

Project Report

DATE	18 November 2022
TEAM ID	PNT2022TMID07688
PROJECT NAME	AI-powered Nutrition Analyzer for Fitness Enthusiasts

1. INTRODUCTION

1.1 Project Overview

Nutrition analyzer aims to use personal information about individuals or groups of individuals to deliver nutritional advice that, theoretically, would be more suitable than generic advice. Deep learning, a sub branch of Artificial Intelligence, has promise to aid in the development of predictive models that are suitable for analyzing Nutrition. Using the prediction made by CNN to provide nutrition values of the food or fruits, that help fitness enthusiasts to track their daily nutrition intake to maintain a healthy life.

1.2 Purpose

The main aim of the project is to building a model which is used for classifying the fruit depends on the different characteristics like colour, shape, texture etc. Here the user can capture the images of different fruits and then the image will be sent the trained model. The model analyses the image and detect the nutrition based on the fruits like (Sugar, Fiber, Protein, Calories, etc.).

2. LITERATURE SURVEY

2.1 Existing problem

Sharing and collaboration are commonplace in today's social media-driven world. But the lack of regulation means it's all too easy for people to share information on fitness, health – and pretty much anything – without any factual backing. Combine this with standard challenges

like keeping clients motivated, and there are problems in the fitness industry that can affect your business.

2.2 References

1. Pure-CNN: A Framework for Fruit Images Classification by Asia Kausar, Mohsin Sharif, JinHyuck Park and Dong Ryeol Shin on 2018 International Conference on Computational Science and Computational Intelligence (CSCI).

Link. <https://www.researchgate.net/publication/338360652> Pure-CNN A Framework for, Fruit Images Classification

2. Fruit Classification using Convolutional Neural Network via Adjust Parameter and Data Enhancement by Liuchen Wu, Hui Zhang, Rubio Chen,Ruibo Chen,Junfei Yi on 12th International Conference on Advanced Computational Intelligence (ICACI).

Link: <https://ieeexplore.ieee.org/document/9177518>

3. Improving the Prediction of Rotten Fruit Using Convolutional Neural Network by Sumitra Nuanmeesri, Lap Poomhiran, Kunalai Ploydanai on International Journal of Engineering Trends and Technology.

Link .<https://www.ijettjournal.org/Volume-69/Issue-7/IJETT-V69I7P207.pdf>

2.3 Problem Statement Definition

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.

3. IDEATION & PROPOSED SOLUTION

3.1 Empathy Map Canvas

In this Empathy Map we describe about

What do they,

Think And Feel, See, Say And Do, Hear, Pain And Gain

Empathy Map For Fitness Enthusiast



3.2 Ideation & Brainstorming

In this phase we discussed about

- Where to Start
- Time Management
- Friend and Family Support
- Bad Health Habits



3.3 Proposed Solution

S.No:	Parameter	Description
1.	Problem Statement (Problem to be solved)	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.
2.	Idea / Solution description	To track fitness level and Analyze the nutrition level of foods like fruits , vegetables . It helps to identify the proportion of vitamins.
3.	Novelty / Uniqueness	Here the user can capture the images of different fruits and then the image will be sent the trained model. The model analyses the image and detect the nutrition based on the fruits like (Sugar, Fibre, Protein, Calories, etc.).

4.	Social Impact / Customer Satisfaction	This project is very helpful to People. Everyone Maintaining their own diet, Low expenditure and to manage the time.
5.	Business Model (Revenue Model)	By using this system, the users can predict and analyze the picture of the fruits and foods. In which it results to the visualizing the description of the foods taken as input.
6.	Scalability of the Solution	By implementing this system, the people can efficiently and effectively to gain knowledge about the fitness. They want and they wish to use at anytime. This system can also be integrated with the future technologies.

3.4 Problem Solution fit

Team ID: PNT2022TMD30612		PROJECT DESIGN PHASE 1		PROJECT TITLE: AI POWERED NUTRITION ANALYZER FOR FITNESS ENTHUSIASTS	
Define CS, fit into CC	1. CUSTOMER SEGMENT(S) CS Who is your customer? I.e. working parents of 0-5 y.o. kids <div>People who want to fit their body and maintain proper or balanced diet in a proper way</div>	6. CUSTOMER CONSTRAINTS CC What constraints prevent your customers from taking action or limit their choices of solutions? I.e. spending power, budget, no cash, network connection, available devices. <div>Internet Facility Spending</div>	5. AVAILABLE SOLUTIONS AS Which solutions are available to the customers when they face the problem or Existing Solution: Physical Exercise, Yoga cons do these solutions have? I.e. pen and paper is an alternative to digital notetaking <div>The Keys is to form workout habits that lead to long lasting changes to lifestyle and to long term improvements in health and well beings Time consumption is more, no proper guidelines according to the health status of the user Try to eat more protein and fat, and less simple sugars</div>	Explore AS, differentiate	
	2. JOBS-TO-BE-DONE / PROBLEMS J&P Which jobs-to-be-done (or problems) do you address for your customers? There could be more than one; explore different sides. <div>We Provide the nutritional content of the food they intake daily. Stay Healthy and Fit.</div>	9. PROBLEM ROOT CAUSE RC What is the real reason that this problem exists? What is the back story behind the need to do this job? I.e. customers have to do it because of the change in regulations. <div>The root cause of this problem is lack of intake of nutrition. Improper diet and skipping the exercise daily leads to many disease which results in leading healthy life.</div>	7. BEHAVIOUR BE What does your customer do to address the problem and get the job done? I.e. directly related: find the right solar panel installer, calculate usage and benefits; indirectly associated: customers spend free time on volunteering work (I.e. Greenpeace) <div>The customers who have issue of health care, Nutrition and fitness will be stated in chat box. At the time of logging in, The customer provide details of their health status. After analysing the health status, Solution will be given.</div>		Focus on J&P, tap into BE, understand RC
3. TRIGGERS TR <div>Through advertisements, Social media and Good feedback of friends and neighbors.</div>	10. YOUR SOLUTION SL If you are working on an existing business, write down your current solution first, fill in the canvas, and check how much it fits reality. If you are working on a new business proposition, then keep it blank until you fill in the canvas and come up with a solution that fits within customer limitations, solves a problem and matches customer behaviour. <div>To track the health care plan of an individual. To track the calories in the food by uploading images. To suggests food based on their health condition.</div>	8. CHANNELS of BEHAVIOUR CH 8.1 ONLINE <div>Get the Nutritional Info By access of application through scanning the healthy foods.</div>	Extract online & offline CH of BE		
4. EMOTIONS: BEFORE / AFTER EM <div>Before: felt more negative thoughts and underestimate themselves. After: great confidence among themselves and achieve Healthy.</div>		8.2 OFFLINE <div>Taking healthy foods, Consume huge amount of water, Follow daily Exercises and gym. Based on Nutritional info Customer will perform.</div>			

