# SPRINT -3
# Application Building

| | |
|---|---|
| Date | 19 NOVEMBER 2022 |
| Team ID | PNT2022TMID48373 |
| Project Name | AI-Powered Nutrition Analyzer for fitness enthusiasts |

## Creating HTML Pages

### 0.html

```
<html lang="en" dir="ltr">
<head>
                    <meta charset="utf-8">
                    <title>Nutrition Image Analysis</title>
                    <link rel="shortcut icon" href="{{ url_for('static', filename='diabetes-
favicon.ico') }}">
                    <link rel="stylesheet" type="text/css" href="{{ url_for('static',
filename='style.css') }}">
                    <script src="https://kit.fontawesome.com/5f3f547070.js"
crossorigin="anonymous"></script>
                    <link href="https://fonts.googleapis.com/css2?family=Pacifico&display=swap"
rel="stylesheet">
          </head>

                    <!-- Result -->
                    <div class="results">
                         <p style="padding-top: 150px; color:blue;"><h4 style="color:blue;">Food
Classified is: <h4><b><h4 style="color:red;"><u>{{showcase1}}<h4><br><h4
style="color:red;"><u>{{showcase}}<h4></p>

                    </div>
                    <br>
                    <br>

  </div>
          </body>
</html>
HOME.html
<!DOCTYPE html>
<html>
<head>
  <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <meta http-equiv="X-UA-Compatible" content="ie=edge">
   <title>Home</title>
   <link href="https://cdn.bootcss.com/bootstrap/4.0.0/css/bootstrap.min.css" rel="stylesheet">
   <script src="https://cdn.bootcss.com/popper.js/1.12.9/umd/popper.min.js"></script>
   <script src="https://cdn.bootcss.com/jquery/3.3.1/jquery.min.js"></script>
   <script src="https://cdn.bootcss.com/bootstrap/4.0.0/js/bootstrap.min.js"></script>
   <link href="{{ url_for('static', filename='css/main.css') }}" rel="stylesheet">
<style>
body
{
   background-image: url("https://www.livingproofnyc.com/wp-
content/themes/livingproof/assets/img/hero-background.jpg");
   background-size: cover;
}
.bar
{
```

```
margin: 0px;
padding:20px;
background-color:white;
opacity:0.6;
color:black;
font-family:'Roboto',sans-serif;
font-style: italic;
border-radius:20px;
font-size:25px;
}
h3
{
margin: 0px;
padding:20px;
background-color:#9ACD32;
width: 800px;
opacity:0.6;
color:#000000;
font-family:'Roboto',sans-serif;
font-style: italic;
border-radius:20px;
font-size:25px;
}
a
{
color:grey;
float:right;
text-decoration:none;
font-style:normal;
padding-right:20px;
}
a:hover{
background-color:black;
color:white;
border-radius:15px;0
font-size:30px;
padding-left:10px;
}
.div1{
  background-color: lightgrey;
  width: 500px;
  border: 10px solid peach;
  padding: 20px;
  margin: 20px;
  height: 500px;
}

.header {            position: relative;
                              top:0;
                              margin:0px;
                              z-index: 1;
                              left: 0px;
                              right: 0px;
                              position: fixed;
                              background-color: #8B008B ;
                              color: white;
                              box-shadow: 0px 8px 4px grey;
                              overflow: hidden;
                              padding-left:20px;
                              font-family: 'Josefin Sans'
```

```
                                font-size: 2vw;
                                width: 100%;
                                height:8%;
                                text-align: center;
                        }
                        .topnav {
  overflow: hidden;
  background-color: #FCAD98;
}

.topnav-right a {
  float: left;
  color: black;
  text-align: center;
  padding: 14px 16px;
  text-decoration: none;
  font-size: 22px;
}

.topnav-right a:hover {
  background-color: #FF69B4;
  color: black;
}

.topnav-right a.active {
  background-color: #DA70D6;
  color: black;
}

.topnav-right {
  float: right;
  padding-right:100px;
}
</style>
</head>
<body>

<!--Brian Tracy-->

<div class="header">
<div style="width:50%;float:left;font-size:2vw;text-align:left;color:black; padding-top:1%;padding-
left:5%;">Nutrtion Image Analysis</div>
  <div class="topnav-right"style="padding-top:0.5%;">

    <a class="active" href="{{ url_for('home')}}">Home</a>
    <a   href="{{ url_for('image1')}}">Classify</a>
  </div>
</div>
</div>
<br>
<br>
<br>
<br>
<br>
<br>
<br>
<br>
<h1>

<center>
```

```
<h3>Food is essential for human life and has been the concern of
many healthcare conventions. Nowadays new dietary assessment
and nutrition analysis tools enable more opportunities to help
people understand their daily eating habits, exploring nutrition
patterns and maintain a healthy diet.Nutritional analysis is the
process of determining the nutritional content of food. It is a
vital part of analytical chemistry that provides information about
the chemical composition, processing, quality control and contamination
of food. It ensures compliance with trade and food laws.</h3>
</center>
 </h1>
</body>
</html>
```

