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**Batch Code :** *LISUM06*

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**Submitted to:** *Data Glacier*

**API Link:** *https://heroku-vaccine-classification.herokuapp.com/*

# Cloud and API Deployment on Heroku

## Writing Flask Application

```
1   import numpy as np
2   from flask import Flask,request,render_template
3   import pickle
4   import warnings
5   warnings.filterwarnings("ignore")
6
7   app = Flask(__name__)
8   model = pickle.load(open('drugs_model.pkl', 'rb'))
9
10  @app.route('/')
11  def home():
12      return render_template('index.html')
13
14  @app.route('/predict',methods = ['POST'])
15  def predict():
16      int_features = [int(x) for x in request.form.values()]
17      #int_features = [int_features]
18      final_features = np.array(int_features)
19      final_features = final_features.reshape(1, 5)
20      prediction = model.predict(final_features)
21      output = prediction[0]
22      #print(output)
23      return render_template('index.html',prediction_text = 'The Drug is : '+ output)
24
25  if __name__ == '__main__':
26      app.run(port= 5000)
```

# Writing template code

```html
<!DOCTYPE html>
<html >
<head>
  <meta charset="UTF-8">
  <title>ML API</title>
  <link href='https://fonts.googleapis.com/css?family=Pacifico' rel='stylesheet' type='text/css'>
<link href='https://fonts.googleapis.com/css?family=Arimo' rel='stylesheet' type='text/css'>
<link href='https://fonts.googleapis.com/css?family=Hind:300' rel='stylesheet' type='text/css'>
<link href='https://fonts.googleapis.com/css?family=Open+Sans+Condensed:300' rel='stylesheet' type='text/css'>
<link rel="stylesheet" href="{{ url_for('static', filename='css/style.css') }}">

</head>
<body>
 <div class="login">
        <h1>Predict Drug Type</h1>
     <!-- Main Input For Receiving Query to our ML -->
    <form action="{{ url_for('predict')}}"method="post">

        <label for="Age">Age :</label>
        <input type="text" name="Age" placeholder="Age" required="required" />

        <br><br><label for="Sex">Sex :</label>
        <select id="Sex" name="Sex">
        <option value=1>Male</option>
        <option value=0>Female</option>
        </select>

        <br><br><label for="BP">BP :</label>
        <select id="BP" name="BP">
        <option value=0>High</option>
        <option value=1>Low</option>
        <option value=2>Normal</option>
        </select>

        <br><br><label for="Cholesterol">Cholesterol :</label>
        <select id="Cholesterol" name="Cholesterol">
        <option value=0>High</option>
        <option value=1>Normal</option>
        </select>

        <br><br><label for="Na_to_K">Na_to_K :</label>
        <input type="text" name="Na_to_K" placeholder="Na_to_K" required="required" />

        <br><br><button type="submit" class="btn btn-primary btn-block btn-large">Predict</button>
    </form>

   <br> <br>
   {{prediction_text}}

 </div>
 <img src="/static/images/Original.svg" style="width: 400px;position: absolute;bottom: 10px;left: 10px;" alt="Company Logo"/>

</body>
</html>
```

## Create requirements.txt

```
 1    atomicwrites==1.4.0
 2    attrs==21.2.0
 3    click==8.0.1
 4    colorama==0.4.4
 5    cycler==0.10.0
 6    Flask==2.0.1
 7    gunicorn==20.1.0
 8    iniconfig==1.1.1
 9    itsdangerous==2.0.1
10    Jinja2==3.0.1
11    joblib==1.0.1
12    kiwisolver==1.3.1
13    MarkupSafe==2.0.1
14    matplotlib==3.4.2
15    numpy==1.20.3
16    packaging==20.9
17    pandas==1.2.4
18    Pillow==8.2.0
19    pluggy==0.13.1
20    py==1.10.0
21    pyparsing==2.4.7
22    pytest==6.2.4
```

## Create procfile

```
 1    web: gunicorn app:app
```

## Create New App in Heroku account

Create New App

**App name**

heroku-vaccine-classificationn

**heroku-vaccine-classificationn** is available

**Choose a region**

Europe

Add to pipeline...

Create app

# Search for branch and connect
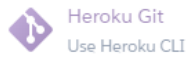
| | | |
|---|---|---|
| Heroku Git<br>Use Heroku CLI | GitHub<br>Connect to GitHub | Container Registry<br>Use Heroku CLI |

**Search for a repository to connect to**

| saadbinmunir ⇅ | cloud | Search |
|---|---|---|

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

📖 saadbinmunir/Heroku-Cloud-and-API-Deployment          Connect

# Deploy Branch

**Choose a branch to deploy**

| ⎇ main ⇅ | Deploy Branch |
|---|---|

Receive code from GitHub                                                           ✓

Build **main** `99a80f43`                                                      • • •

```
-----> Installing requirements with pip
-----> Discovering process types
       Procfile declares types -> web
-----> Compressing...
       Done: 155.5M
-----> Launching...
       Released v18
       https://heroku-vaccine-classification.herokuapp.com/ deployed to Heroku
```

☑ Autoscroll with output                                           View build log

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** `99a80f43`                                                          ✓

Release phase                                                                      ✓

