Data Glacier
Project Report

Name: Surya Chandra Karanam
Internship Batch: LISUM05
Submitted to: Data Glacier
Submission Date: 14.01.2022
Reference: https://www.kaggle.com/yersever/500-person-gender-height-weight-bodymassindex
Project: https://github.com/karanamsuryachandra/BMI-Calculator/tree/master

Project Abstract

The BMI is defined as the body mass divided by the square of the body height and is expressed in units of kg/m². The height is entered in centimeters and weight in kilograms. A dataset is considered which contains height, weight, and BMIs of five hundred people. The machine learning model uses logistic regression to predict the output.

Required Data

The dataset contains information about gender, height, weight, and BMI index of individuals

Height: Integer (cm)

Weight: Integer (Kg)

Output after predicting BMI using ML

0 - Extremely Weak

1 - Weak

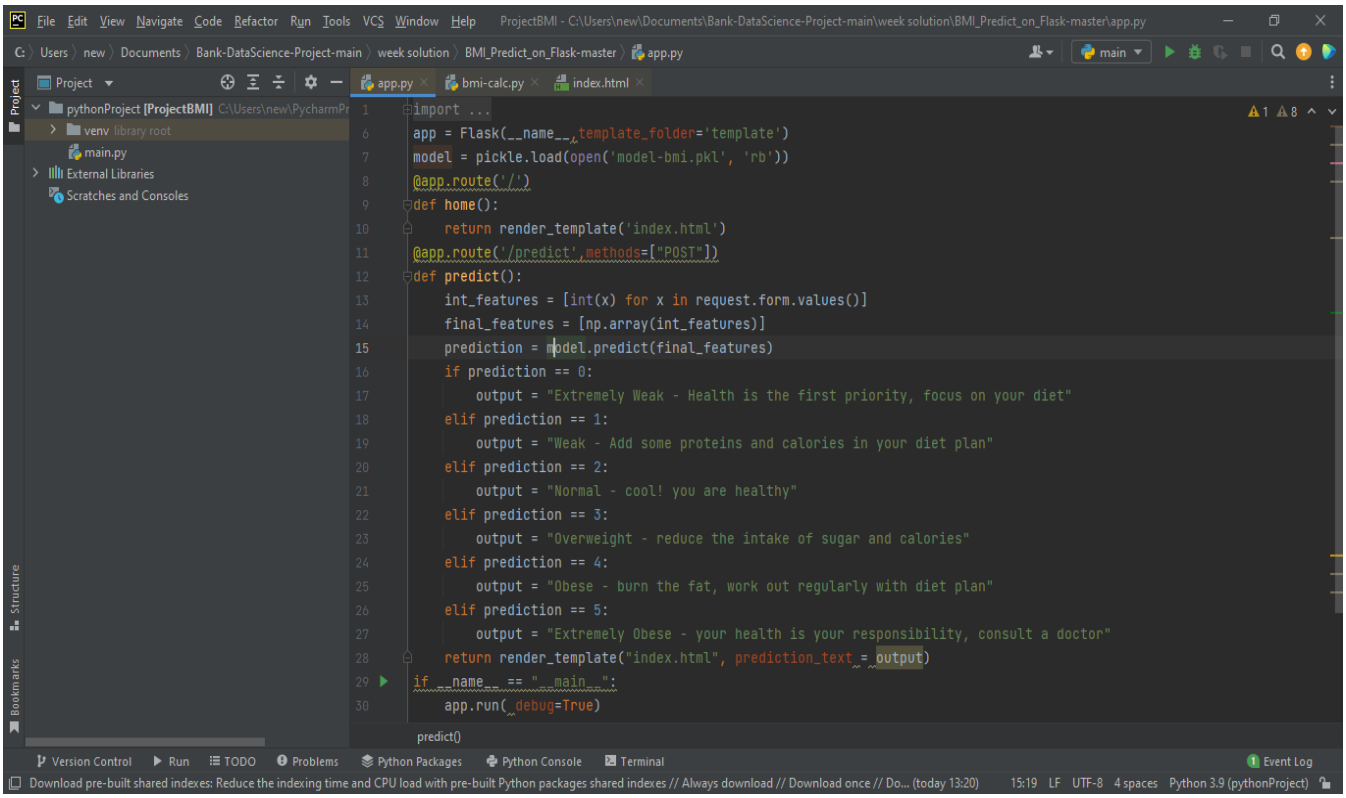
2 - Normal

3 - Overweight

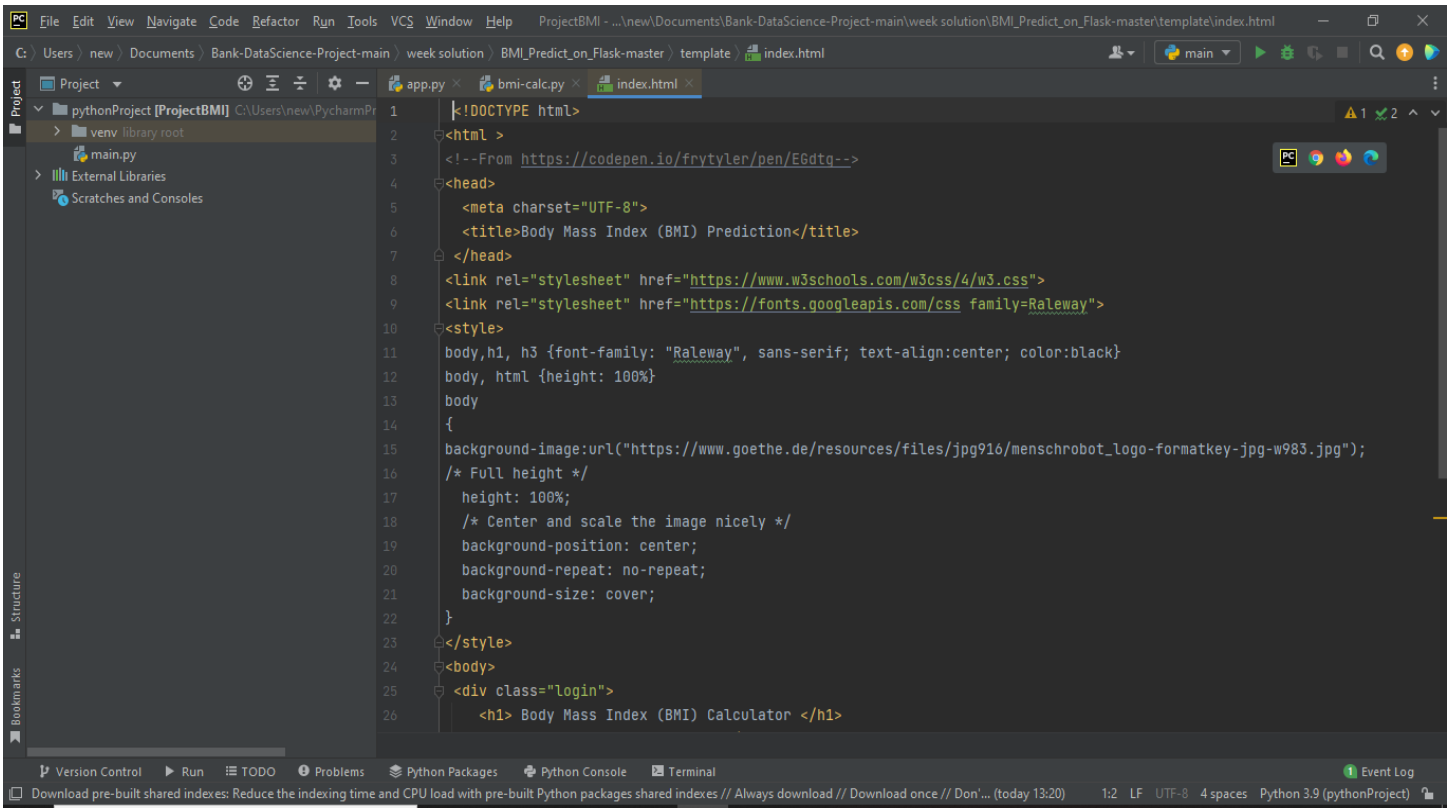
4 - Obesity

5 - Extreme Obesity

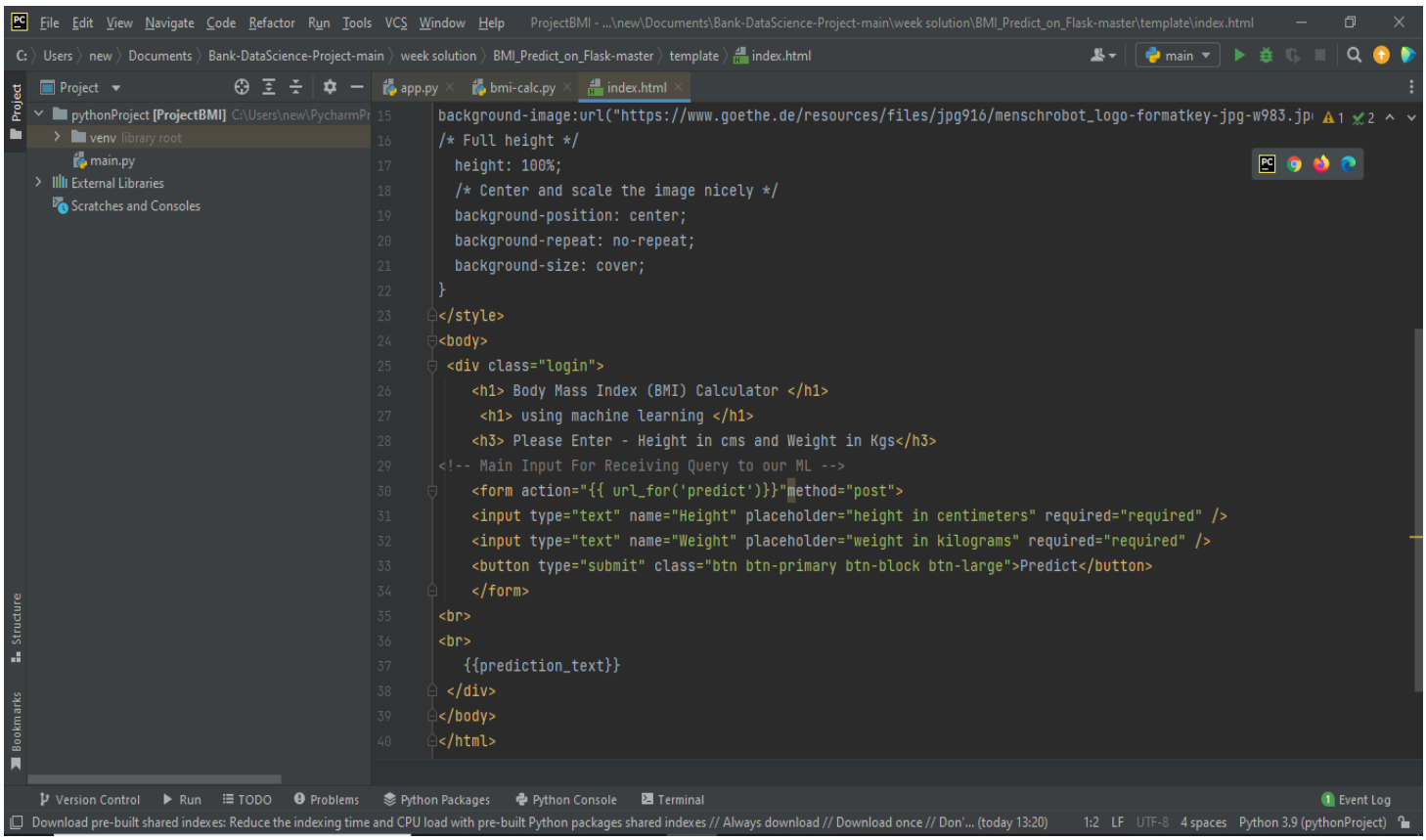
1. Prediction, Pickling and Depickling - “app.py”



