNING: This is a development server. Do not use it in a production deployment.
  Use a production WSGI server instead.
* Debug mode: on
* Running on http://127.0.0.1:5000/ (Press CTRL+C to quit)
* Restarting with fsevents reloader
* Debugger is active!
* Debugger PIN: 170-514-534
127.0.0.1 - - [28/Jun/2022 21:00:57] "GET / HTTP/1.1" 500 -
```

STEP 5 : use “<http://127.0.0.1:5000/>” to open the web server on the local device



STEP 6 : deploy on github

**Create a new repository**

A repository contains all project files, including the revision history. Already have a project repository elsewhere? [Import a repository.](#)

---


**Owner \*** **Repository name \***


 kashish1928 / heroku\_sample ✓

Great repository names are short and memorable. Need inspiration? How about [psychic-octo-guide?](#)

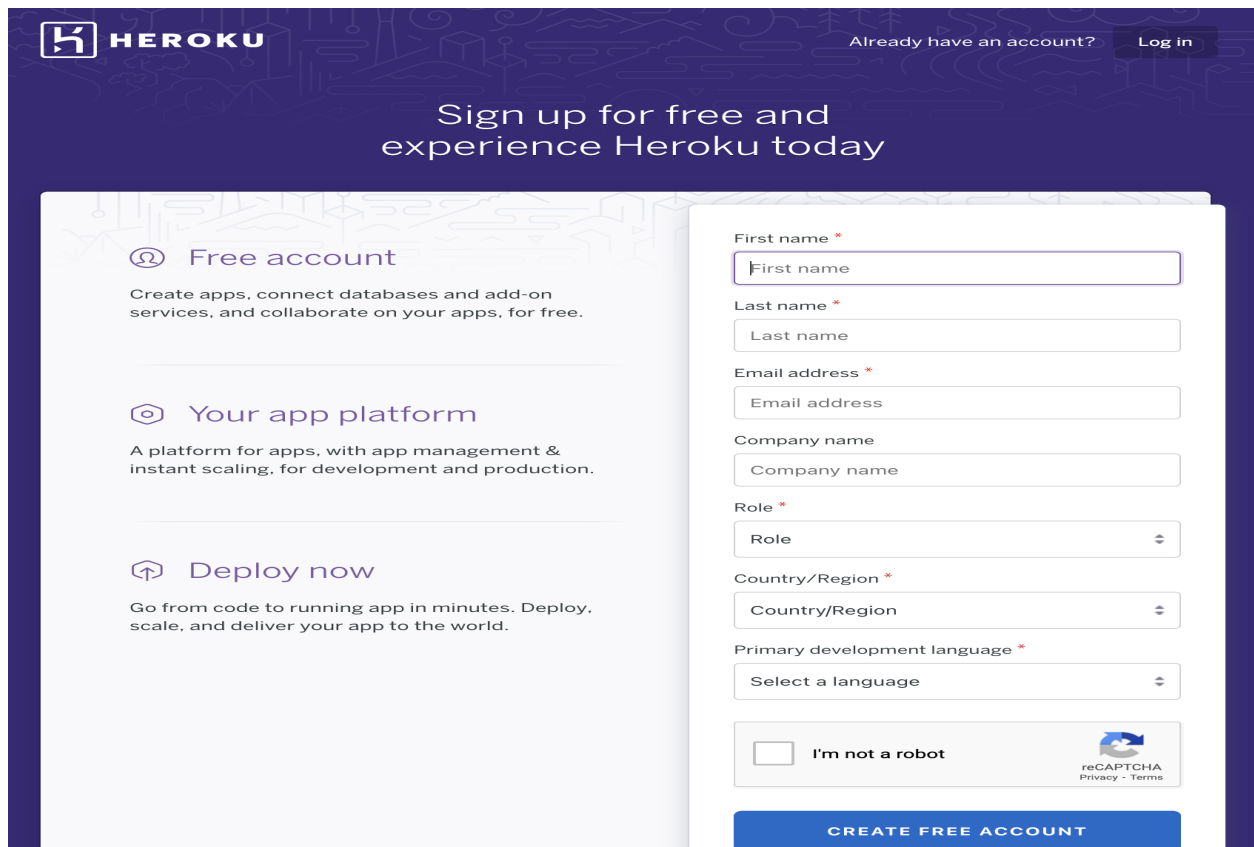
**Description (optional)**

---

☒  **Public**  
Anyone on the internet can see this repository. You choose who can commit.