4. REQUIREMENT ANALYSIS

4.1 Functional requirement

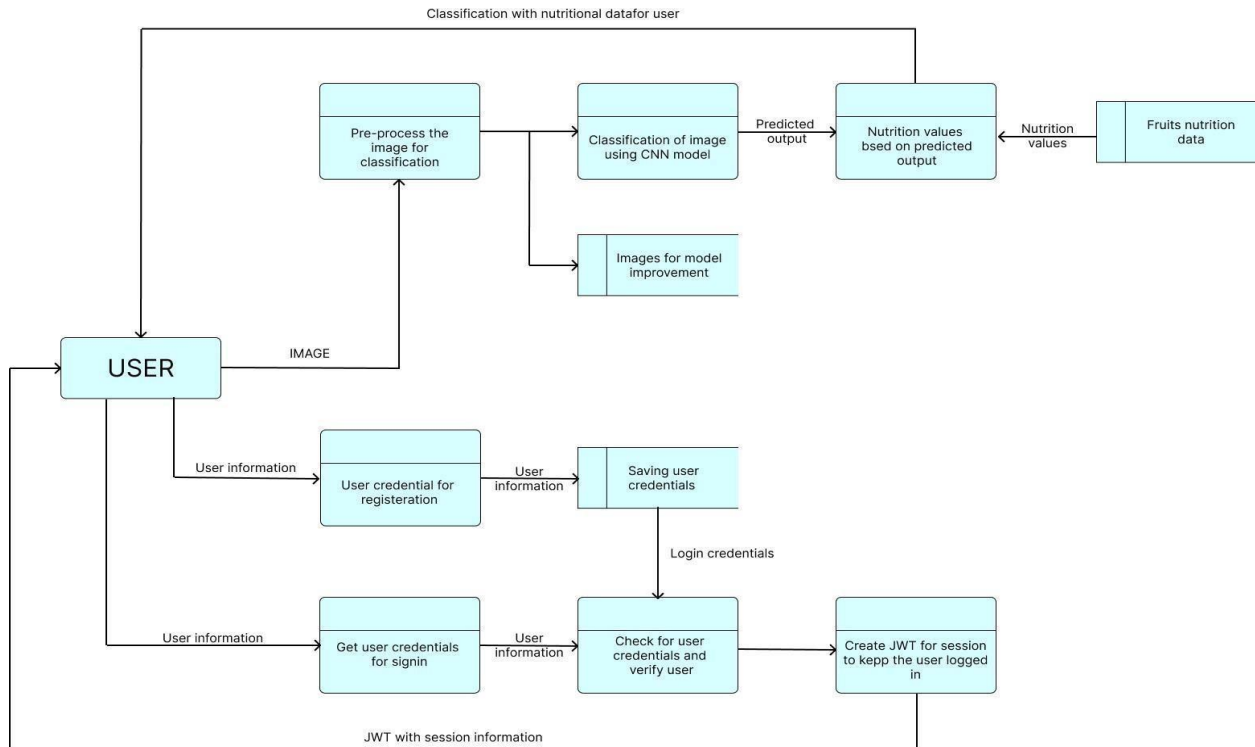
FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form Registration through Gmail Registration through LinkedIN
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	Give permission to enter dashboard	Having your details Healthy tips Common food review
FR-4	Diet plans	Mediterranean diet Low- carbohydrate diet High protein diet Diabetic diet
FR-5	Features of subscription	Individual guidance Individual food schedule Chat with mentor
FR-6	Notification	Notify a healthy quotes daily Notify to drink water Notify right time for right food

4.2 Non Functional Requirements

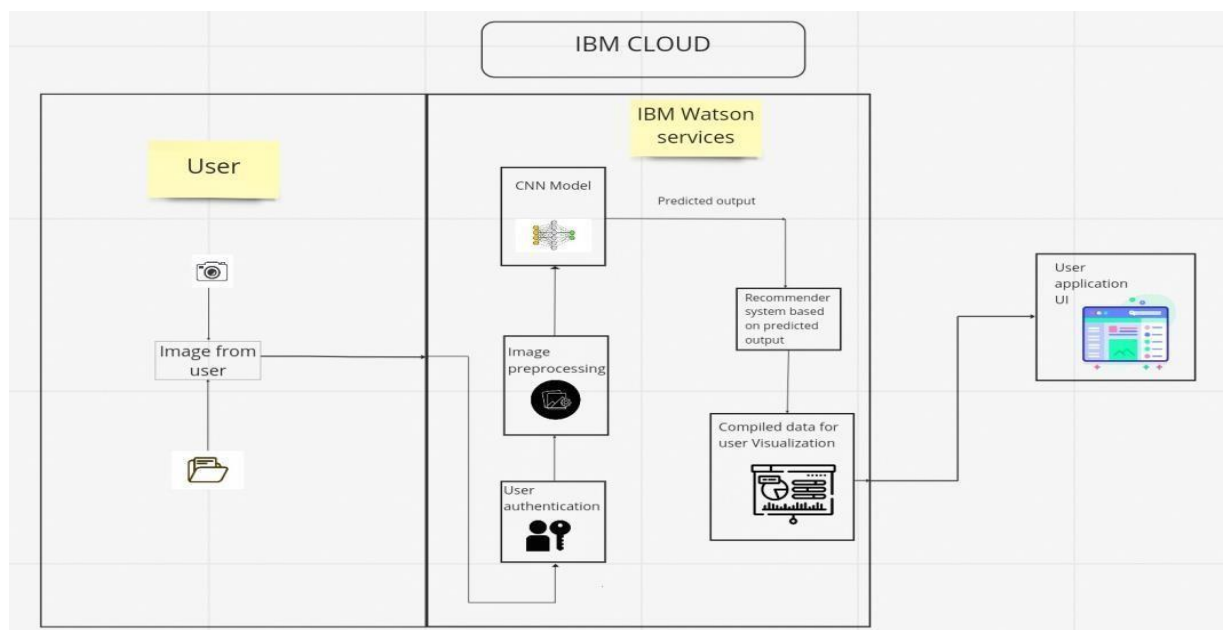
FR No.	Non-Functional Requirement	Description
NFR-1	Usability	As usability is a prerequisite for success of health and wellness through mobile app make use by clients.
NFR-2	Security	By using login page ,verify through email and phone number by sending OTP
NFR-3	Reliability	Awareness and emphasis on the importance of sustaining personal health care and manag their health pervasively.
NFR-4	Performance	Information was saved clearly and having a proper icons.
NFR-5	Availability	Having proper internet this application will work any time.
NFR-6	Scalability	If the client wants a separate chart or modify the food chart they will proceed to deliver the opinion.