2. HTML code (index.html)

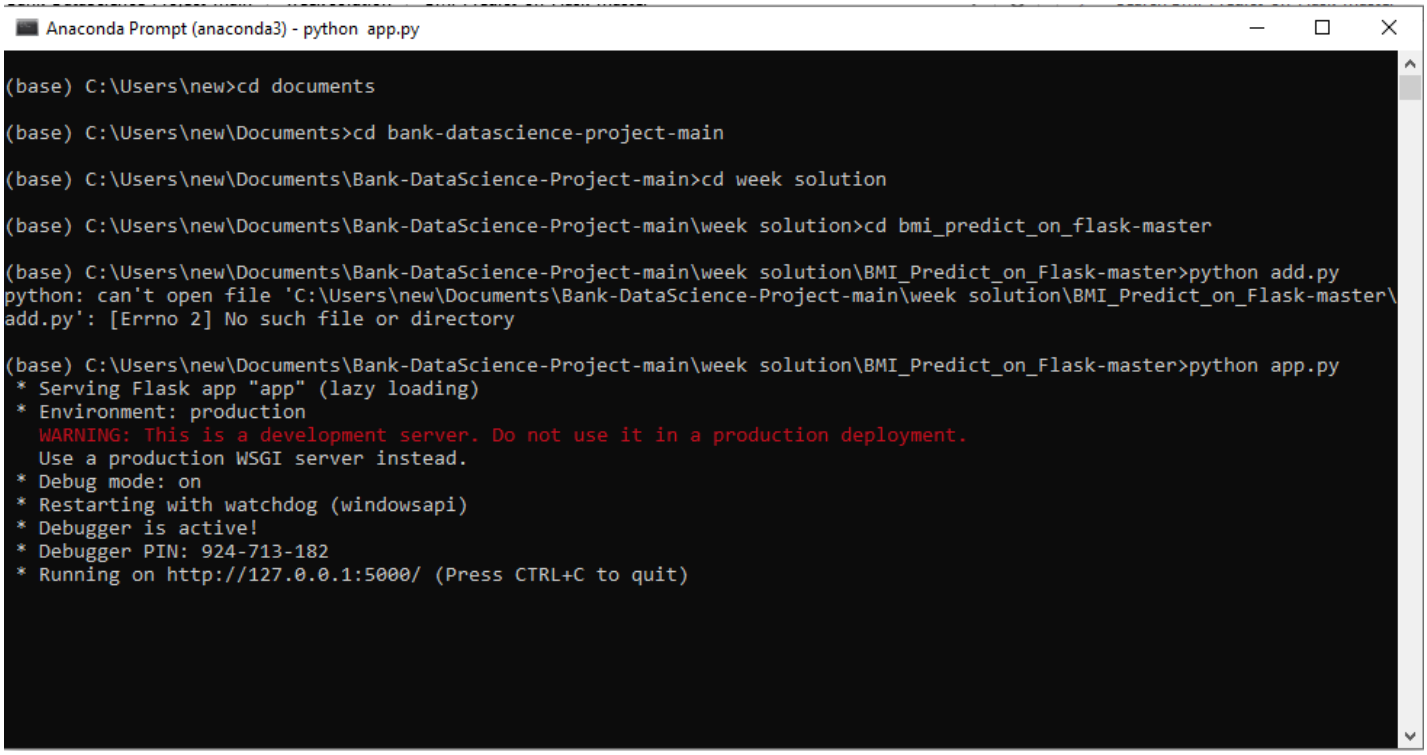


```
<!DOCTYPE html>
<html >
<!--From https://codepen.io/frytyler/pen/EGdtg-->
<head>
  <meta charset="UTF-8">
  <title>Body Mass Index (BMI) Prediction</title>
 </head>
<link rel="stylesheet" href="https://www.w3schools.com/w3css/4/w3.css">
<link rel="stylesheet" href="https://fonts.googleapis.com/css family=Raleway">
<style>
body,h1, h3 {font-family: "Raleway", sans-serif; text-align:center; color:black}
body, html {height: 100%}
body
{
background-image:url("https://www.goethe.de/resources/files/jpg916/menschrobot_logo-formatkey-jpg-w983.jpg");
/* Full height */
  height: 100%;
  /* Center and scale the image nicely */
  background-position: center;
  background-repeat: no-repeat;
  background-size: cover;
}
</style>
<body>
<div class="login">
    <h1> Body Mass Index (BMI) Calculator </h1>
```



