

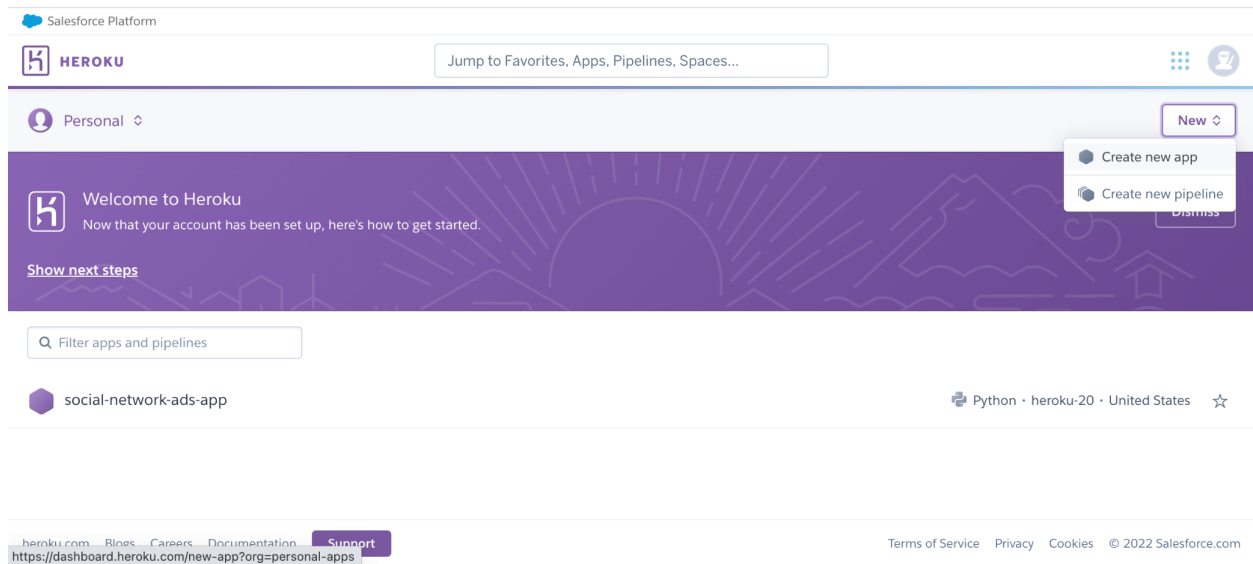
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Batch: LISUM10:30-Week 5 Cloud and API Deployment

