Deployment on Heroku

Raisin type prediction app

Data Glacier
Your Deep Learning Partner
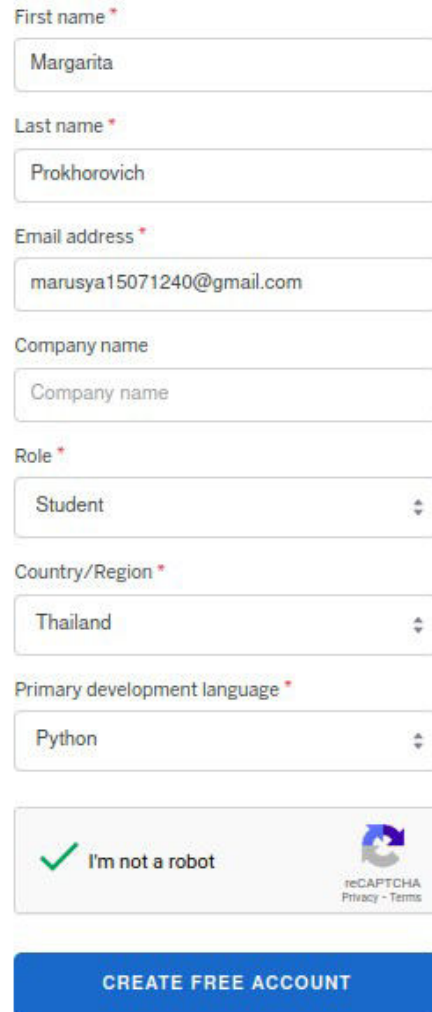
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Batch code - LISUM09,
Submission date – 25 May, 2022,
Submitted to – Data Glacier
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In this project I use a model and app from the previous project – raisin type prediction app. I described model building and deployment on Flask sections in a previous week project. Here I'll describe a further development on Heroku.

First step is to log in in Heroku filling the form.

First name *
Margarita

Last name *
Prokhorovich

Email address *
marusya15071240@gmail.com

Company name
Company name

Role *
Student

Country/Region *
Thailand
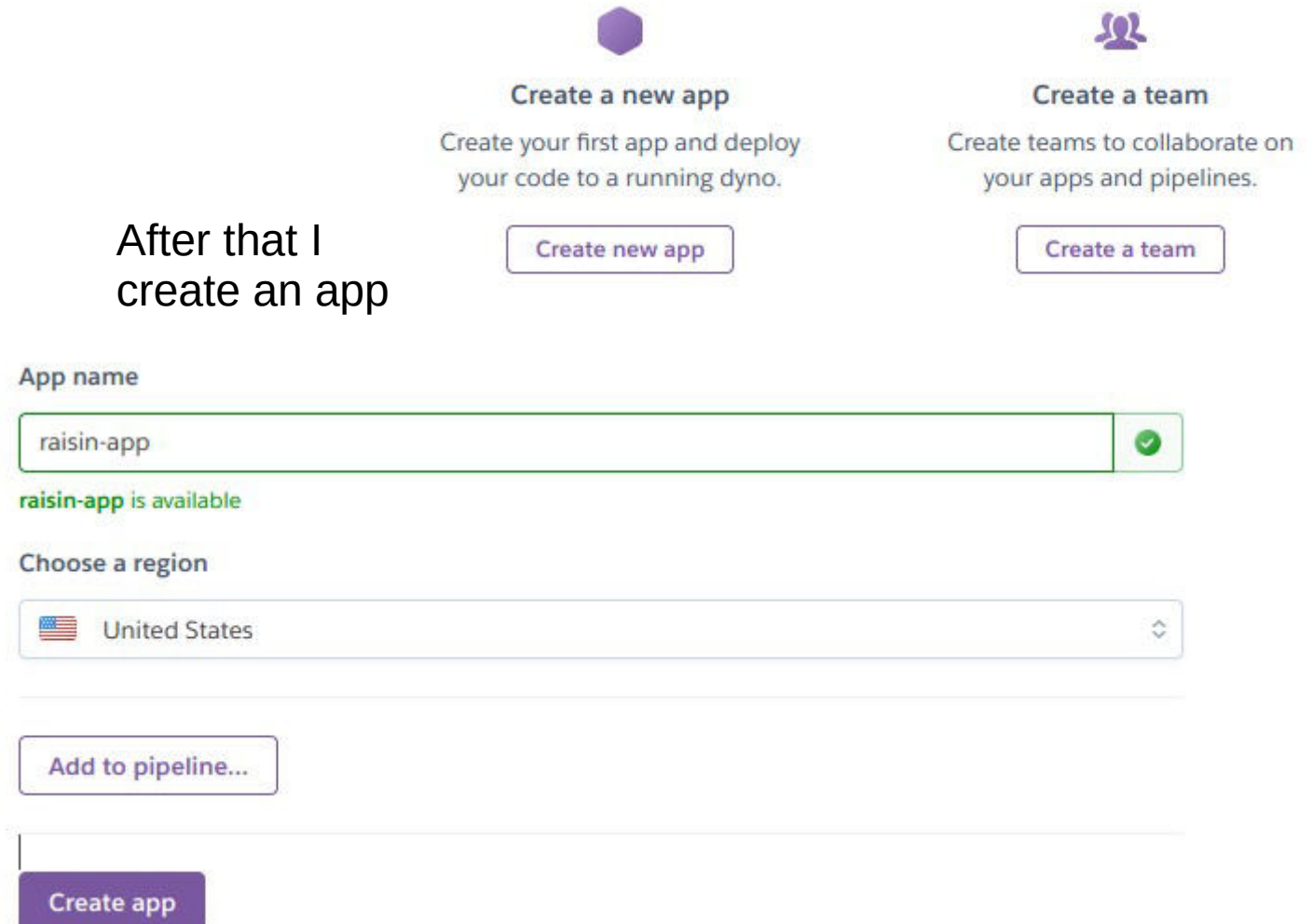
Primary development language *
Python