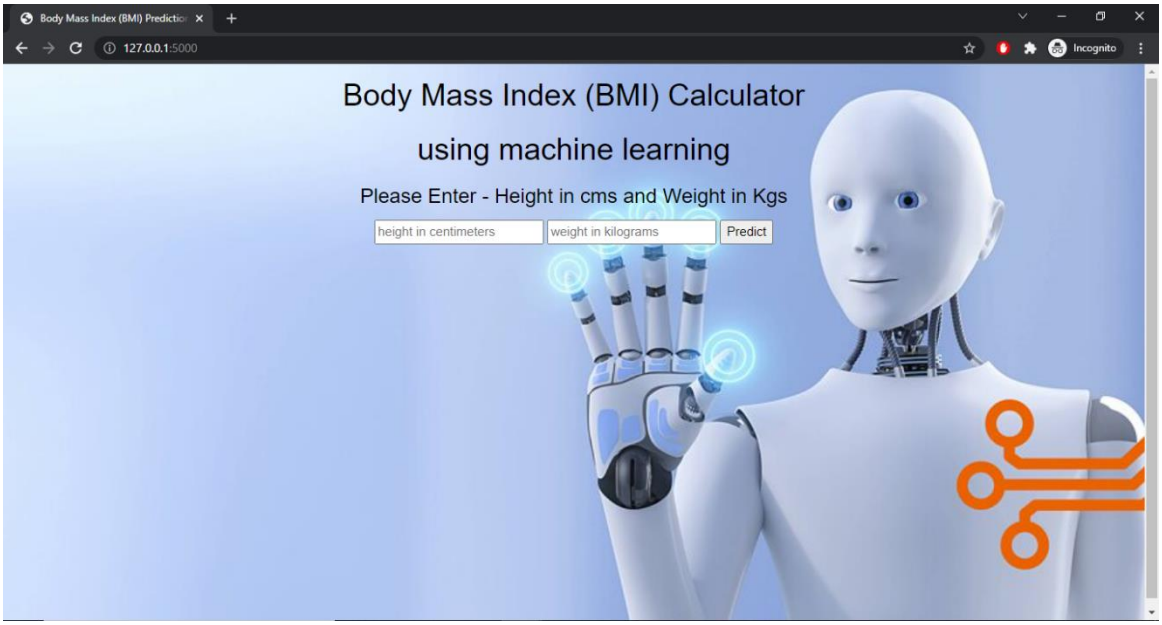
```
background-image:url("https://www.goethe.de/resources/files/jpg916/menschrobot_logo-formatkey-jpg-w983.jp
/* Full height */
  height: 100%;
  /* Center and scale the image nicely */
  background-position: center;
  background-repeat: no-repeat;
  background-size: cover;
}
</style>
<body>
<div class="login">
    <h1> Body Mass Index (BMI) Calculator </h1>
     <h1> using machine learning </h1>
    <h3> Please Enter - Height in cms and Weight in Kgs</h3>
<!-- Main Input For Receiving Query to our ML -->
    <form action="{{ url_for('predict')}}"method="post">
    <input type="text" name="Height" placeholder="height in centimeters" required="required" />
    <input type="text" name="Weight" placeholder="weight in kilograms" required="required" />
    <button type="submit" class="btn btn-primary btn-block btn-large">Predict</button>
    </form>
<br>
<br>
   {{prediction_text}}
 </div>
</body>
</html>
```