Image.html

```
<!DOCTYPE html>
<html lang="en">
<head>
   <meta charset="UTF-8">
   <title>Title</title>
</head>
<body>
{% extends "imageprediction.html" %} {% block content %}
<div style="float:left">
   <br>
   <br>
   <h5>
      <font color="black" size="3" font-family="sans-serif"><b>Upload image to classify</b></font>
   </h5>
   <div>
      <form id="upload-file" method="post" enctype="multipart/form-data">
         <label for="imageUpload" class="upload-label">
            Choose...
         </label>
         <input type="file" name="file" id="imageUpload" accept=".png, .jpg, .jpeg">
      </form>

      <center>
         <div class="image-section" style="display:none;">
            <div class="img-preview">
               <div id="imagePreview">
               </div>
      </center>
   </div>
   <center>
      <div>
         <button type="button" class="btn btn-primary btn-lg " id="btn-predict">Classify</button>
      </div>
   </center>
</div>
<div class="loader" style="display:none;margin-left: 450px;"></div>
<h3 id="result">
   <span>
      <p style="padding-top: 25px;">
      <h4>Food Classified is : <h4><b><u>
                  {{showcase}}{{showcase1}}
                  </p>
   </span>
</h3>
```

```
</div>
</div>
{% endblock %}
</body>
</html>
```