5. PROJECT DESIGN

5.1 Data Flow Diagrams



5.2 Solution & Technical Architecture



5.3 User Stories

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Web user)	Registration and login	USN-1	As a user, I can register for the application by entering a unique user id, password, and confirming my password.	I can access my account / dashboard	High	Sprint -1
Common to all	Main page, About Page	USN-2	Home page, About page. Navigate through the application easily (easy user experience and interface).	All can access home page, about page	High	Sprint -1
Customer	Prediction	USN-3	As a user, I can upload pictures from the camera and also from the device.	I can upload picture from my gallery and camera	High	Sprint -2
Customer	Anonymous Usage	USN-4	As a user, I can access the application without signing in.	I can access the application without authentication	High	Sprint -2
Customer	Logout	USN-5	As a user, I can logout from the application	I can logout	High	Sprint -1
Customer	Searching fruits data manually	USN-6	As a user, I can access information (nutritional Content) about other fruits also in the application.	I can access the nutrition information's of fruit	Medium	Sprint -2
Customer	Motivation	USN-7	As a user, I get daily	I can get daily	High	Sprint

er	al quotes suggestion		motivational quotes.	motivational quotes		-2
Customer	Searching	USN-8	As a user, I can get suggestion of fruits based on season and health condition	I can get fruit suggestion based on season and health condition	High	Sprint -2
Customer	Health details management	USN-9	As a user, I can manage my health condition details like diabetic details through accessing the health management page	I can manage my health condition page	Medium	Sprint -3
Customer	Monitoring	USN-10	As a user, I can monitor my daily water intake as per my body weight, and get periodic reminders.	I can get periodic notifications for water intake reminder.	Medium	Sprint -3
Customer	Dashboard	USN-11	As a User I can view the nutritional content of food taken for an day	I can monitor my daily nutrition intake.	Low	Sprint -2
Common to all	Report page	USN-12	As a User I can report any issues through report page	I can report any issues through the report page	High	Sprint 2
Customer (Mobile user)	Installable PWA	USN-13	PWA for mobile users	I can install app from any browser	Medium	Sprint -3

6. PROJECT PLANNING & SCHEDULING

6.1 Sprint Planning & Estimation

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Data Collection	USN-1	Dataset - Collecting images of food items apples , banana, orange, pineapple, watermelon for analysis	5	High	Lokesh M Sivanesan M Rajkumar S Dharman M Imaya B
Sprint-1	Image Preprocessing	USN-2	Image data augmentation - Increasing the amount of data by generating new data points from existing data	4	Medium	Lokesh M Sivanesan M Rajkumar S Dharman M Imaya B
Sprint-1		usN-3	Image Data Generator Class - Used for getting the input of the original data	4	Medium	
Sprint-1		USN-4	Applying image data generator functionality to train set and test set	4	Medium	
Sprint-2	Modeling Phase	USN-5	Defining the model architecture - Building the model using deep learning approach and adding CNN layers	4	High	Lokesh M Sivanesan M Rajkumar S Dharman M Imaya B
Sprint-2		U N -6	Training , saving, testing and predicting the model	5	High	
Sprint-2		USN- 7	Database creation for the input classes	4	High	

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-2	Development phase	USN-8	User database creation - It contains the details of users	3	Medium	Lokesh M Sivanesan M Rajkumar S Dharman M Imaya B
Sprint-2		USN-9	Home page creation - It shows options of the application	2	Low	
Sprint-2		USN-10	Login and registration page creation User can register and login through gmail with Id and password	2	Low	
Sprint-3		USN-11	Dashboard creation — Dashboard contains the information of user profile and features of the application	2	Low	Lokesh M Sivanesan M Rajkumar S Dharman M Imaya B
Sprint-3		USN-12	User Input Page Creation - It is for the user to feed the input images	4	Medium	
Sprint-3		USN-13	Analysis and prediction page creation It shows the prediction of given user input	4	Medium	
Sprint-3	Application Phase	USN-14	Creation of about us , feedback and rating page — It shows application history and feedback page to users	4	Medium	Lokesh M Sivanesan M Rajkumar S Dharman M Imaya B
Sprint-3		USN-15	Building the python code and importing the flask module into the Project	6	High	
Sprint-4		USN-16	Create the Flask application and loading the model	5	High	Lokesh M Sivanesan M Rajkumar S Dharman
Sprint-4		USN-17	API integration - Connecting front end and back end and perform routing and run	5	High	

			the application			M Imaya B
Sprint-4	Deployment Phase	USN-18	Cloud deployment — Deployment of application by using IBM cloud	4	High	
Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-4	Testing Phase	USN-19	Functional testing — Checking usability and accessibility	3	Medium	Lokesh M Sivanesan M Rajkumar S Dharman M Imaya B
		USN*20	Non Functional testing — Checking scalability and performance of the application	3	Medium	