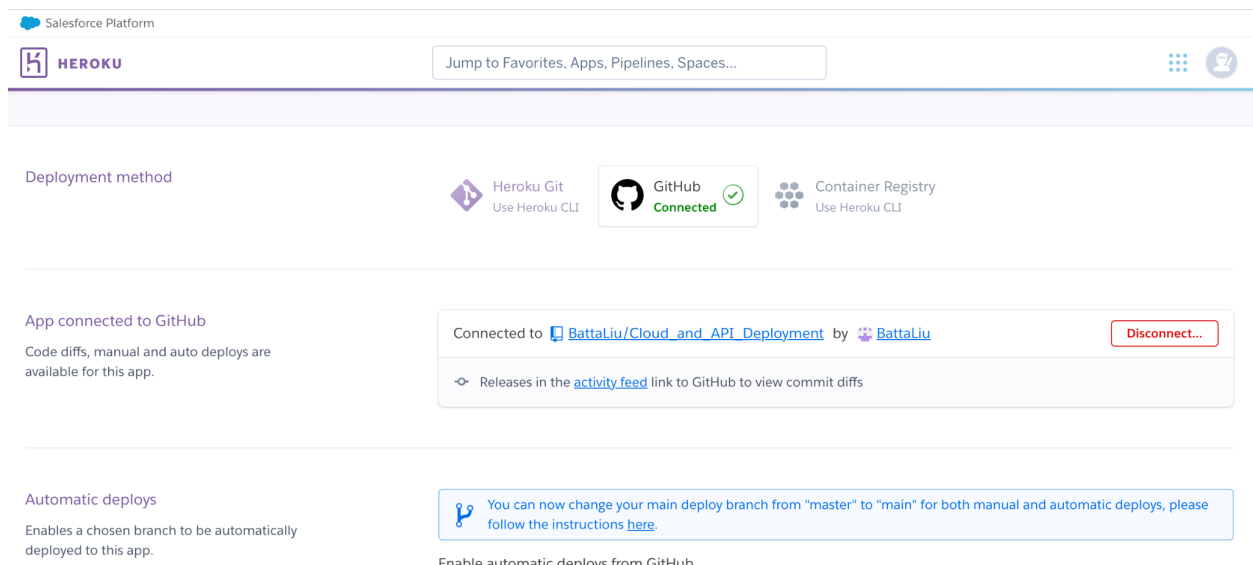
Submission Date: July 5, 2022

Submitted to: Data Glacier and Data Science Group

Step 1: register on Heroku and create a new app named social-network-ads.app



Step 2: Connect the app with the target repository on Github



Step 3: Manually deploy the APP

In this step, I try to use the same toy model and files as in Week 4 assignment (Deployment on Flask). However, I encountered several errors in the deployment. so I looked into the log of

deployment from the Heroku dashboard and realized that '/predict' doesn't not support 'post' method, so I added methods=['POST'] to @app.route('/predict') and the problem got solved.

The other change I made is to loosen the package requirement in 'requirements.txt', change all '==' to '>=', and then the deployment went through smoothly.

The image displays two screenshots of the Heroku dashboard interface. The top screenshot shows the 'Deploy a GitHub branch' section, where the 'main' branch is selected for deployment. The build output is visible, showing the installation of dependencies and the release phase. The bottom screenshot shows the 'Deploy to Heroku' section, where the deployment is successful, and a 'View' button is available to inspect the deployed application.

Top Screenshot: Deploy a GitHub branch

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

Receive code from GitHub

Build main | a9749e72

```
-----> No change in requirements detected, installing from cache
-----> Using cached install of python-3.10.5
-----> Installing pip 22.1.2, setuptools 60.10.0 and wheel 0.37.1
-----> Installing SQLite3
-----> Installing requirements with pip
-----> Discovering process types
-----> Procfile declares types -> web
-----> Compressing...
```

Autoscroll with output [View build log](#)

Release phase

Bottom Screenshot: Deploy to Heroku

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

Receive code from GitHub

Build main | a9749e72

Release phase

Deploy to Heroku

Your app was successfully deployed.

[View](#)

Step 4: Testing the Web APP

Click the View button after deployment, the home page opened.

← → ↻ social-network-ads-app.herokuapp.com

Predict Purchase Decision

Age

Salary (Annual)

Predict

Put some numbers into the APP, and it returns the prediction.

