IBM – NALAIYA THIRAN

Fertilizers Recommendation System For Disease Prediction

PROJECT REPORT

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1. INTRODUCTION

1.1 Project Overview:

Plant disease prediction helps in the detection and recognitionof the plant diseases. The images of plants are captured and analyzed for certain symptoms using Computer vision andimage processing. By identifying the disease, the deficit nutrients that lead to the disease are found. Based on the available data on fertilizers, the necessary nutrient rich fertilizers are recommended.

1.2 Purpose:

The plant diseases may lead to abnormal functionalities whichmay end up with the death of the plant. The project aims at recognizing the symptoms at the early stages. The project also aims at guiding the farmers with the proper choice of the fertilizers that are required to counter the deficiency of the nutrients that cause the disease.

2. LITERATURE SURVEY

2.1 Reference

➢ https://www.semanticscholar.org/paper/Fertilizers-Recommendation-System-ForDisease-In-Neela-Nithya/495379d3ef2b461fabd2de8d0605c164cb1e396fc164cb1e396f

➢ http://www.ijetajournal.org/volume-8/issue-2/IJETA-V8I2P1.pdf

➢ https://ieeexplore.ieee.org/document/8878781

➢ https://www.irjet.net/archives/V7/i10/IRJET-V7I1004.pdf

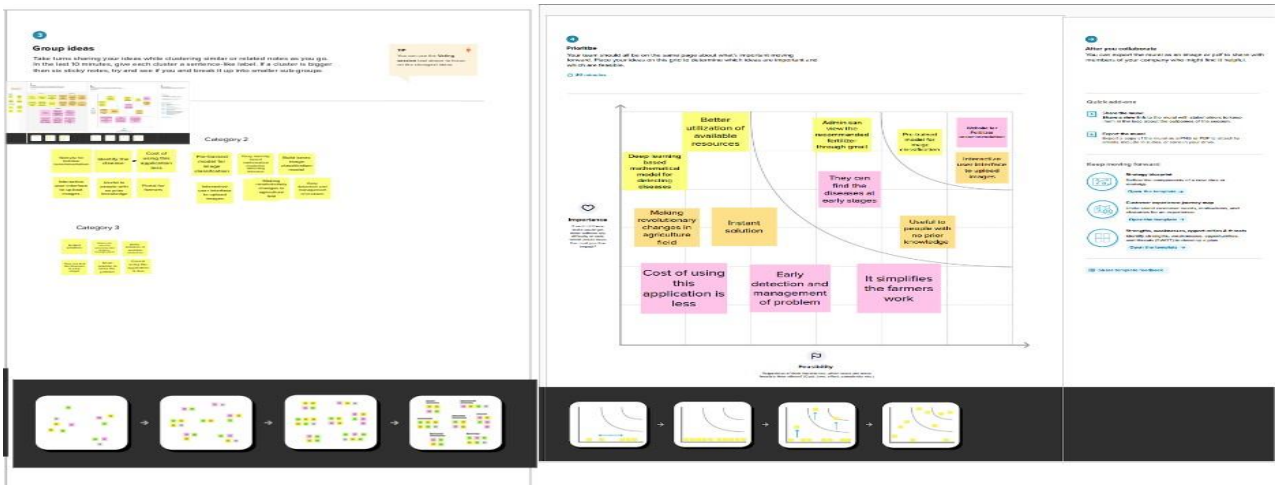
2.2 Problem Statement:

Who does the problem affect?	Persons who do Agriculture
What are the boundaries of the problem?	People who Grow Crops and facing Issues of Plant Disease
What is the issue?	In agricultural aspects, if the plant is affected by leaf disease, then it reduces the growth and productiveness. Generally, the plant diseases are caused by the abnormal physiological functionalities of plants.
When does the issue occur?	During the development of the crops as they will be affected by various diseases.