6.2 Sprint Delivery Schedule

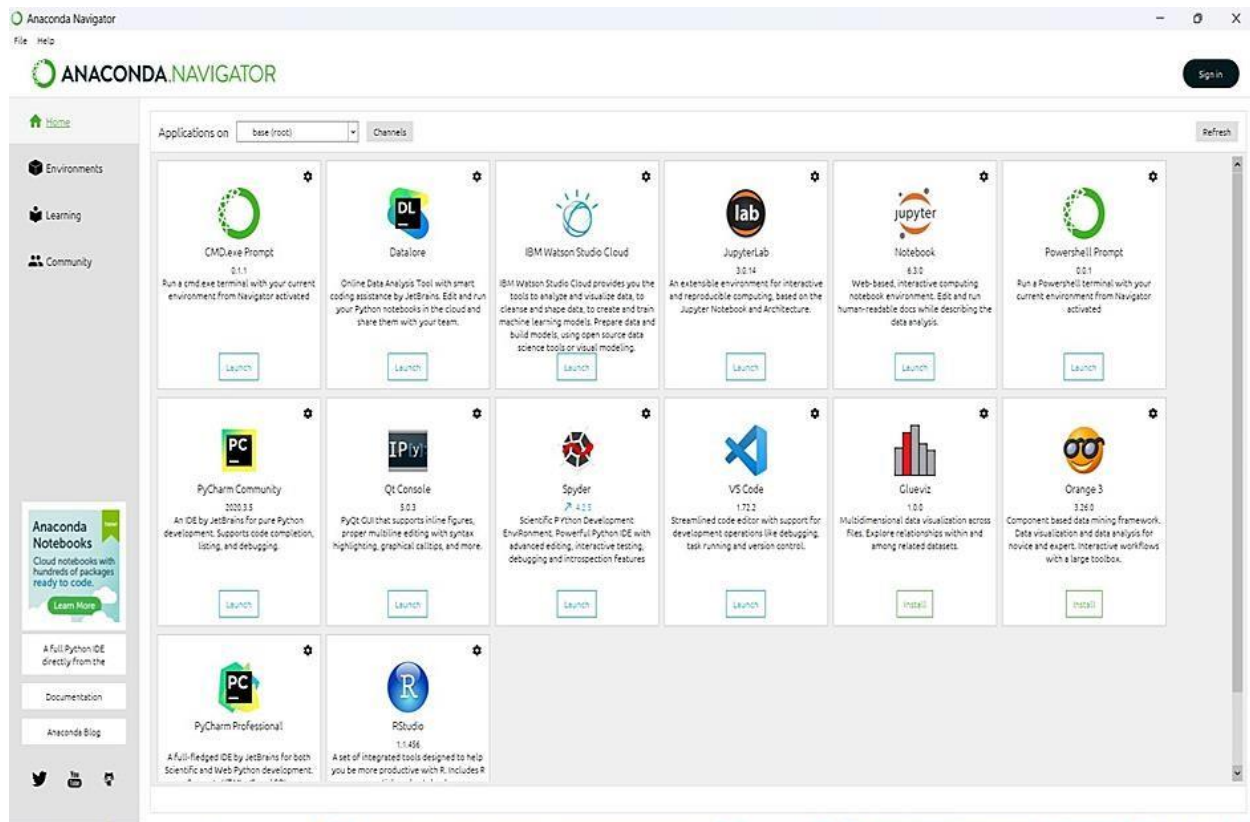
Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (as on Planned End Date)	Sprint Release Date (Actual)
Sprint-1	08	5 Days	29 Oct 2022	02 Nov 2022	20	3 Nov 2022
Sprint-2	15	5 Days	03 Oct 2022	07 Nov 2022	20	8 Nov 2022
Sprint-3	15	5 Days	08 Nov 2022	12 Nov 2022	20	11 Nov 2022
Sprint-4	25	5 Days	13 Nov 2022	17 Nov 2022	20	16 Nov 2022

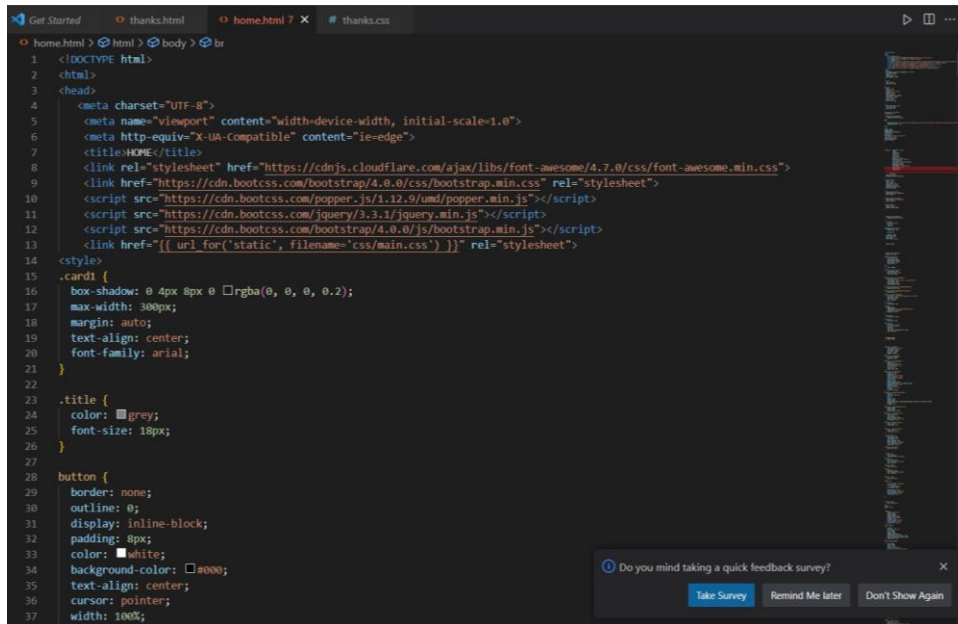
7. CODING & SOLUTIONING (Explain the features added in the project along with code)

7.1 Feature 1

If you are using anaconda navigator, follow the below steps to download the required packages:

1. Open anaconda prompt as administrator.
2. Type "pip install tensorflow==1.14.0" and click enter.
3. Type "pip install keras=2.2.4" and click enter.
4. Type "pip install opencv-python" and click enter. • Type "pip install imutils" and click enter





```
1 <!DOCTYPE html>
2 <html>
3 <head>
4   <meta charset="UTF-8">
5   <meta name="viewport" content="width=device-width, initial-scale=1.0">
6   <meta http-equiv="X-UA-compatible" content="ie-edge">
7   <title>HOME</title>
8   <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/4.7.0/css/font-awesome.min.css">
9   <link href="https://cdn.bootcss.com/bootstrap/4.0.0/css/bootstrap.min.css" rel="stylesheet">
10  <script src="https://cdn.bootcss.com/popper.js/1.12.9/umd/popper.min.js"></script>
11  <script src="https://cdn.bootcss.com/jquery/3.3.1/jquery.min.js"></script>
12  <script src="https://cdn.bootcss.com/bootstrap/4.0.0/js/bootstrap.min.js"></script>
13  <link href="{url_for('static', filename='css/main.css')}" rel="stylesheet">
14 </head>
15 <body>
16   <div class="card">
17     <div class="card-body">
18       <div class="text-center">
19         <h1>HOME</h1>
20         <button class="btn btn-primary">Click Me</button>
21       </div>
22     </div>
23   </div>
24 </body>
25 </html>
```

```
1 .card {
2   box-shadow: 0 4px 8px 0 rgba(0, 0, 0, 0.2);
3   max-width: 300px;
4   margin: auto;
5   text-align: center;
6   font-family: arial;
7 }
8
9 .title {
10  color: grey;
11  font-size: 18px;
12 }
13
14 button {
15  border: none;
16  outline: 0;
17  display: inline-block;
18  padding: 8px;
19  color: white;
20  background-color: #000000;
21  text-align: center;
22  cursor: pointer;
23  width: 100%;
24 }
```

Do you mind taking a quick feedback survey?