I'm not a robot
reCAPTCHA
Privacy - Terms

CREATE FREE ACCOUNT

Create a new app

Create your first app and deploy your code to a running dyno.

Create new app

Create a team

Create teams to collaborate on your apps and pipelines.

Create a team

After that I create an app

App name

raisin-app	✓

raisin-app is available

Choose a region

🇺🇸 United States
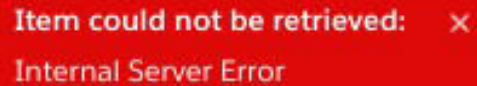
Add to pipeline...

Create app

I choose GitHub as a deployment method. When pressing 'Connect to GitHub', an error occurs. Since there's no possibility to deploy the app through GitHub, I'll deploy it through Heroku Git.

Item could not be retrieved: ✕
Internal Server Error

An error that occurs when trying to connect to GitHub.
Type 'heroku login' in the console.

```
nyak@nyak-ThinkPad-X220:~/Desktop/scripts$ heroku login
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/2f
b9ffb4-8e85-47e7-90a8-2e42991e9523?requestor=SFMyNTY.g2gDbQAAAAw0O
S4yMzcuOC4yMTVuBgD4i6P2gAFiAAFRgA.zWhGZUaoEeCCiKfA1fkuzbrt_qOB-CkQ
GCH8e2N1sHQ
heroku: Waiting for login...
```

Logged in on the site.

Logged In

You can close this page and return to your CLI. It
should now be logged in.

```
nyak@nyak-ThinkPad-X220:~/Desktop/scripts/VC/Week5$ pip install
pipreqs
Defaulting to user installation because normal site-packages is
not writeable
Requirement already satisfied: pipreqs in /home/nyak/.local/lib/
python3.8/site-packages (0.4.11)
Requirement already satisfied: docopt in /home/nyak/.local/lib/p
ython3.8/site-packages (from pipreqs) (0.6.2)
Requirement already satisfied: yarg in /home/nyak/.local/lib/pyt
hon3.8/site-packages (from pipreqs) (0.1.9)
Requirement already satisfied: requests in /usr/lib/python3/dist
-packages (from yarg->pipreqs) (2.22.0)
WARNING: You are using pip version 22.0.4; however, version 22.1
 is available.
You should consider upgrading via the '/usr/bin/python3 -m pip i
nstall --upgrade pip' command.
nyak@nyak-ThinkPad-X220:~/Desktop/scripts/VC/Week5$ pipreqs .
INFO: Successfully saved requirements file in ./requirements.txt
nyak@nyak-ThinkPad-X220:~/Desktop/scripts/VC/Week5$
```

In addition to app and model files, templates and style files, it's also needed to add requirements.txt and Procfile files. To generate requirements.txt file, I can use pipreqs module. Since an error occurs, I also add gunicorn to the requirements. Also I create runtime.txt to specify python version.