3.Executing the app.py file anaconda navigator



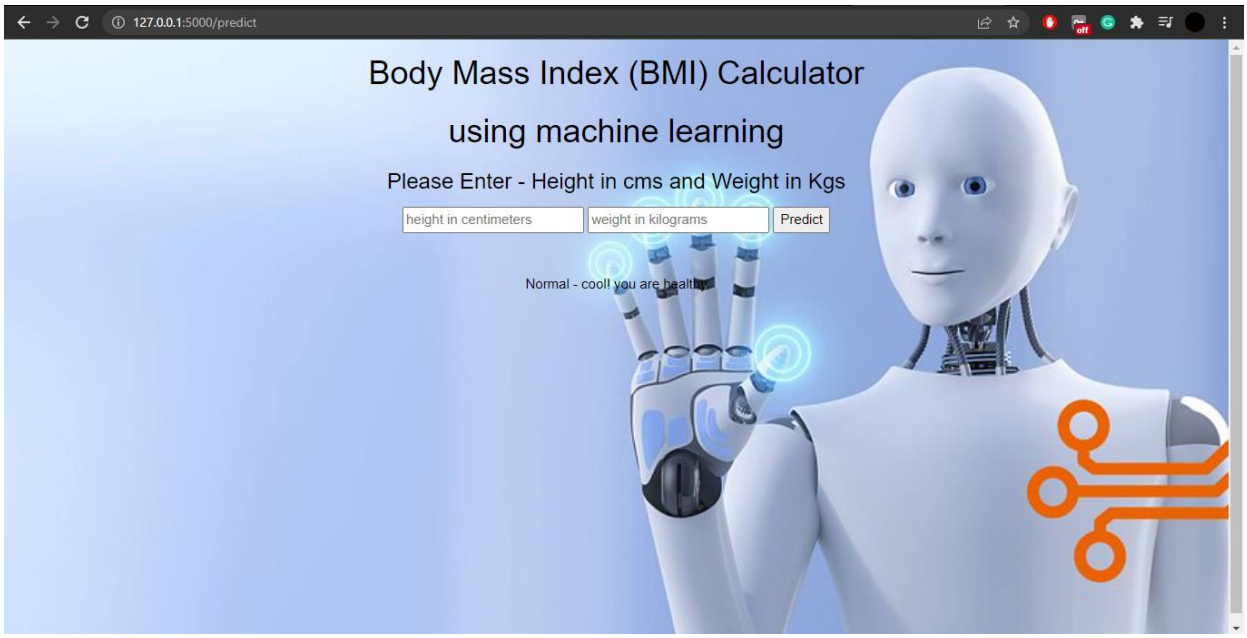
Output - http://127.0.0.1.5000/

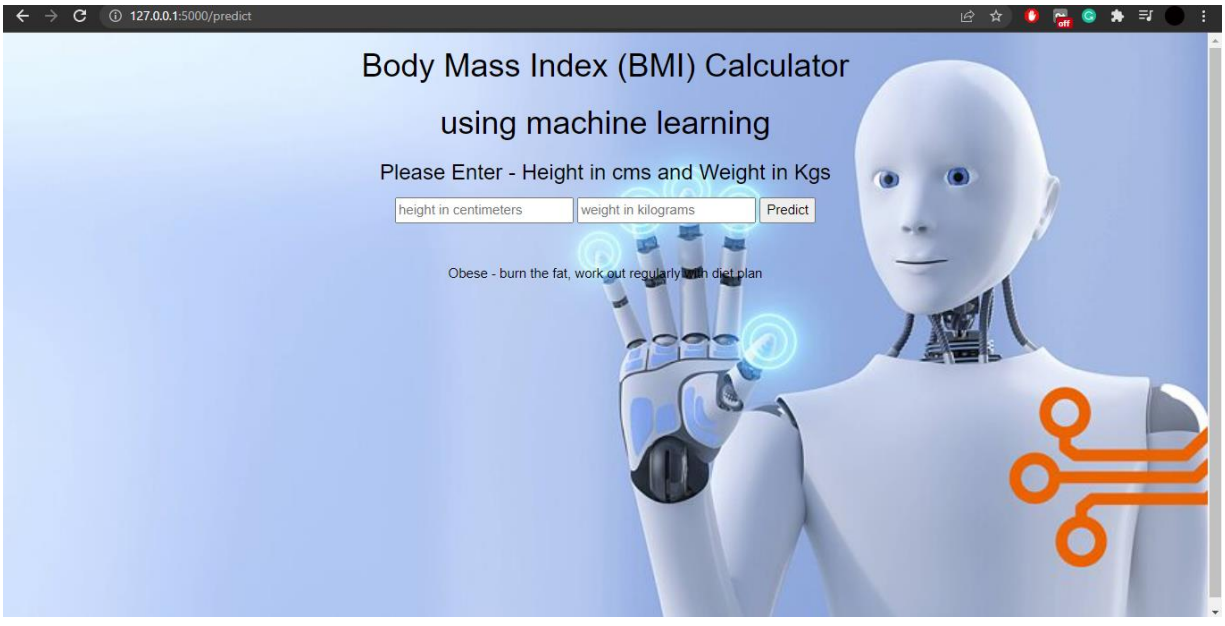
3. BMI Calculation using Machine learning model



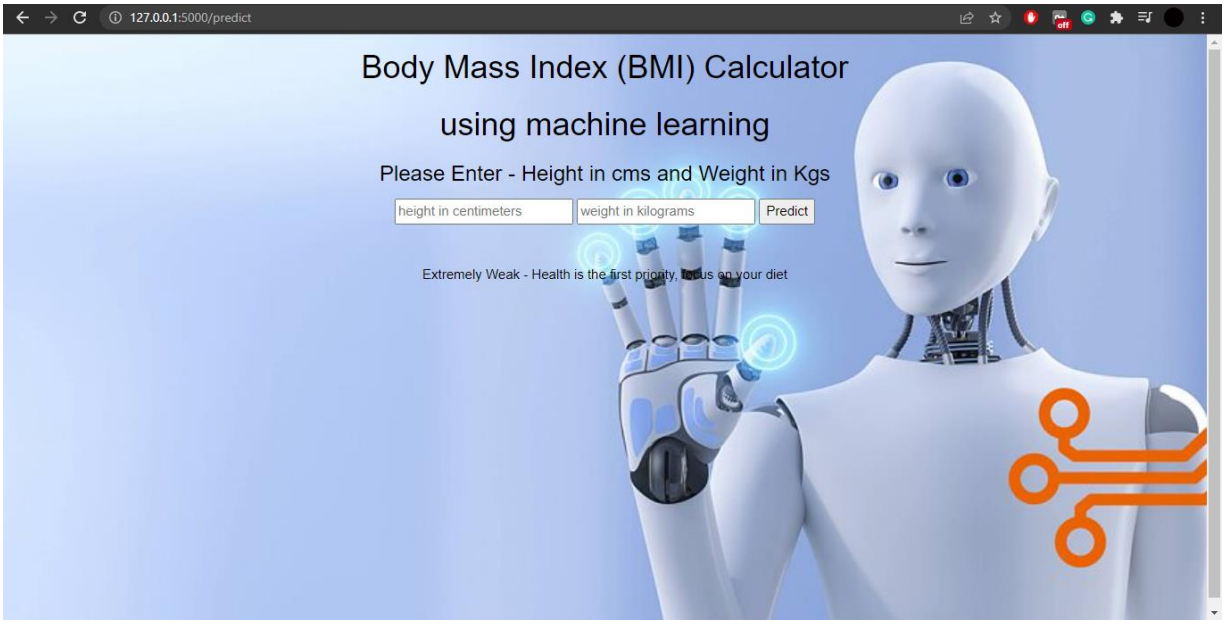
Predictions by the model:

1. **Extremely Weak - Health is the first priority, focus on your diet**
2. **Weak - Add some proteins and calories in your diet plan**
3. **Normal - cool! you are healthy**
4. **Overweight - reduce the intake of sugar and calories**
5. **Obese - burn the fat, work out regularly with diet plan**
6. **Extremely Obese - your health is your responsibility, consult a doctor**