Take Survey Remind Me later Don't Show Again

Data Collection

Download the dataset [here](#)

```
[ ] from google.colab import drive
    drive.mount('/content/drive')

Mounted at /content/drive

[ ] cd/content/drive/MyDrive/Colab Notebooks

/content/drive/MyDrive/Colab Notebooks

[ ] # Unzipping the dataset
    !unzip 'Dataset.zip'
```

Image Preprocessing

```
[ ] from keras.preprocessing.image import ImageDataGenerator
```

Image Data Augmentation

```
[ ] train_datagen = ImageDataGenerator(rescale=1./255, shear_range=0.2, zoom_range=0.2, horizontal_flip=True)
test_datagen=ImageDataGenerator(rescale=1./255)
```

Applying Image DataGenerator Functionality To Trainset And Testset

```
▶ x_train = train_datagen.flow_from_directory(
    r'/content/drive/MyDrive/Colab Notebooks/Dataset/TRAIN_SET',
    target_size=(64, 64), batch_size=5, color_mode='rgb', class_mode='sparse')
x_test = test_datagen.flow_from_directory(
    r'/content/drive/MyDrive/Colab Notebooks/Dataset/TEST_SET',
    target_size=(64, 64), batch_size=5, color_mode='rgb', class_mode='sparse')
```

3. Adding CNN Layers

```
[ ] classifier = Sequential()
classifier.add(Conv2D(32, (3, 3), input_shape=(64, 64, 3), activation='relu'))
classifier.add(MaxPooling2D(pool_size=(2, 2)))
classifier.add(Conv2D(32, (3, 3), activation='relu'))
classifier.add(MaxPooling2D(pool_size=(2, 2)))
classifier.add(Flatten())
```

4. Adding Dense Layers

```
[ ] classifier.add(Dense(units=128, activation='relu'))
classifier.add(Dense(units=5, activation='softmax'))
```

```
▶ classifier.summary()
```

Model: "sequential_1"

Layer (type)	Output Shape	Param #
conv2d (Conv2D)	(None, 62, 62, 32)	896

5. Configure The Learning Process

```
[ ] classifier.compile(optimizer='adam', loss='sparse_categorical_crossentropy', metrics=['accuracy'])
```

6. Train The Model

```
[ ] classifier.fit_generator(generator=x_train, steps_per_epoch = len(x_train), epochs=20, validation_data=x_test, validation_steps = len(x_test))
```

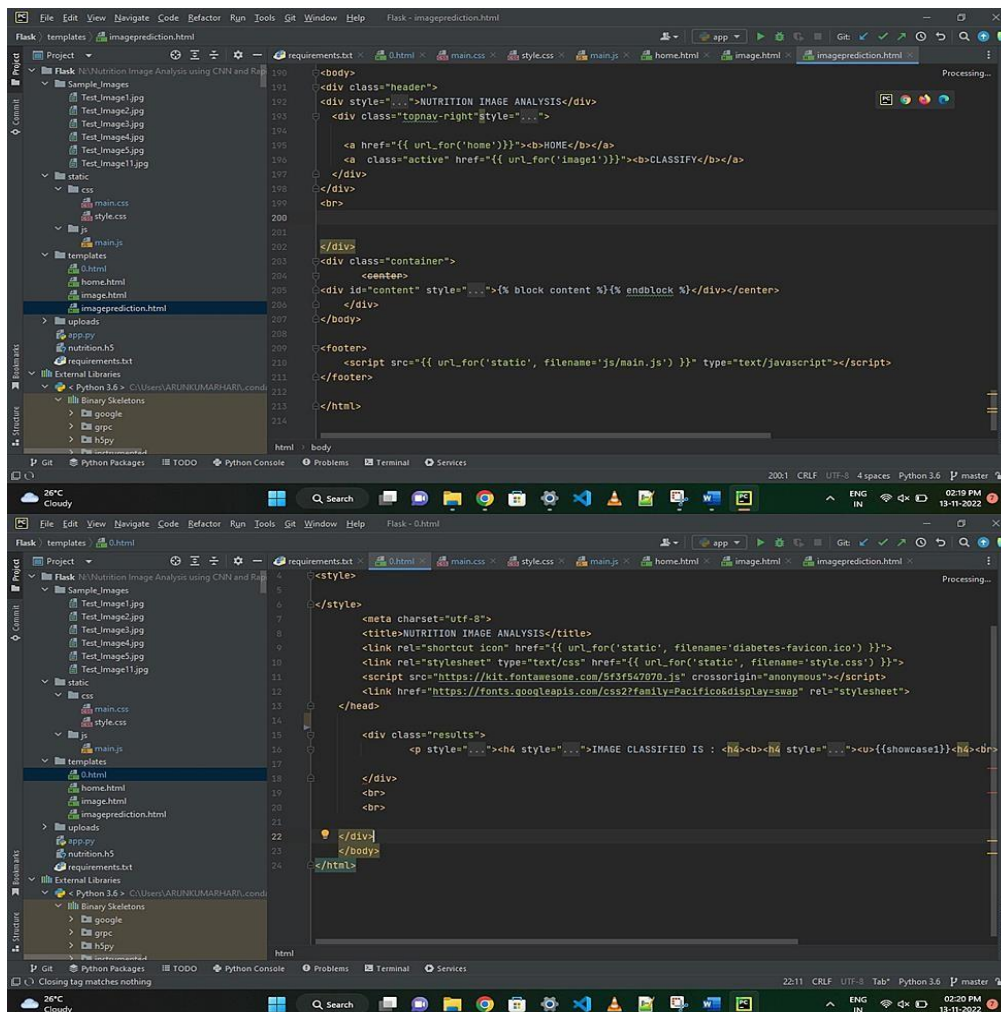
/usr/local/lib/python3.7/dist-packages/ipykernel_launcher.py:2: UserWarning: 'Model.fit_generator' is deprecated and will be removed in a future version. Pl