3.IDEATION

- **3.1 Empathy Map Canvas:**

- **3.2 Brainstorming:**



- **3.3 Problem Statement Template:**

Customer Problem Statement Template:

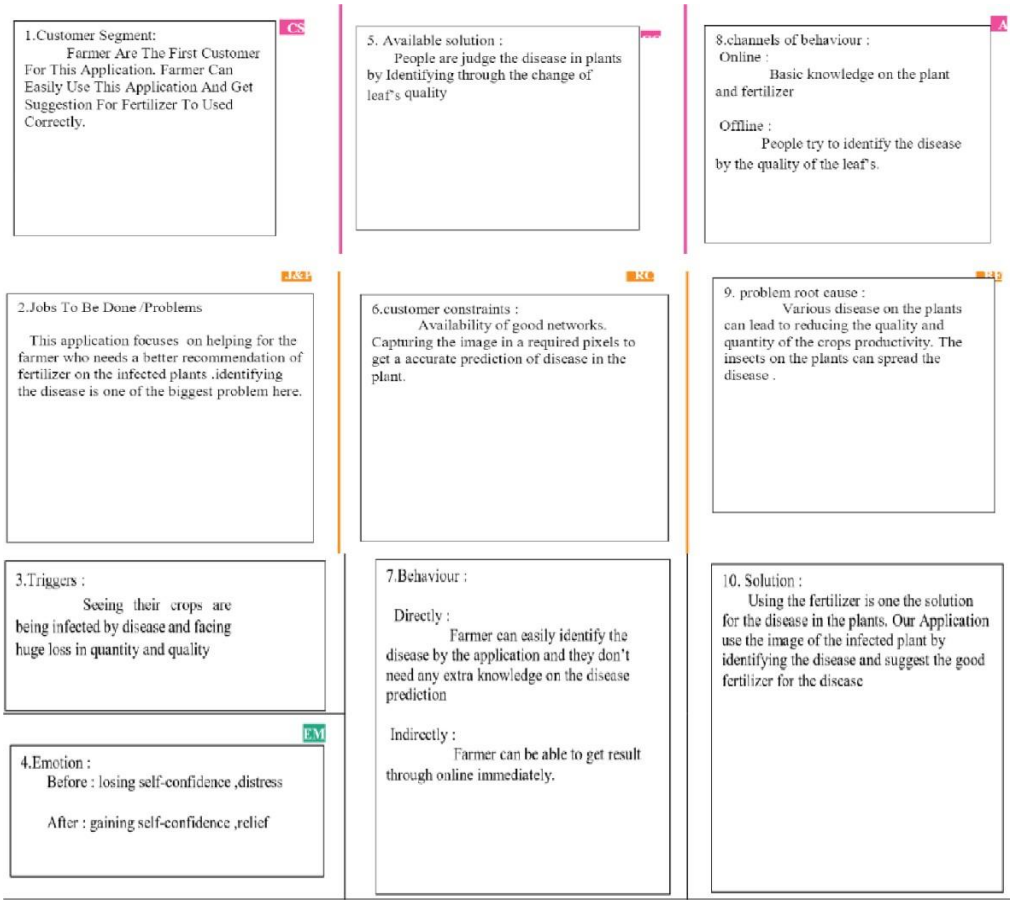
Create a problem statement to understand your customer's point of view. The Customer Problem Statement template helps you focus on what matters to create experiences people will love.

A well-articulated customer problem statement allows you and your team to find the ideal solution for the challenges your customers face. Throughout the process, you'll also be able to empathize with your customers, which helps you better understand how they perceive your product or service.

I am	Describe customer with 3-4 key characteristics - *who are they?*	Describe the customer and their attributes here
I'm trying to	*List their outcome or "job" the care about - what are they trying to achieve?*	List the thing they are trying to achieve here
but	Describe what problems or barriers stand in the way – *what bothers them most?*	Describe the problems or barriers that get in the way here
because	Enter the "root cause" of why the problem or barrier exists – *what needs to be solved?*	Describe the reason the problems or barriers exist
which makes me feel	Describe the emotions from the customer's point of view – *how does it impact them emotionally?*	Describe the emotions the result from experiencing the problems or barriers

4.PROJECT DESIGN PHASE:

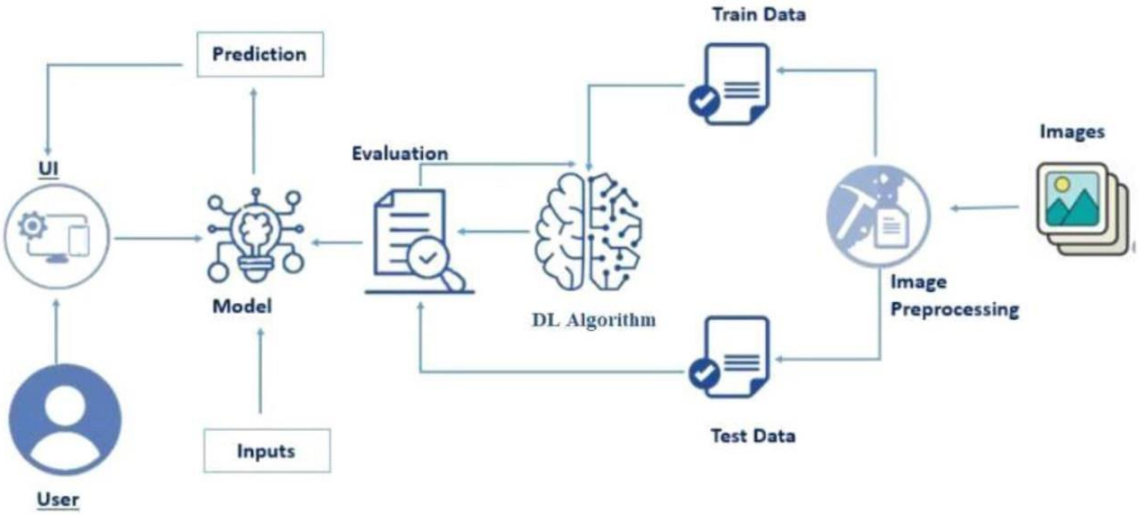
4.1 Problem solution fit:



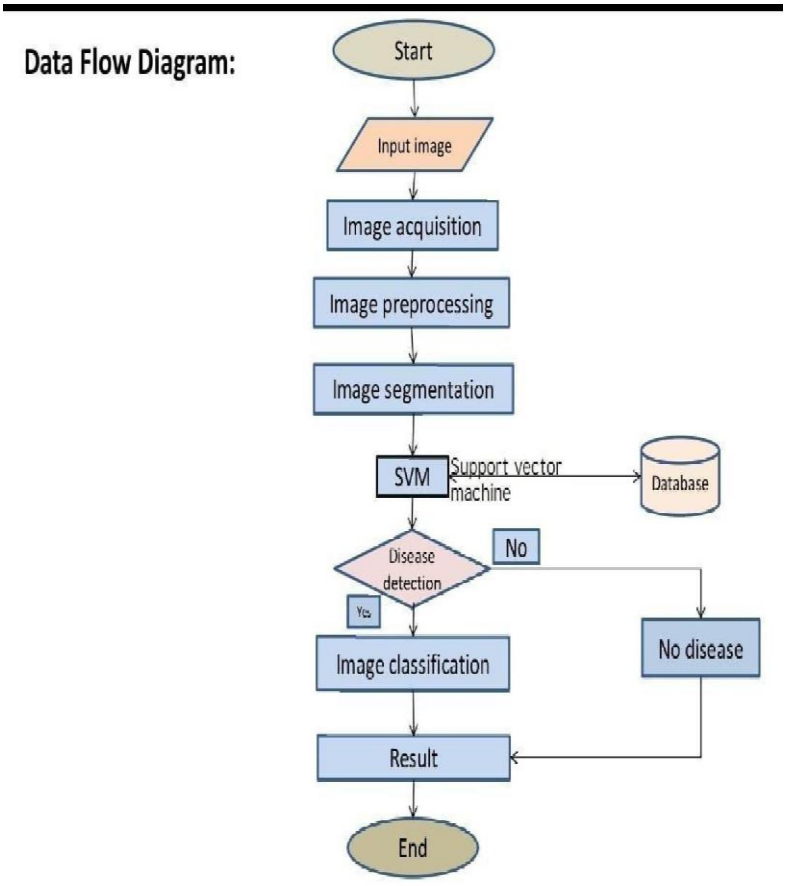
4.2. Proposed solution:

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	•Farmers are unable to detect crop diseases due to a lack of knowledge and old practices • Growing only certain crops depletes the soil and if the crops are harmed by illnesses
2.	Idea / Solution description	•Plant disease reduces the production and quality of food, fibre and biofuel crops. It has been a major factors that influencing the farmers life as well as our life. •To overcome this problem we develop this project to predict the plant if the crop is affected with which disease, and a viable remedy is then offered to the user.
3.	Novelty / Uniqueness	• Crop diseases detection using image processing in which user get pesticides based on disease images. • To predict the accurate disease for plant and crops we add more image dataset with wider variations are trained. •Most of the farmers are uneducated so we develop the system which is easily accessible by anyone.
4.	Social Impact / Customer Satisfaction	• Providing Complete irrigation data through cloud computing. • It helpful for farmers to increase productivity. Increase the usability of natural manure. • Efficient utilization of existing knowledge through artificial intelligence.
5.	Business Model (Revenue Model)	•As long as this system is beneficial to users, subscribtions will increase which gives benefits to industry.

4.3 Solution architecture:



4.4 DataFlow Diagram:



5 .PROJECT PLANNING PHASE:

5.1 Milestone and activity plan:

Ideation Phase

Title	Description	Status
Literature survey	Literature Survey on the selected projects & gathering information by referring the Technical papers etc.	COMPLETED
Brainstorm and Idea prioritization	List the Idea's by organising the brainstorming session & prioritize the top 4 Ideas based on the Feasibility & Importance	COMPLETED

Problem statement	List of problems in the project	COMPLETED
Prepare empathy map	Prepare Empathy Map Canvas to capture the User Pains & Gains, prepare list of problem statements	COMPLETED

Project Design Phase – 1

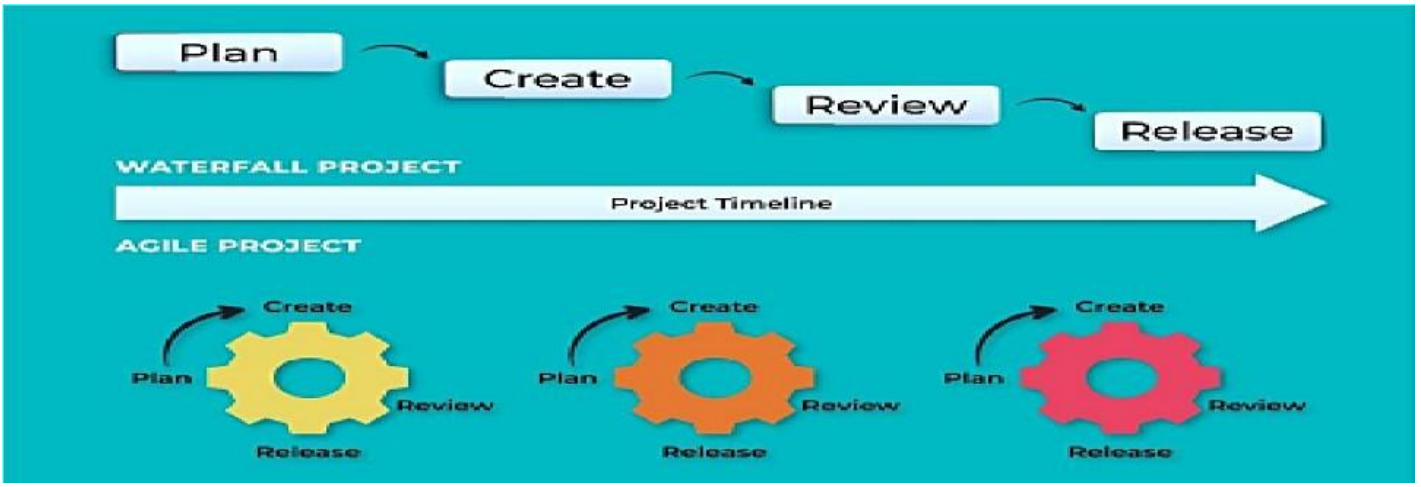
Title	Description	Status
Proposed Solution	Prepare the Proposed Solution Document, which includes the Novelty, Feasibility of Idea,Social impact, Scalability of solution, etc.	COMPLETED
Problem Solution Fit	Prepare Problem – Solution Fit Document	COMPLETED
Solution Architecture	Prepare the Technology (Solution) Architecture diagram	COMPLETED