Model deployment

```
nyak@nyak-ThinkPad-X220:~/Desktop/scripts/VC/Week5$ git init
Initialized empty Git repository in /home/nyak/Desktop/scripts/VC/Week5/.git/
nyak@nyak-ThinkPad-X220:~/Desktop/scripts/VC/Week5$ heroku git:remote -a raisin-app
set git remote heroku to https://git.heroku.com/raisin-app.git
nyak@nyak-ThinkPad-X220:~/Desktop/scripts/VC/Week5$ git add .
nyak@nyak-ThinkPad-X220:~/Desktop/scripts/VC/Week5$ git commit -m 'Created heroku app'
[master (root-commit) aaacb91] Created heroku app
 15 files changed, 833 insertions(+)
 create mode 100644 .~lock.Deployment_on_Flask_snapshots.odp#
 create mode 100644 .~lock.Raisin_Dataset.xlsx#
 create mode 100644 Deployment_on_Flask_snapshots.odp
 create mode 100644 Procfile
 create mode 100644 README.md
 create mode 100644 Raisin_Dataset.xlsx
 create mode 100644 app.py
 create mode 100644 model.ipynb
 create mode 100644 model_raisin.pkl
 create mode 100644 requirements.txt
 create mode 100644 runtime.txt
 create mode 100644 standart_scale.pkl
 create mode 100644 static/css/style.css
 create mode 100644 static/images/schema.png
 create mode 100644 templates/index.html
```

I initialize a new git repository in a project week. Next step is to connect the app to git remote. After that I add and commit the files.

```
nyak@nyak-ThinkPad-X220:~/Desktop/scripts/VC/Week5$ git push heroku master
Enumerating objects: 21, done.
Counting objects: 100% (21/21), done.
Delta compression using up to 4 threads
Compressing objects: 100% (15/15), done.
Writing objects: 100% (21/21), 470.41 KiB | 14.70 MiB/s, done.
Total 21 (delta 0), reused 0 (delta 0)
remote: Compressing source files... done.
remote: Building source:
remote:
remote: -----> Building on the Heroku-20 stack
remote: -----> Determining which buildpack to use for this app
remote: -----> Python app detected
remote: -----> Using Python version specified in runtime.txt
remote: -----> Installing python-3.9.13
remote: -----> Installing pip 22.0.4, setuptools 60.10.0 and wheel 0.37.1
remote: -----> Installing SQLite3
remote: -----> Installing requirements with pip
remote:        Collecting Flask==1.1.1
remote:          Downloading Flask-1.1.1-py2.py3-none-any.whl (94 kB)
```

After that I push the changes to heroku master branch. Process is completed successfully.
After that I type 'heroku open' to open the app and test it.

```
nyak@nyak-ThinkPad-X220:~/Desktop/scripts/VC/Week5$ heroku open
nyak@nyak-ThinkPad-X220:~/Desktop/scripts/VC/Week5$ █
```

Since a week later the error with GitHub connection disappeared, I also try this method of deployment.

1. Chose a repository

Connect to GitHub

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

Search for a repository to connect to

| maryprokh | |

| repo-name | Search |

Missing a GitHub organization? Ensure Heroku Dashboard has team access.

maryprokh/Machine-learning-examples   Connect

maryprokh/data_analysis_examples   Connect

maryprokh/VC   Connect

2. Chose a branch for manual deployment

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

| heroku_app | Deploy Branch |

3. Deployment is in progress

Receive code from GitHub

Build **heroku_app** 6aec3ce8

```
-----> Building on the Heroku-20 stack
-----> Using buildpack: heroku/python
-----> Python app detected
-----> Using Python version specified in runtime.txt
-----> No change in requirements detected, installing from cache
-----> Using cached install of python-3.9.13
-----> Installing pip 22.0.4, setuptools 60.10.0 and wheel 0.37.1
-----> Installing SQLite3
```

✅ Autoscroll with output   View build log

4. Deployment is complete

Receive code from GitHub   ⊘

Build **heroku_app** 6aec3ce8   ⊘

Release phase   ⊘

Deploy to Heroku   ✅

Your app was successfully deployed.

View

The **app** opens in a new tab, predictions work. Deployment on Heroku is completed.

Raisin type prediction app Deployment on Heroku

Thank You