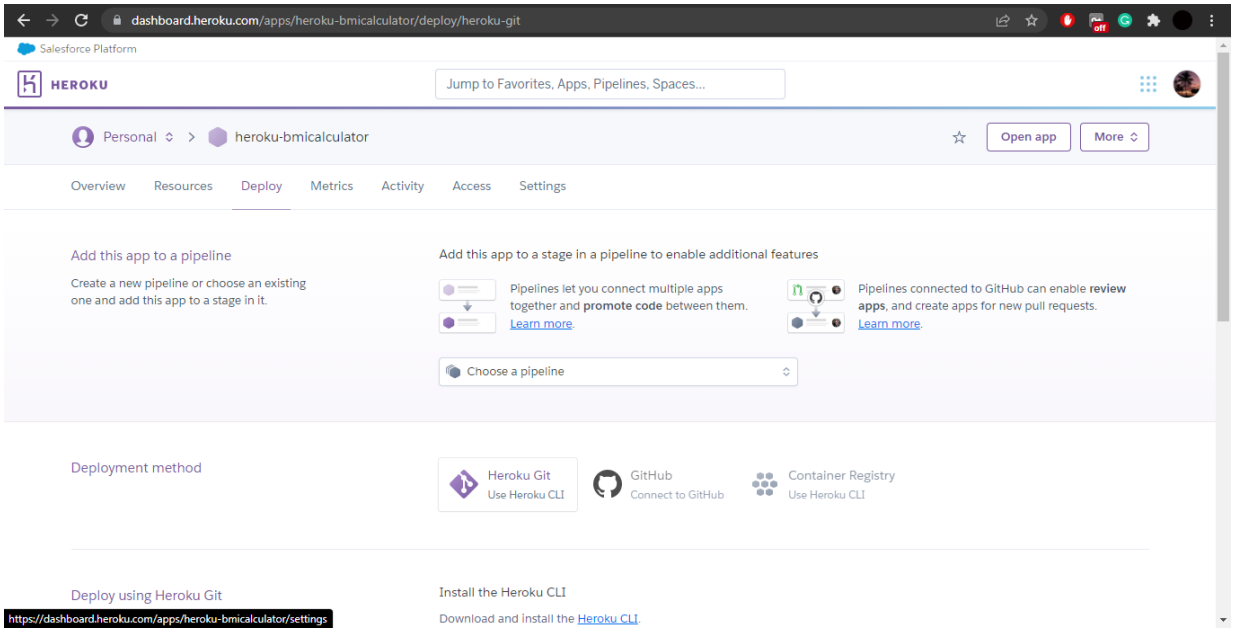


Extremely weak prediction

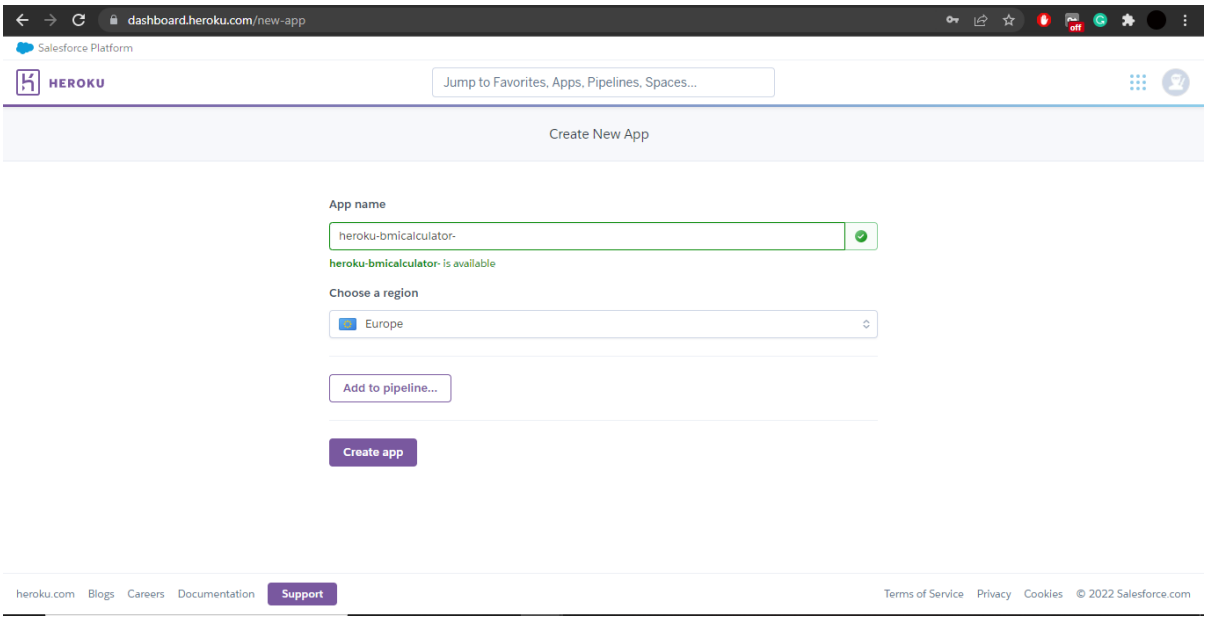


Deployment using Heroku app

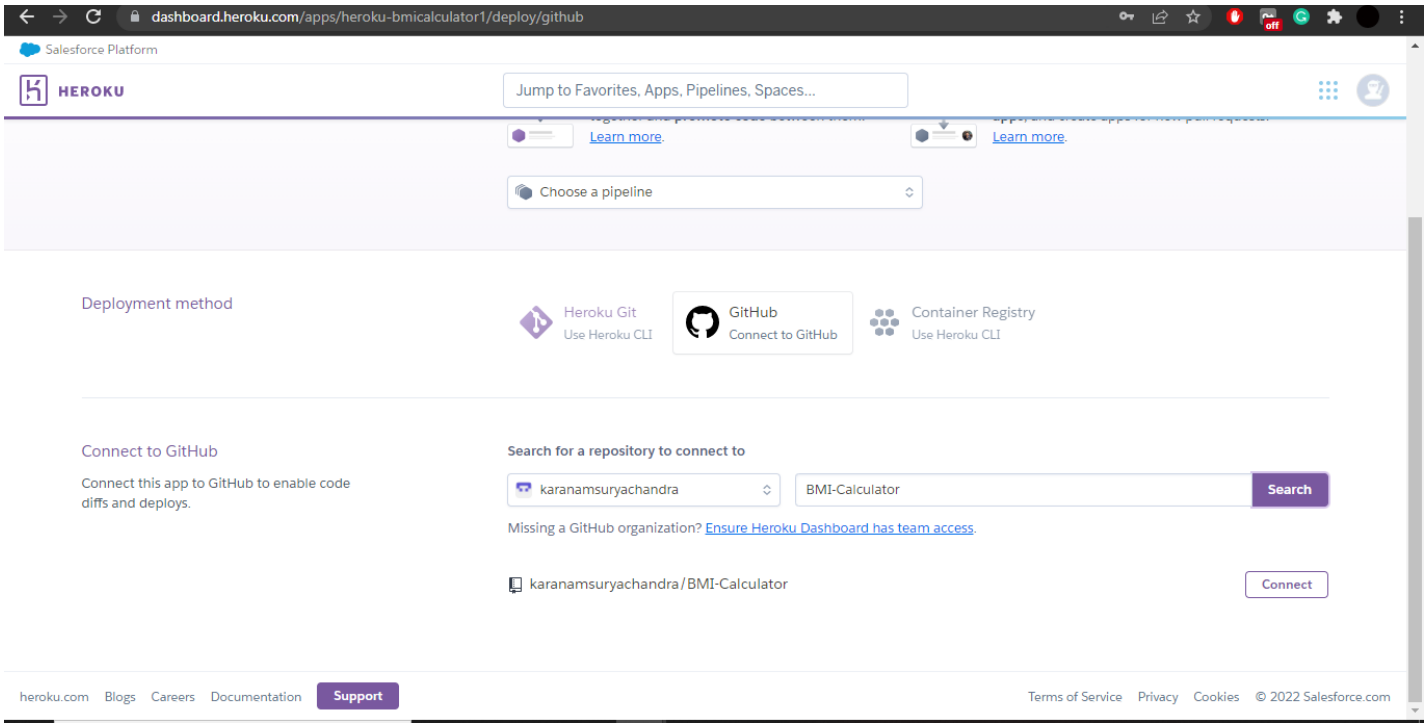