Epoch 1/20
494/824 [=====] - ETA: 6:52 - loss: 0.7194 - accuracy: 0.7174

7. Saving The Model

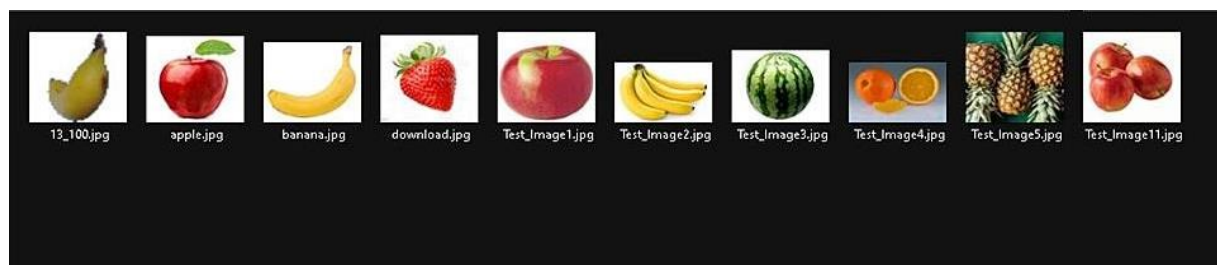
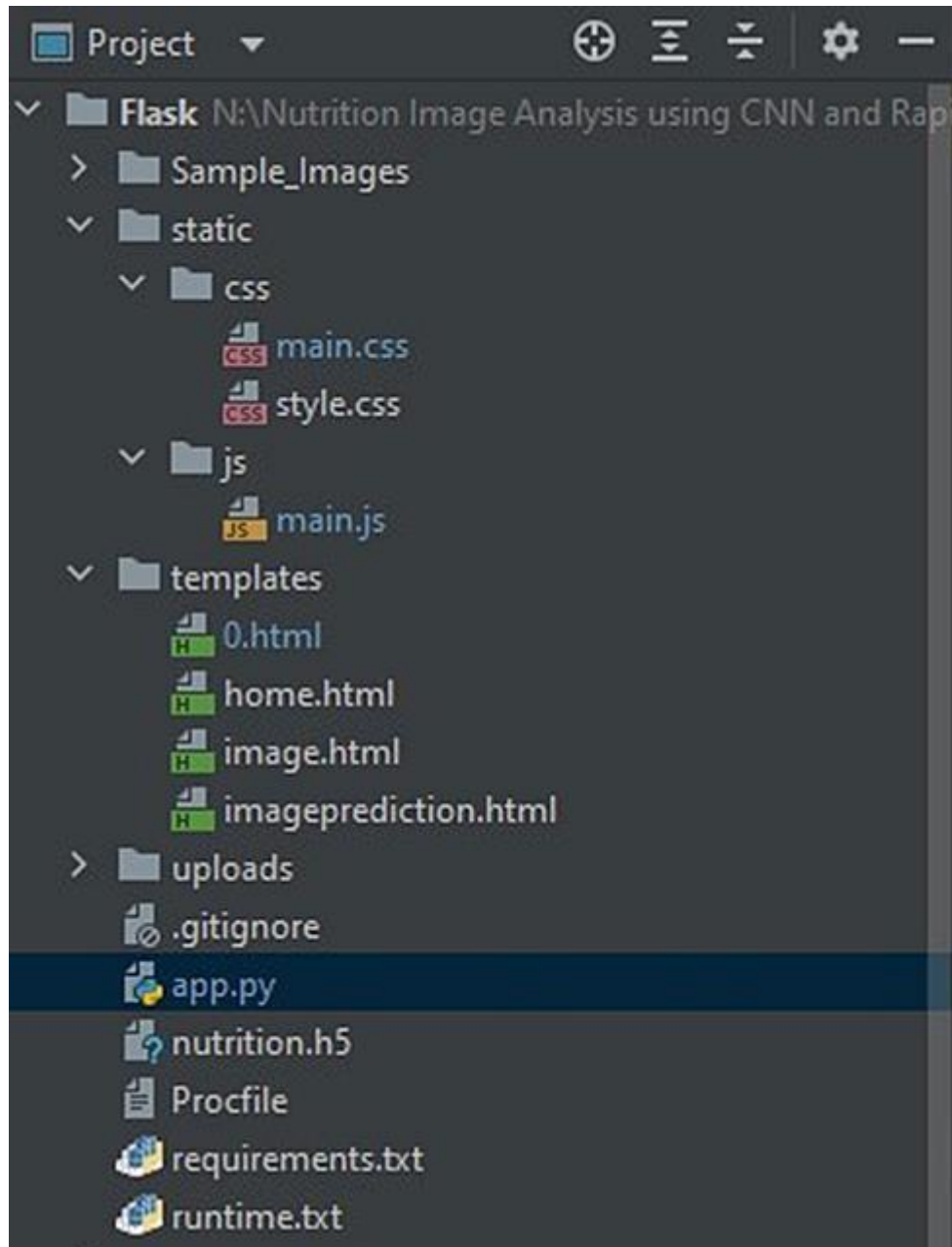
```
[ ] classifier.save('nutrition.h5')
```

7.2 Feature 2



8. TESTING

8.1 Test Cases



8.2 User Acceptance Testing



We are performing White Box Testing for select the package module.

Pseudocode for select the package module is-

1. `select_the_package ()` procedure begins
2. READ the package name, features, offers and duration from the package database
3. DISPLAY the package name, features, offers and duration
4. DO
5. GET the package name, features, offers and duration
6. STORE the package selected to the customer's database
7. PROCEED to payment screen //another module

8. WHILE select package is NULL

9. //End DO...WHILE

10.procedure ends

FLOWGRAPH

CYCLOMATIC COMPLEXITY OF RESULTANT GRAPH

$V(G) = \text{Number of regions}$

$= 2$

$V(G) = \text{Edges} - \text{Nodes} + 2$

$= 8 - 8 + 2$

$= 2$

$V(G) = \text{Predicate nodes} + 1$

$= 1 + 1$

$= 2$

LINEARLY INDEPENDENT PATHS FOR FLOW GRAPHS

Path 1: 1-2-3-4-5-6-7-8-9-10

Path 2: 1-2-3-4-5-6-7-8-4-5-6-7-8-9-10

TEST ID	INPUT VALUES	ACTUAL OUTPUT	EXPECTED OUTPUT
1	Package is selected	To be observed after execution	Display the selected package
2	Package is not selected	To be observed after execution	Show the packages to select until one is selected

