

# Breast Tissue Prediction

Intern name: **Seyed Mojtaba Hejazi**

Submission date: 05/08/2022

Data Glacier Company

Here are my steps to do this deployment.

**1- Extract the dataset from UCI. That is about breast tissue.**

**2- Build our model:**

```
import pandas as pd
from sklearn.neighbors import KNeighborsClassifier
import pickle
```

```
dataset = pd.read_csv('BreastTissue.csv')
```

```
x= dataset.iloc[:, :9]
```

```
y= dataset.iloc[:, -1]
```

```
KNC=KNeighborsClassifier()
```

```
KNC.fit(x,y)
```

```
pickle.dump(KNC, open('model.pkl','wb'))
```

```
model=pickle.load(open('model.pkl','rb'))print(model.predict([290.4551412,0.1
44164196,0.053058009,74.63506664,1189.545213,15.93815436,35.70333099,
65.54132446,330.2672929]))
```

### 3- Coding our web application using flask:

```
import numpy as np
from flask import Flask, request, render_template
import pickle

Myapp= Flask(__name__)
model = pickle.load(open('model.pkl', 'rb'))

@Myapp.route('/')
def home():
    return render_template('index.html')

@Myapp.route('/predict',methods=['POST'])
def predict():

    float_features = [float(x) for x in request.form.values()]
    final_features = [np.array(float_features)]
    prediction = model.predict(final_features)

    output =str(prediction)

    return render_template('index.html', prediction_text='Breast Tissue would be $
{}'.format(output))

if __name__ == "__main__":
    Myapp.run(debug=True)
```

#### 4- Coding HTML file for using as a template for our application

```
<!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 Breat Tissue</h1>

    <!-- Main Input For Receiving Query to our ML -->

    <form action="{ { url_for('predict') } }" method="post">

      <input type="text" name="I0" placeholder="Impedivity (ohm) at zero
frequency" required="required" />

      <input type="text" name="PA500" placeholder="phase angle at 500 KHz"
required="required" />

      <input type="text" name="HFS" placeholder="high-frequency slope of
phase angle" required="required" />
```

`<input type="text" name="DA" placeholder="impedance distance between spectral ends" required="required" />`

`<input type="text" name="Area" placeholder="area under spectrum" required="required" />`

`<input type="text" name="A/DA" placeholder="area normalized by DA" required="required" />`

`<input type="text" name="Max IP" placeholder="maximum of the spectrum" required="required" />`

`<input type="text" name="DR" placeholder="distance between I0 and real part of the maximum frequency point" required="required" />`

`<input type="text" name="P" placeholder="length of the spectral curve" required="required" />`