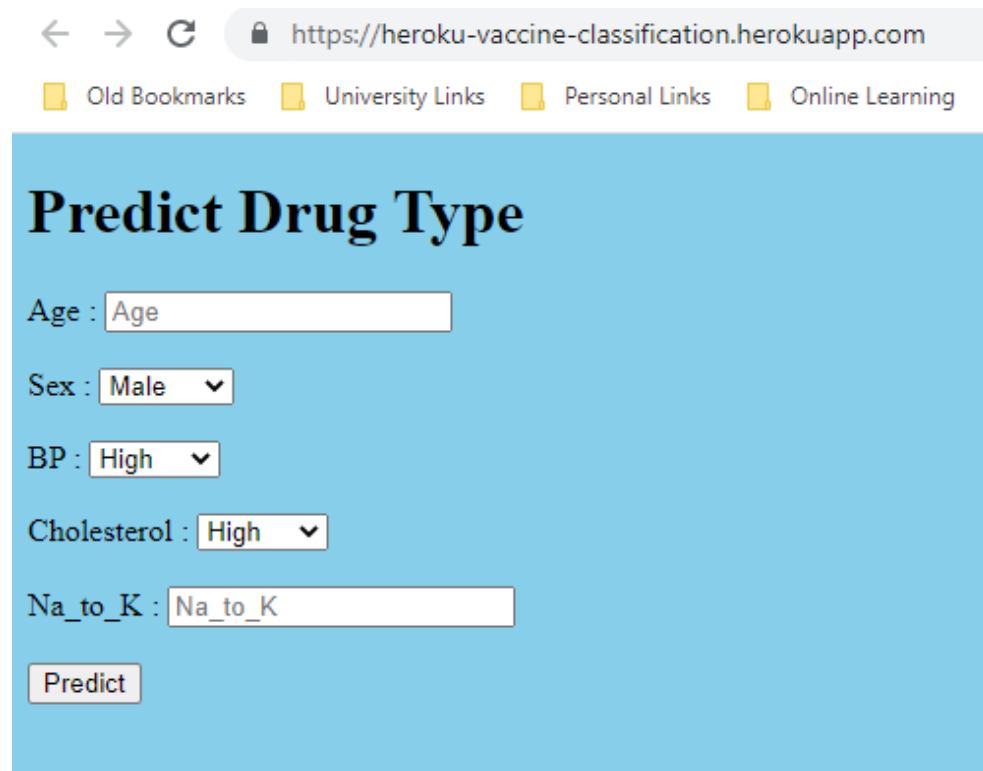**Deploy to Heroku**                                                               ✓
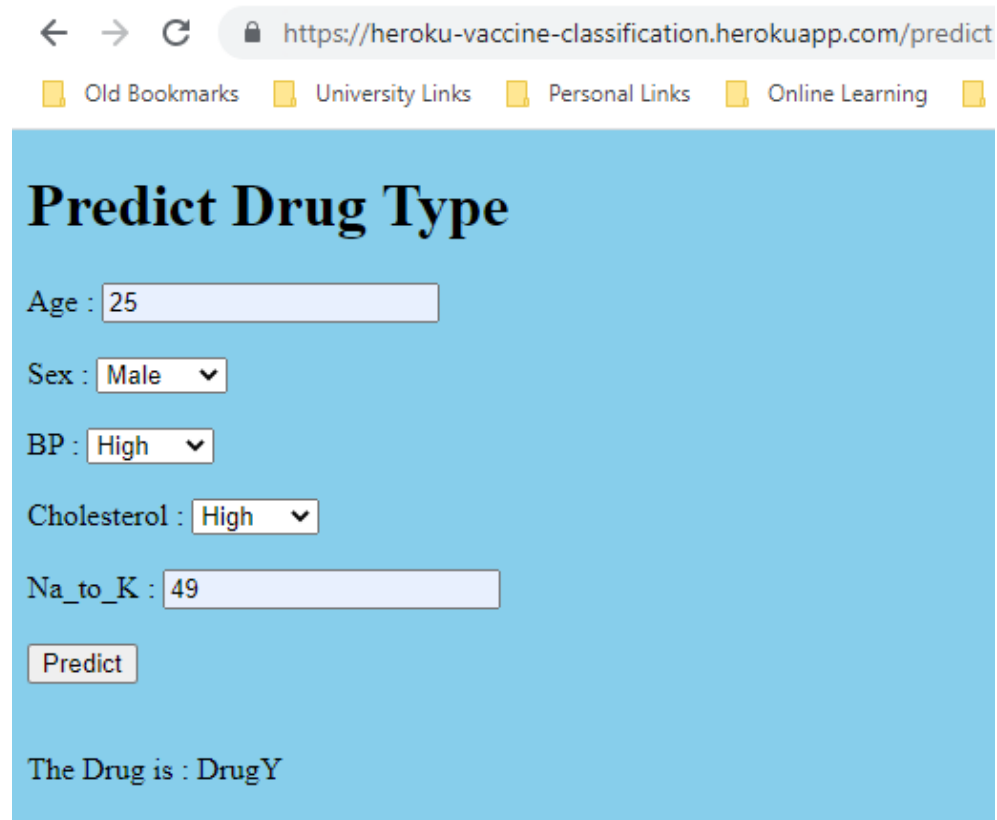
**Your app was successfully deployed.**

⤴ View

## Open Link in browser

The link is : https://heroku-vaccine-classification.herokuapp.com/



## Test Model and Get results