TEST CASE TABLE

9. RESULTS

9.1 Performance Metrics

```

Flask - app.py
Project: Flask Nutrition Image Analysis using CNN and PyTorch
  requirements.txt
  0.html
  main.css
  style.css
  main.js
  app.py
  home.html
  image.html
  imageprediction.ht
  app.py
  Sample_Images
    Test_Image1.jpg
    Test_Image2.jpg
  Run: app
  To enable them in other operations, rebuild TensorFlow with the appropriate compiler flags.
  Loaded model from disk
  * Restarting with stat
  * Serving Flask app 'app' (lazy loading)
  * Environment: production
  WARNING: This is a development server. Do not use it in a production deployment.
  Use a production WSGI server instead.
  * Debug mode: on
  2022-11-13 14:47:13.521039: W tensorflow/stream_executor/platform/default/dso_loader.cc:64] Could not load dynamic library 'cudart64_110.dll'; dlderror: cudart
  2022-11-13 14:47:13.523308: I tensorflow/stream_executor/cuda/cudart_stub.cc:29] Ignore above cudart dlerror if you do not have a GPU set up on your machine.
  Loaded model from disk
  2022-11-13 15:03:52.074467: W tensorflow/stream_executor/platform/default/dso_loader.cc:64] Could not load dynamic library 'nvcuda.dll'; dlderror: nvcuda.dll
  2022-11-13 15:03:52.769818: W tensorflow/stream_executor/cuda/cuda_driver.cc:269] failed call to cuInit: UNKNOWN ERROR (303)
  2022-11-13 15:03:54.596275: I tensorflow/stream_executor/cuda/cuda_diagnostics.cc:169] retrieving CUDA diagnostic information for host: LAPTOP-E5IM4603
  2022-11-13 15:03:54.619299: I tensorflow/stream_executor/cuda/cuda_diagnostics.cc:176] hostname: LAPTOP-E5IM4603
  2022-11-13 15:03:57.062699: I tensorflow/core/platform/cpu_feature_guard.cc:142] This TensorFlow binary is optimized with oneAPI Deep Neural Network Library
  To enable them in other operations, rebuild TensorFlow with the appropriate compiler flags.
  * Debugger is active!
  * Debugger PIN: 589-305-935
  * Running on http://127.0.0.1:5000/ (Press CTRL+C to quit)
  
```


10.ADVANTAGES & DISADVANTAGES

ADVANTAGES:

1. Monitor Your Diet Easily. Weight watchers or people who want to gain weight can mention the type and amount of foods consumed at each meal.
2. Monitor Your Progress.
3. Give Free Health and Fitness Tips.
4. Provide Personal Health Coaches.

DISADVANTAGES:

1. In some cases, it can lead us in failing sick.
2. Cost of using this application could be high.

11.CONCLUSION

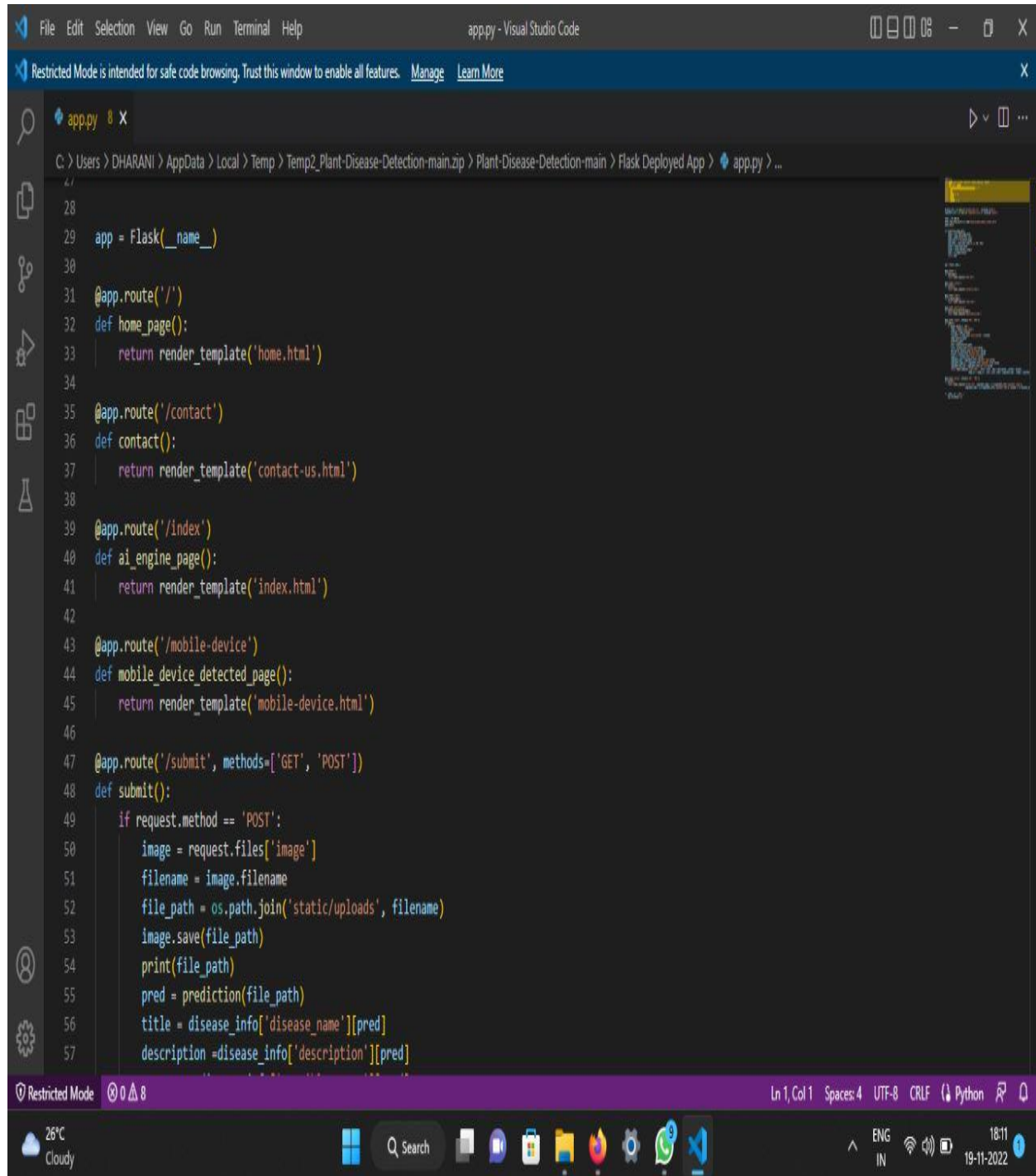
Engaging in regular physical activity may produce improvements in an individual's physical health, cognitive performance, and psychological well-being. Physical benefits include, but are not limited to, reduced risk for diseases, and improvements in physical functioning, fitness, and overall quality of life. The purpose of a fitness app is to provide the user with instructions and examples of one or more types of exercise, physical activity, nutritional programs.

