doc.md 9/30/2022

Info

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- Batch Code: LISUM 13:30 August 30 November 2022
- Submission date: 2022/9/26
- Submitted to: Week 5: Cloud and API deployment
- 1. train a simple model

```
import sklearn
from sklearn.linear_model import LogisticRegression
from sklearn.datasets import load_iris
import numpy as np
import pickle

✓ 0.4s

Python

X, y = load_iris(return_X_y=True)
lr = LogisticRegression()
lr.fit(X, y)

Python
```

2. save the model

```
file_name = 'trained_model.sav'
pickle.dump(lr, open(file_name, 'wb'))
loaded_model = pickle.load(open(file_name, 'rb'))

$\square$ 0.4s

Python
```

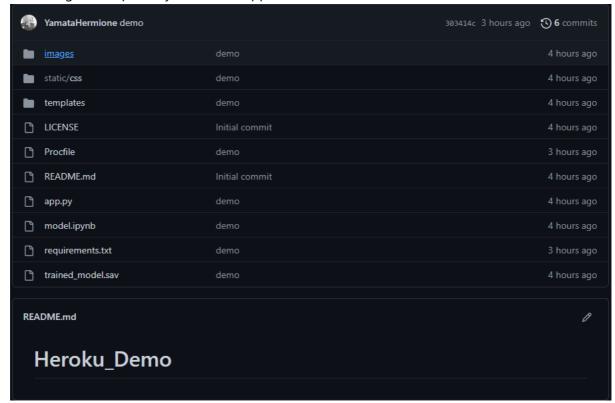
3. make a web app

```
🕏 app.py > 🛇 index
 1 \vee from flask import Flask, render_template, request
    import pickle
    import numpy as np
    app = Flask(__name__)
 6 model = pickle.load(open('trained_model.sav', 'rb'))
     labels = ['setosa', 'versicolor', 'virginica']
     @app.route('/') #http://google/com/
10 v def index():
         return render_template('index.html',
                                 info = 'Predicting type of Iris from give information. Types of iris: {}, {} and {}'
                                .format(labels[0], labels[1], labels[2]))
13
     @app.route('/predict', methods=['POST'])
16 vdef predict():
         features = [np.array([float(x) for x in request.form.values()])]
         prediction = model.predict(features)
         output = labels[prediction.item()]
         return render_template('index.html', prediction_text='Type of Iris is {}'.format(output))
     app.run(port=5000, debug=True)
```

4. Deploy the model on Heroku

doc.md 9/30/2022

1. Create a github repository for heroku app



2. Connect heroku to github

App connected to GitHub

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

Connected to

YamataHermione by

YamataHermione

Disconnect...

Place of the sectivity feed link to GitHub to view commit diffs

3. Deploy the model

```
reated wheel for pyspark: filename=pyspark-3.2.1-py2.py3-none-any.whl size=281853625 sha256=8629d489613/b982/ac0a/1c2e0d0d0/6/e01069fe4afaf03008/420alb31a24
            Stored in directory: /tmp/pip-ephen-wheel-cache-fxt4krp2/wheels/15/97/bd/52908574a60b5F8e3dc4dc5a0b5be8a59ac20986ee51c2611b

Building wheel for sklearn (setup.py): started

Building wheel for sklearn (setup.py): finished with status 'done'

Created wheel for sklearn: filename=sklearn-0.0-py2.py3-none-any.whl size=1304 sha256=f6014b48cf0b5fb0d1891a73b393ce819ae1ea48084b94e6e562902be0904200
            Successfully built pyspark sklearn
Installing collected packages: py4j, zipp, threadpoolctl, setuptools, pyspark, pip, numpy, MarkupSafe, joblib, itsdangerous, colorama, click, Werkzeug, scipy, Jinja2,
importlib-metadata, gunicorn, scikit-learn, Flask, sklearn
Attempting uninstall: setuptools
               Found existing installation: setuptools 63.4.3
              Uninstalling setuptools-63.4.3:
Successfully uninstalled setuptools-63.4.3
            Attempting uninstall: pip
               Found existing installation: pip 22.2.2
               Uninstalling pip-22.2.2:
         Successfully uninstalled pip-22.2.2
Successfully installed Flask-2.2.2 Jinja2-3.1.2 MarkupSafe-2.1.1 Werkzeug-2.2.2 click-8.1.3 colorama-0.4.5 gunicorn-20.1.0 importlib-metadata-4.12.0 itsdangerous-2.1.2
joblib-1.2.0 numpy-1.23.3 pip-21.2.3 py4j-0.10.9.3 pyspark-3.2.1 scikit-learn-1.1.2 scipy-1.9.1 setuptools-57.4.0 sklearn-0.0 threadpoolctl-3.1.0 zipp-3.8.1
      --> Discovering process types
          Procfile declares types -> web
----> Compressing...
Done: 386.9M
 ----> Launching...
! Warning: Your slug size (386 MB) exceeds our soft limit (300 MB) which may affect boot time
          Released v6
https://heroku-demo-app-w6.herokuapp.com/ deployed to Heroku

Starting November 28th, 2022, free Heroku Dynos, free Heroku Postgres, and free Heroku Data for Redis® will no longer be available.

If you have apps using any of these resources, you must upgrade to paid plans by this date to ensure your apps continue to run and to retain your data. For students, we will announce a new program by the end of September. Learn more at https://blog.heroku.com/next-chapter
Build finished
```

doc.md 9/30/2022

5. Done