1. Heroku dashboard



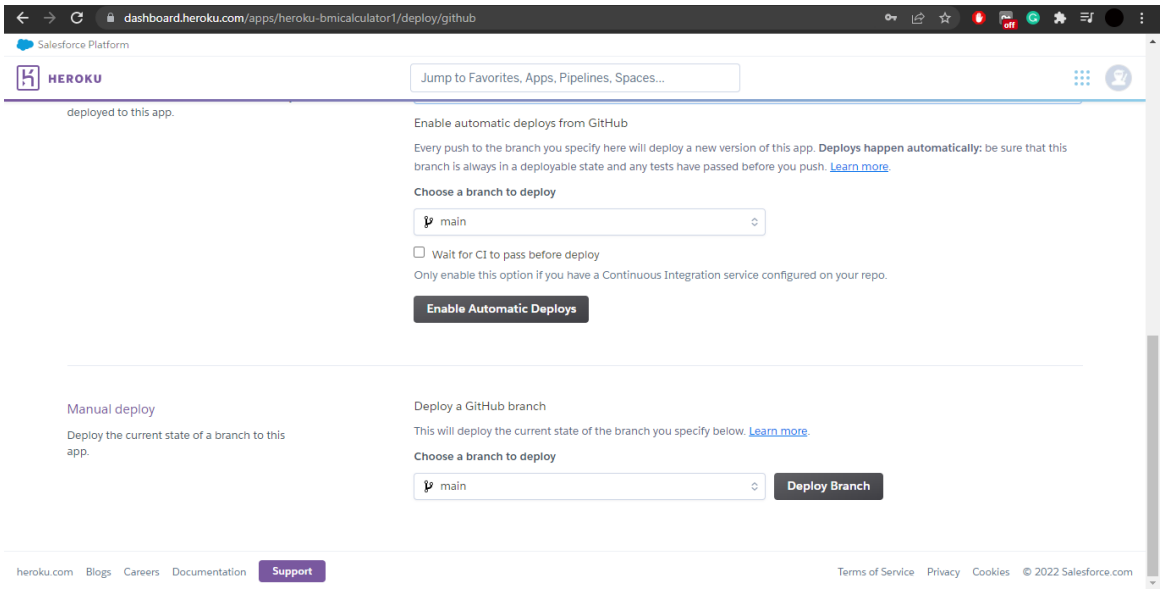
2. Create a new app with unique name



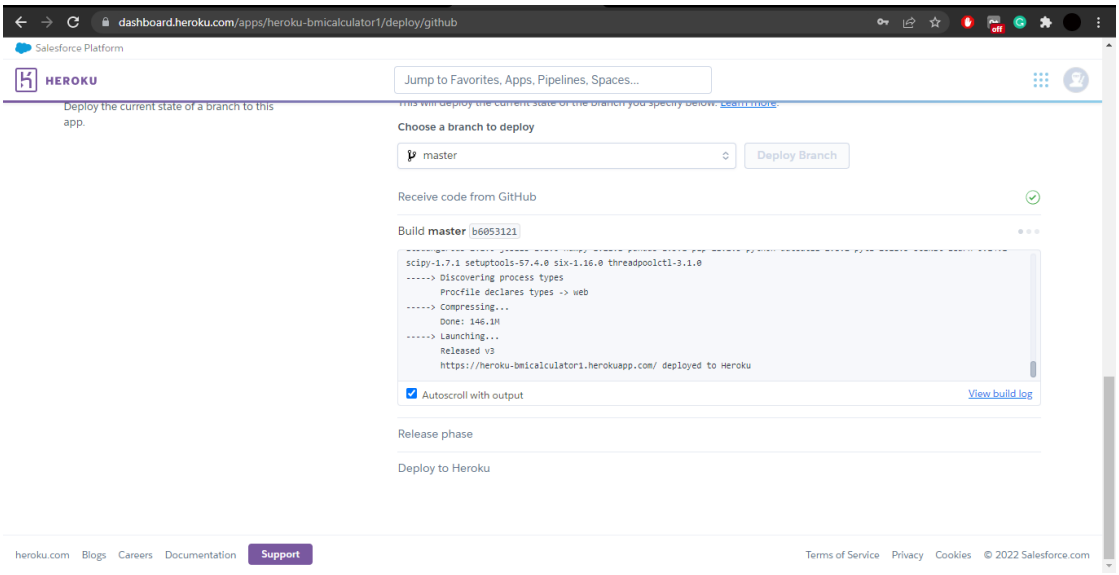
3. Connect the GitHub repository to Heroku