12.FUTURE SCOPE

- Offers payment convenience in personal training subscriptions.
- Useful articles.
- Video instructions.
- Diet Plans.
- Individual progress tracking.
- Live video from training sessions

13.APPENDIX

Source Code



```
File Edit Selection View Go Run Terminal Help
app.py - Visual Studio Code

Restricted Mode is intended for safe code browsing. Trust this window to enable all features. Manage Learn More

app.py 8 X
C:\Users\DHARANI\AppData\Local\Temp\Temp2_Plant-Disease-Detection-main.zip\Plant-Disease-Detection-main\Flask Deployed App\app.py ...

28
29 app = Flask(__name__)
30
31 @app.route('/')
32 def home_page():
33     return render_template('home.html')
34
35 @app.route('/contact')
36 def contact():
37     return render_template('contact-us.html')
38
39 @app.route('/index')
40 def ai_engine_page():
41     return render_template('index.html')
42
43 @app.route('/mobile-device')
44 def mobile_device_detected_page():
45     return render_template('mobile-device.html')
46
47 @app.route('/submit', methods=['GET', 'POST'])
48 def submit():
49     if request.method == 'POST':
50         image = request.files['image']
51         filename = image.filename
52         file_path = os.path.join('static/uploads', filename)
53         image.save(file_path)
54         print(file_path)
55         pred = prediction(file_path)
56         title = disease_info['disease_name'][pred]
57         description = disease_info['description'][pred]
```

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26°C Cloudy Search ENG IN 18:11 19-11-2022

```
File Edit Selection View Go Run Terminal Help      app.py - Visual Studio Code
Restricted Mode is intended for safe code browsing. Trust this window to enable all features. Manage Learn More

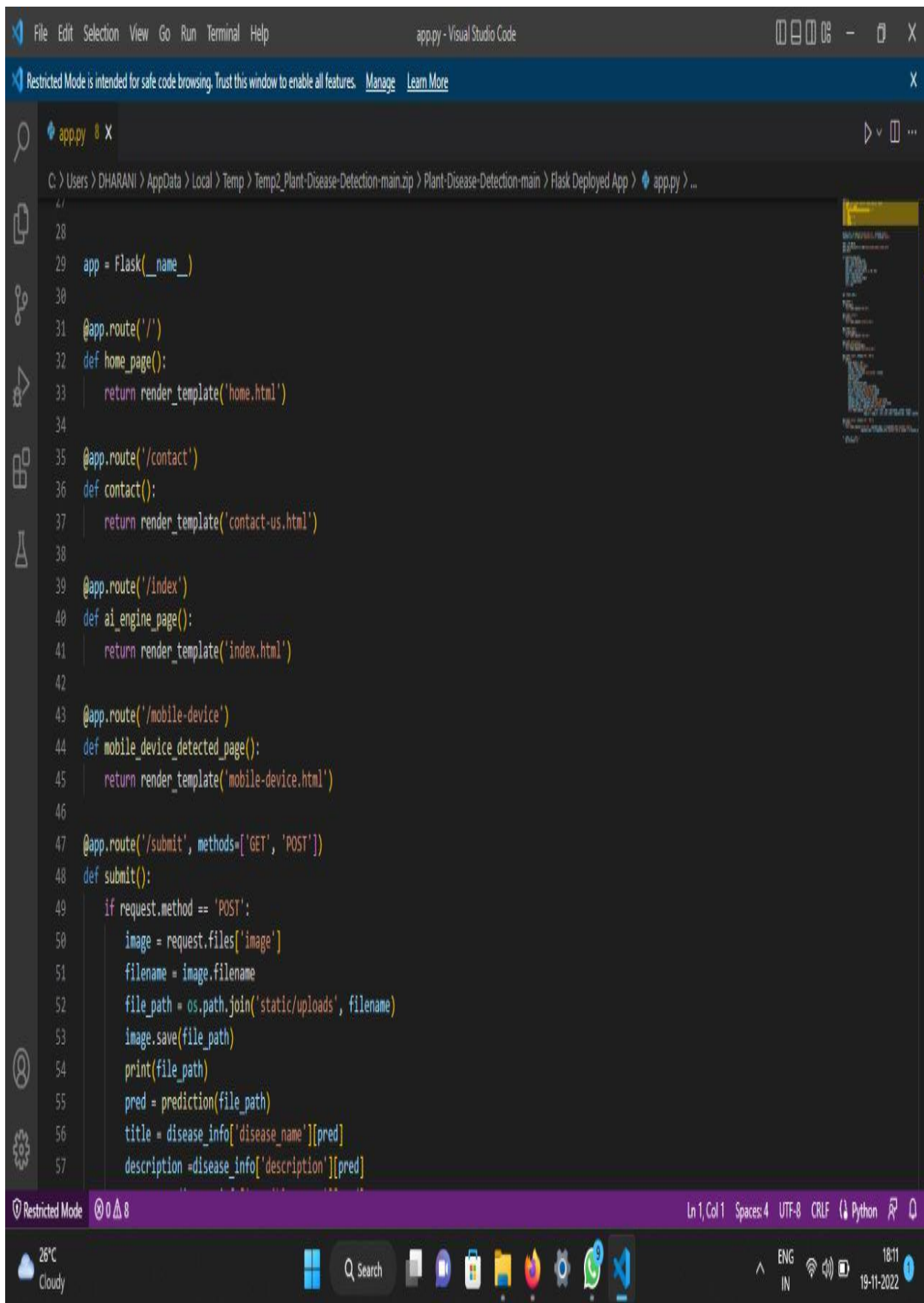
app.py x
C:\Users\DHARANI> AppData\Local\Temp\Temp2_Plant-Disease-Detection-main.zip\Plant-Disease-Detection-main\Flask Deployed App> app.py ...

44 def mobile_device_detected_page():
45     return render_template('mobile-device.html')
46
47 @app.route('/submit', methods=['GET', 'POST'])
48 def submit():
49     if request.method == 'POST':
50         image = request.files['image']
51         filename = image.filename
52         file_path = os.path.join('static/uploads', filename)
53         image.save(file_path)
54         print(file_path)
55         pred = prediction(file_path)
56         title = disease_info['disease_name'][pred]
57         description = disease_info['description'][pred]
58         prevent = disease_info['Possible Steps'][pred]
59         image_url = disease_info['image_url'][pred]
60         supplement_name = supplement_info['supplement name'][pred]
61         supplement_image_url = supplement_info['supplement image'][pred]
62         supplement_buy_link = supplement_info['buy link'][pred]
63         return render_template('submit.html', title = title, desc = description, prevent = prevent,
64                                image_url = image_url, pred = pred, sname = supplement_name, simage = supplement_image_url, buy_link = suppleme
65
66 @app.route('/market', methods=['GET', 'POST'])
67 def market():
68     return render_template('market.html', supplement_image = list(supplement_info['supplement image']),
69                            supplement_name = list(supplement_info['supplement name']), disease = list(disease_info['disease_name']), buy = list(s
70
71 if __name__ == '__main__':
72     app.run(debug=True)
73
```

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26°C Cloudy Search 18:11 19-11-2022



GitHub & Project Demo Link

➤ [https://youtu.be/ nfVIX4RCgw](https://youtu.be/nfVIX4RCgw)