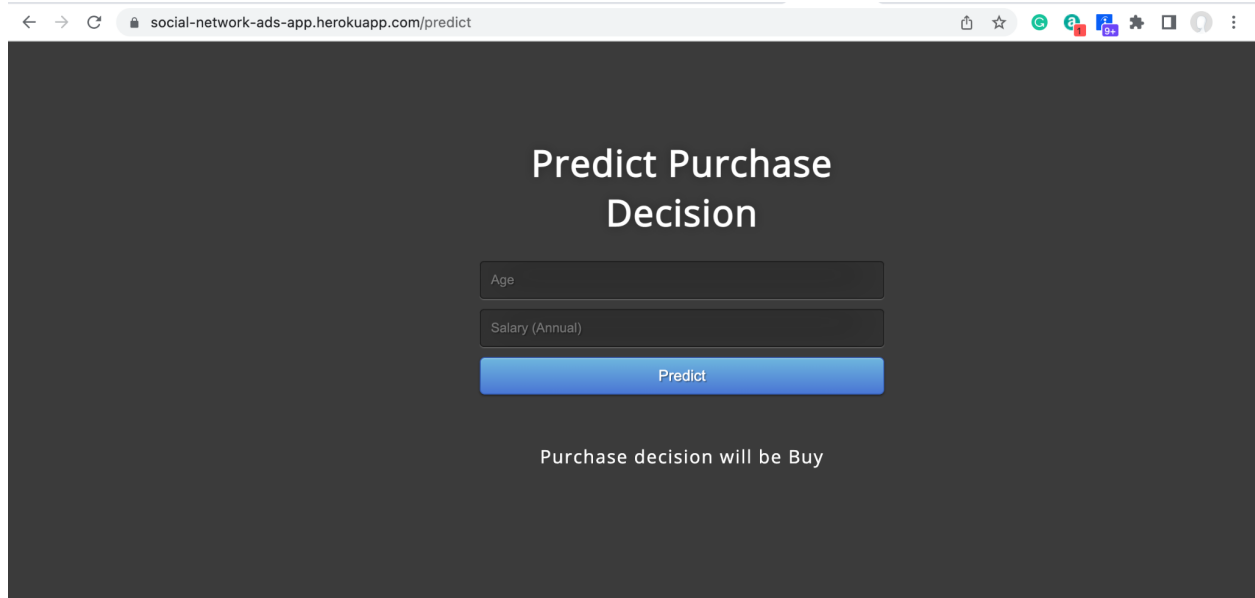
← → ↻ social-network-ads-app.herokuapp.com

Predict Purchase Decision

18

4000

Predict



Step 5: rewrite my app.py (name is battapp.py) for API deployment

As Postman is Json based, I have to jsonify the input.

```
1  #!/usr/bin/env python3
2  # -*- coding: utf-8 -*-
3  """
4  Created on Tue Jun 28 00:49:58 2022
5
6  @author: batta
7  """
8  import pandas as pd
9  from flask import Flask, jsonify, request
10 import pickle
11
12 app = Flask(__name__)
13 model = pickle.load(open('knn_model.pkl', 'rb'))
14
15 @app.route('/')
16 def home():
17     data = "Hello world!"
18     return jsonify({'data':data})
19
20 @app.route('/predict',methods=['GET', 'POST'])
21 def predict():
22     '''
23     For rendering results on HTML GUI
24     '''
25     age = request.args.get('age')
26     estimated_salary = request.args.get('estimated_salary')
27     test_df = pd.DataFrame({'Age': [age], 'Income': [estimated_salary]})
28     prediction = model.predict(test_df)
29     def int_to_word(decision):
30         word_dict = {0:"Not buy", 1:"Buy"}
31         return word_dict[decision]
32     output = int_to_word(prediction[0])
33     return jsonify({'Purchase Decision:': output})
34
35 if __name__ == "__main__":
36     app.run(port = 3232,debug=True)
37
```

Step 6: test the api on postman

http://127.0.0.1:3232/

Save

GET http://127.0.0.1:3232/

Send

Params Authorization Headers (6) Body Pre-request Script Tests Settings Cookies

Query Params

	KEY	VALUE	DESCRIPTION		Bulk Ed
	Key	Value	Description		

Body Cookies Headers (5) Test Results

200 OK 34 ms 194 B Save Response

Pretty Raw Preview Visualize



JSON



```
1 {
2   "data": "Hello world!"
3 }
```

http://127.0.0.1:3232/predict?age=35&estimated_salary=30000

Save



GET

http://127.0.0.1:3232/predict?age=35&estimated_salary=30000

Send

Params

Authorization

Headers (6)

Body

Pre-request Script

Tests

Settings

Cookies

Query Params


	KEY	VALUE	DESCRIPTION	...	Bulk Edit
<input checked="" type="checkbox"/>	age	35			
<input checked="" type="checkbox"/>	estimated_salary	30000			
	Key	Value	Description		

Body

Cookies

Headers (5)

Test Results

 200 OK 56 ms 199 B [Save Response](#)



Pretty

Raw

Preview

Visualize

JSON



1

2

3

"Purchase Decision": "Buy"