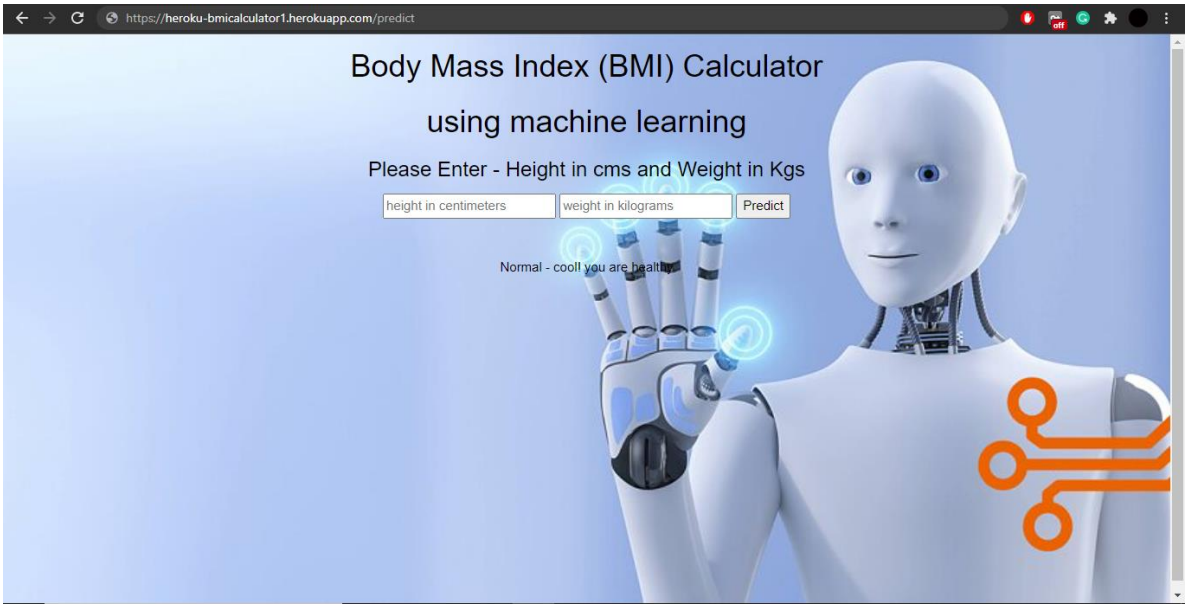
4. Choose the required branch to deploy and select manual deploy

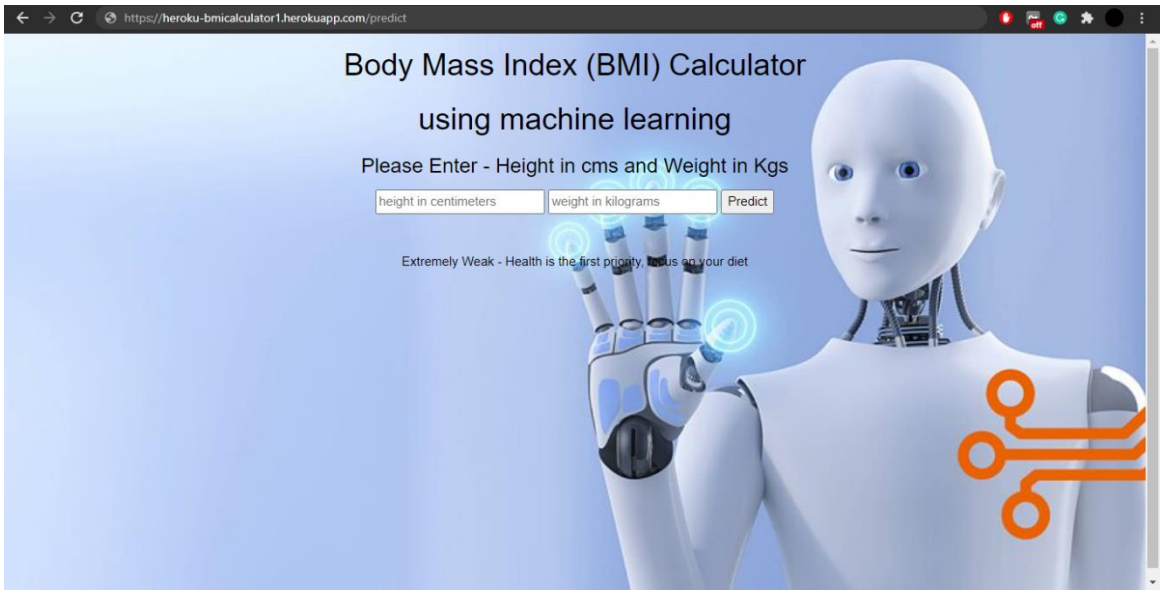


5. If required, add requirements.txt file and import Heroku/ python library in the settings option. Select “Deploy Branch”.



6. The ML model is deployed using Heroku and a sample of three outputs are given below.




https://heroku-bmicalculator1.herokuapp.com/predict
Body Mass Index (BMI) Calculator
using machine learning
Please Enter - Height in cms and Weight in Kgs
height in centimeters
weight in kilograms
Predict
Extremely Weak - Health is the first priority, focus on your diet