☐  **Private**  
You choose who can see and commit to this repository.

## STEP 7 : create account on heroku



The image shows the Heroku sign-up page. At the top, there's a Heroku logo and a link to log in for existing users. The main heading is "Sign up for free and experience Heroku today". Below this, there are three sections: "Free account" (Create apps, connect databases and add-on services, and collaborate on your apps, for free.), "Your app platform" (A platform for apps, with app management & instant scaling, for development and production.), and "Deploy now" (Go from code to running app in minutes. Deploy, scale, and deliver your app to the world.). On the right, there's a form to create a free account. The form fields are: First name \*, Last name \*, Email address \*, Company name, Role \*, Country/Region \*, and Primary development language \*. There's also a reCAPTCHA "I'm not a robot" checkbox and a "CREATE FREE ACCOUNT" button at the bottom.

HEROKU

Already have an account? [Log in](#)

### Sign up for free and experience Heroku today

#### Free account

Create apps, connect databases and add-on services, and collaborate on your apps, for free.

#### Your app platform

A platform for apps, with app management & instant scaling, for development and production.

#### Deploy now

Go from code to running app in minutes. Deploy, scale, and deliver your app to the world.

First name \*

First name

Last name \*

Last name

Email address \*

Email address

Company name

Company name

Role \*

Role


Country/Region \*

Country/Region

Primary development language \*

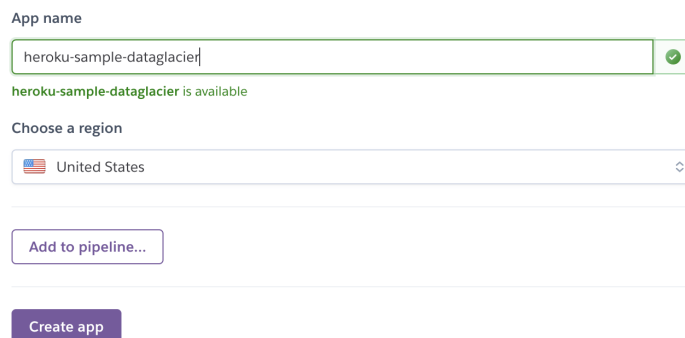
Select a language

☐ I'm not a robot

  
reCAPTCHA  
[Privacy](#) - [Terms](#)

CREATE FREE ACCOUNT

## STEP 8 : create a heroku app and link to github



The image shows the Heroku app creation page. It has a form with the following fields: "App name" with a text input containing "heroku-sample-dataglacier" and a green checkmark icon; "heroku-sample-dataglacier is available" in green text; "Choose a region" with a dropdown menu showing "United States"; "Add to pipeline..." button; and "Create app" button.

App name

heroku-sample-dataglacier

heroku-sample-dataglacier is available

Choose a region

United States

Add to pipeline...

Create app

## STEP 9 : deploy your repository and test

Connected to  [kashish1928/heroku\\_sample](#) by  [kashish1928](#)

Disconnect...

🔗 Releases in the [activity feed](#) link to GitHub to view commit diffs




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

Enable automatic deploys from GitHub

Every push to the branch you specify here will deploy a new version of this app. **Deploys happen automatically:** be sure that this branch is always in a deployable state and any tests have passed before you push. [Learn more](#).

Choose a branch to deploy

 main 

☐ Wait for CI to pass before deploy

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

Enable Automatic Deploys