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

`</form>`

`<br>`

`<br>`

`{{ prediction_text }}`

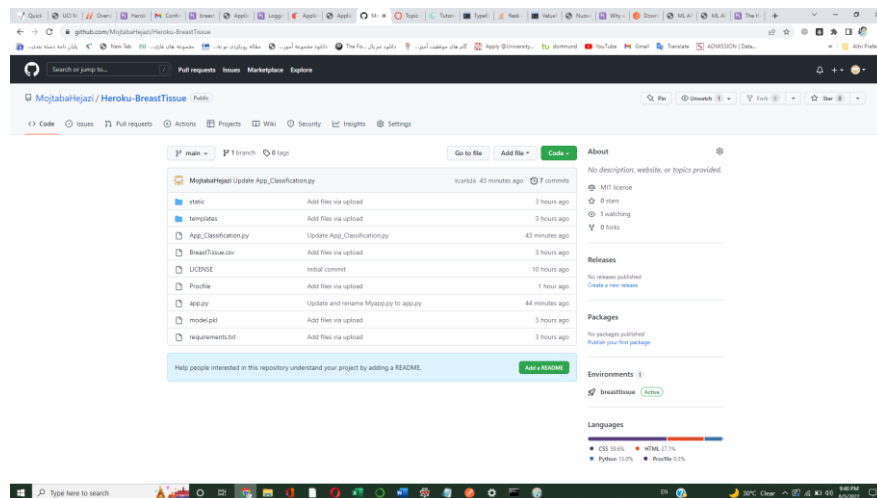
`</div>`

``

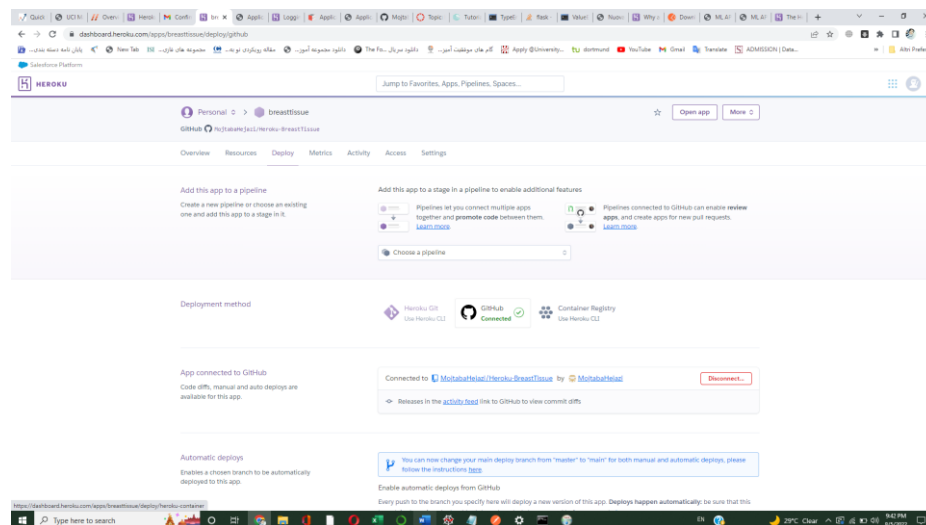
`</body>`

`</html>`

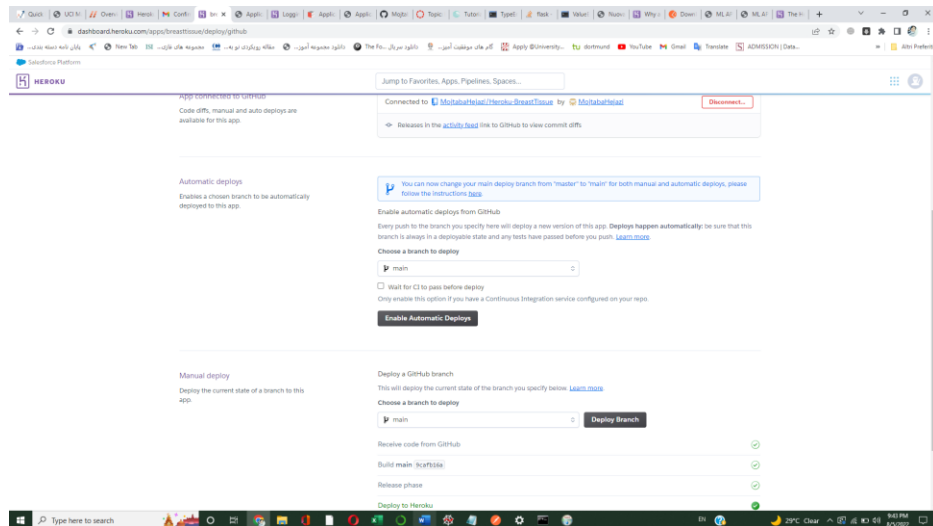
## 5- Create a new repository named Heroku-BreastTissue and then add all the files here in this repository.



## 6- Now it is time to connect our repository to the Heroku account.



## 7- And Finally we have to deploy our application with Heroku.



**8- And now we can do predicting with the link provided by Heroku.**