ImagePrediction.html

```
<!DOCTYPE html>
<html>
<head>
  <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <meta http-equiv="X-UA-Compatible" content="ie=edge">
   <title>Predict</title>
   <link href="https://cdn.bootcss.com/bootstrap/4.0.0/css/bootstrap.min.css" rel="stylesheet">
   <script src="https://cdn.bootcss.com/popper.js/1.12.9/umd/popper.min.js"></script>
   <script src="https://cdn.bootcss.com/jquery/3.3.1/jquery.min.js"></script>
   <script src="https://cdn.bootcss.com/bootstrap/4.0.0/js/bootstrap.min.js"></script>
   <link href="{{ url_for('static', filename='css/main.css') }}" rel="stylesheet">
<style>
body
{
   background-image:
url("https://i.pinimg.com/originals/be/21/1a/be211ad5043a8d05757a3538bdd8f450.jpg");
   background-size: cover;
}
.bar
{
margin: 0px;
padding:20px;
background-color:white;
opacity:0.6;
color:black;
font-family:'Roboto',sans-serif;
font-style: italic;
border-radius:20px;
font-size:25px;
}
a
{
color:grey;
float:right;
text-decoration:none;
font-style:normal;
padding-right:20px;
}
a:hover{
background-color:black;
color:white;
border-radius:15px;0
font-size:30px;
padding-left:10px;
}
.div1{
  background-color: lightgrey;
  width: 500px;
  border: 10px solid peach;
  padding: 20px;
  margin: 20px;
  height: 500px;
}
```

```
.header {           position: relative;
                            top:0;
                            margin:0px;
                            z-index: 1;
                            left: 0px;
                            right: 0px;
                            position: fixed;
                            background-color: #8B008B ;
                            color: white;
                            box-shadow: 0px 8px 4px grey;
                            overflow: hidden;
                            padding-left:20px;
                            font-family: 'Josefin Sans';
                            font-size: 2vw;
                            width: 100%;
                            height:8%;
                            text-align: center;
                    }
                    .topnav {
 overflow: hidden;
 background-color: #FCAD98;
}

.topnav-right a {
 float: left;
 color: black;
 text-align: center;
 padding: 14px 16px;
 text-decoration: none;
 font-size: 18px;
}

.topnav-right a:hover {
 background-color: #FF69B4;
 color: black;
}

.topnav-right a.active {
 background-color: #DA70D6;
 color: black;
}

.topnav-right {
 float: right;
 padding-right:100px;
}
</style>
</head>
<body>
<div class="header">
<div style="width:50%;float:left;font-size:2vw;text-align:left;color:black; padding-top:1%;padding-
left:5%;">Nutrtion Image Analysis</div>
 <div class="topnav-right"style="padding-top:0.5%;">

   <a href="{{ url_for('home')}}">Home</a>
   <a  class="active" href="{{ url_for('image1')}}">Classify</a>
 </div>
</div>
<br>
```

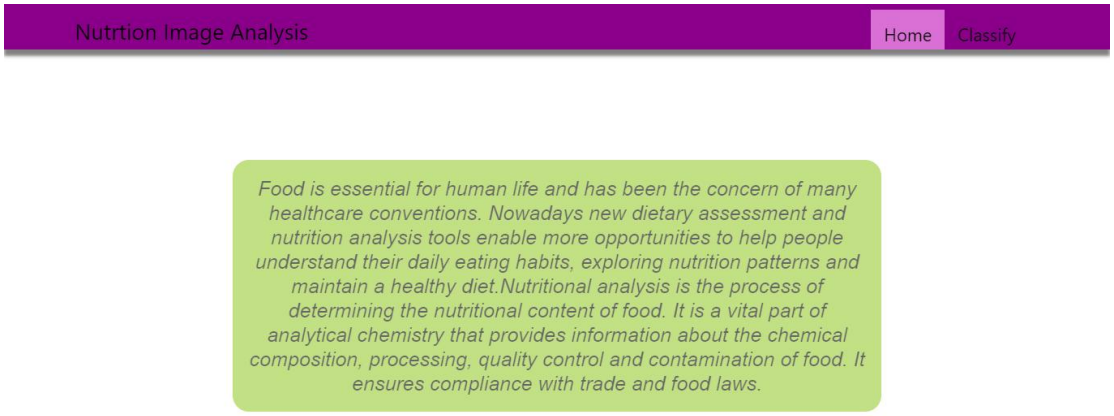
```
</div>
<div class="container">
      <center>
<div id="content" style="margin-top:2em">{% block content %}{% endblock %}</div></center>
   </div>
</body>

<footer>
   <script src="{{ url_for('static', filename='js/main.js') }}" type="text/javascript"></script>
</footer>

</html>
```

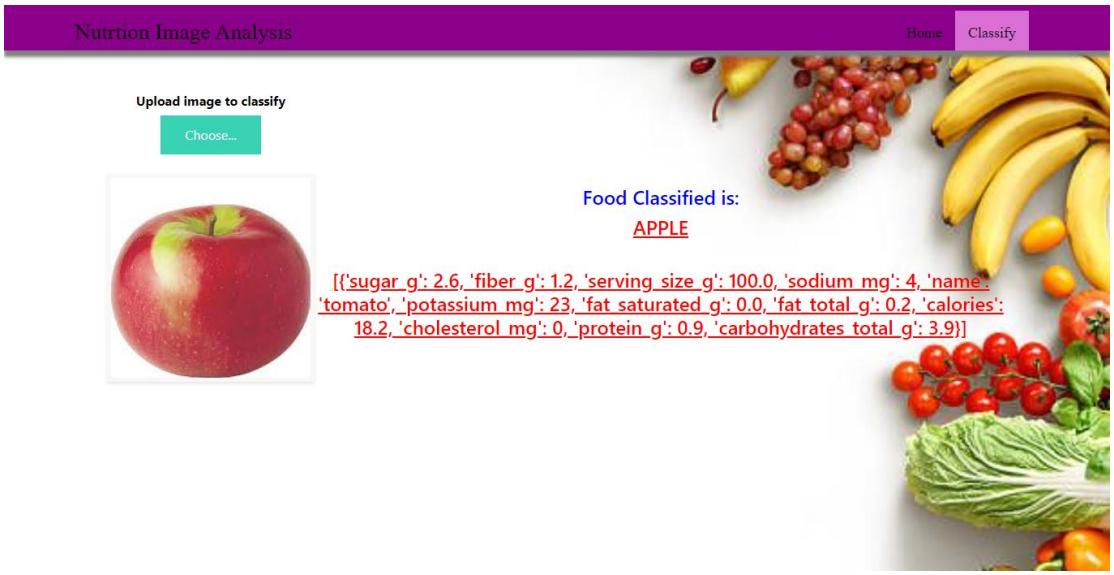
Routing to Html Page

App.py

```
from flask import Flask, render_template, request
import os
import numpy as np
import tensorflow
from keras.models import load_model
from keras.preprocessing import image
app = Flask(__name__, template_folder="template")
model = load_model('nutrition.h5')
print("Loaded model from disk")
@ app.route('/')
def home():
   return render_template('home.html')
@ app.route('/image1', methods=['GET', 'POST'])
def image1():
   return render_template("image.html")


@ app.route('/predict', methods=['GET', 'POST'])
def lanuch():
   if request.method == 'POST':
      f = request.files['file']
      basepath = os.path.dirname('__file__')
      filepath = os.path.join(basepath, "uploads", f.filename)
      f.save(filepath)

      img = tensorflow._keras.utils.load_img(filepath, target_size=(64, 64))
      x=image.image_utils.img_to_array(img)
      x = np.expand_dims(x, axis=0)

      pred = np.argmax(model.predict(x), axis=1)
      print("prediction", pred)
      index = ['APPLE', 'BANANA', 'ORANGE', 'PINEAPPLE', 'WATERMELON']

      result = str(index[pred[0]])
      print(result)
      x = result
      result = nutrition(result)
      print(result)

      return render_template("0.html", showcase=(result), showcase1=(x))


def nutrition(index):
   import requests
```

```
    url = "https://calorieninjas.p.rapidapi.com/v1/nutrition"
    querystring = {"query": "tomato"}
    headers = {
        "X-RapidAPI-Key": "e6843bfa04msh49abdb9bbcf3420p1a9e13jsn06dc99b07347",
        "X-RapidAPI-Host": "calorieninjas.p.rapidapi.com"
    }
    response = requests.request("GET", url, headers=headers, params=querystring)
    print(response.text)
    return response.json()["items"]


if __name__ == "__main__":

    app.run(debug=True)
```



Nutrtion Image Analysis

Home Classify

Upload image to classify

Choose...

Food Classified is:

BANANA

[{'sugar_g': 2.6, 'fiber_g': 1.2, 'serving_size_g': 100.0, 'sodium_mg': 4, 'name': 'tomato', 'potassium_mg': 23, 'fat_saturated_g': 0.0, 'fat_total_g': 0.2, 'calories': 18.2, 'cholesterol_mg': 0, 'protein_g': 0.9, 'carbohydrates_total_g': 3.9}]