PROJECT DESIGN PHASE 2

Customer Journey	Prepare the customer journey maps to understand the user interactions & experiences with the application	COMPLETED
Functional Requirement	Prepare the Functional Requirement Document	COMPLETED

Data Flow Diagram	Draw the data flow diagrams & submit for review	COMPLETED
Technology Architecture	Prepare the Technology Architecture Diagram	COMPLETED

5.2 SPRINT DELIVERY PLAN:



Product Backlog, Sprint Schedule, and Estimation (4 Marks)

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Image Processing.	USN-1	As a user, I can retrieve useful information about the images.	1	Low	Suriyapriya.K Reshma.D Shalini.K Thirumahari.B Rajkumar.J
Sprint-2	Model Building for Fruit Disease Prediction.	USN-2	As a user, I can able to predict fruit disease using this model.	1	Medium	Suriyapriya.K Reshma.D Shalini.K Thirumahari.B Rajkumar.J
Sprint-2	Model Building for Vegetable Disease Prediction.	USN-3	As a user, I can able to predict vegetable disease using this model.	2	Medium	Suriyapriya.K Reshma.D Shalini.K Thirumahari.B Rajkumar.J

Sprint-3	Application Building.	USN-4	As a user, I can see a web page for Fertilizers Recommendation System for Disease Prediction	2	High	Suriyapriya.K Reshma.D Shalini.K Thirumahan.B Rajkumar.J
Sprint-4	Train The Model on IBM Cloud.	USN-5	As a user, I can save the information about Fertilizers and crops on IBM cloud	2	High	Suriyapriya.K Reshma.D Shalini.K Thirumahan.B Rajkumar.J

Project Tracker, Velocity & Burndown Chart: (4 Marks)

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	20	6 Days	24 Oct 2022	29 Oct 2022	20	26 Oct 2022
Sprint-2	20	6 Days	31 Oct 2022	05 Nov 2022	20	30 Oct 2022
Sprint-3	20	6 Days	07 Nov 2022	12 Nov 2022	20	05 Nov 2022
Sprint-4	20	6 Days	14 Nov 2022	19 Nov 2022	20	10 Nov 2022

Velocity:

Imagine we have a 10-day sprint duration, and the velocity of the team is 20 (points per sprint). Let's calculate the team's average velocity (AV) per iteration unit (story points per day)

$$AV = \frac{sprint\ duration}{velocity} = \frac{20}{10} = 2$$

Burndown chart:

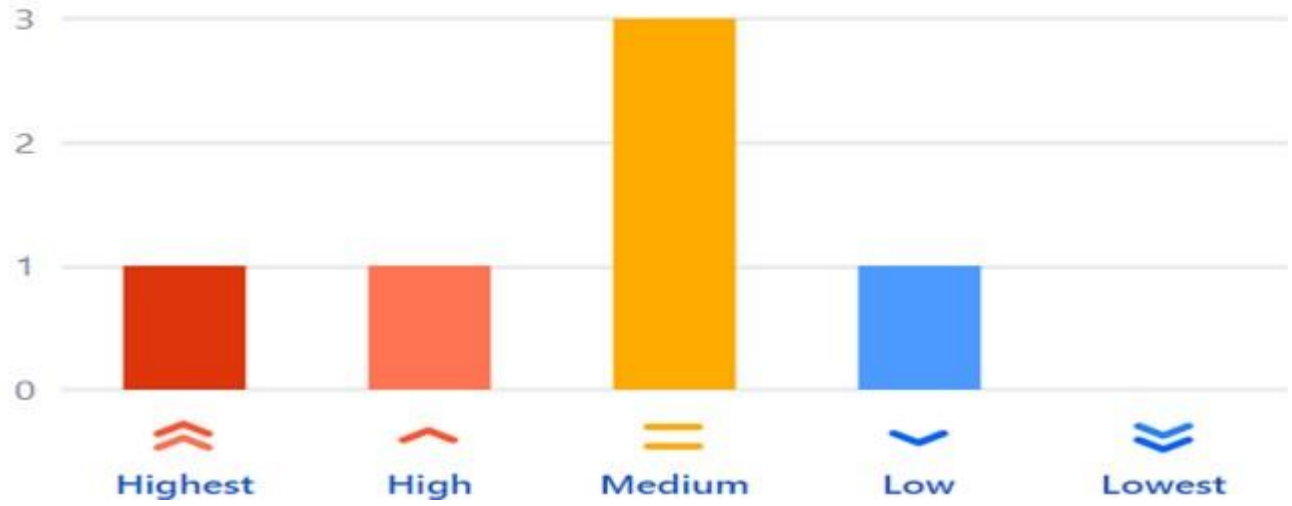
STATUS OVERVIEW

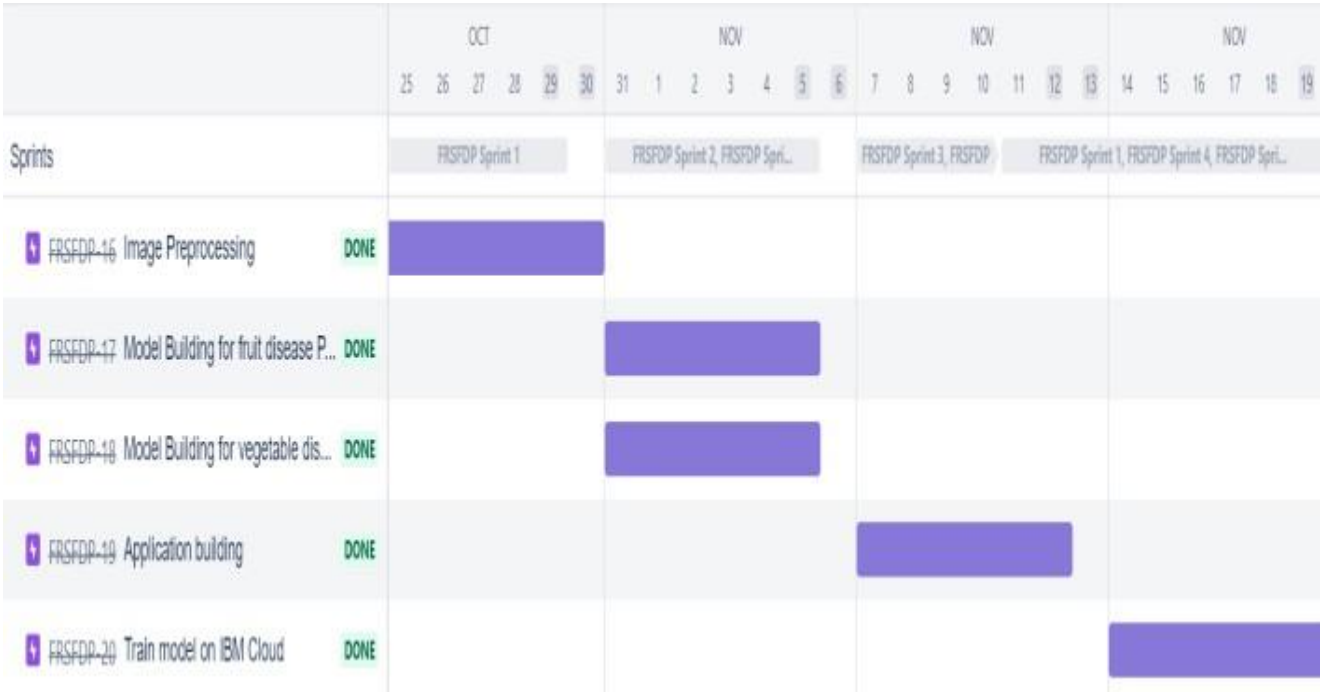
View the progress of your project based on the status of each item. For more details, go to the board view.

Open	0
To Do	0
In Progress	0
In Review	0
Cancelled	0
Done	10
Rejected	0
Total	**10**

Priority breakdown

Get a holistic view of how work is being prioritized within your project. To check if the team's focusing on the right work, go to the list view.



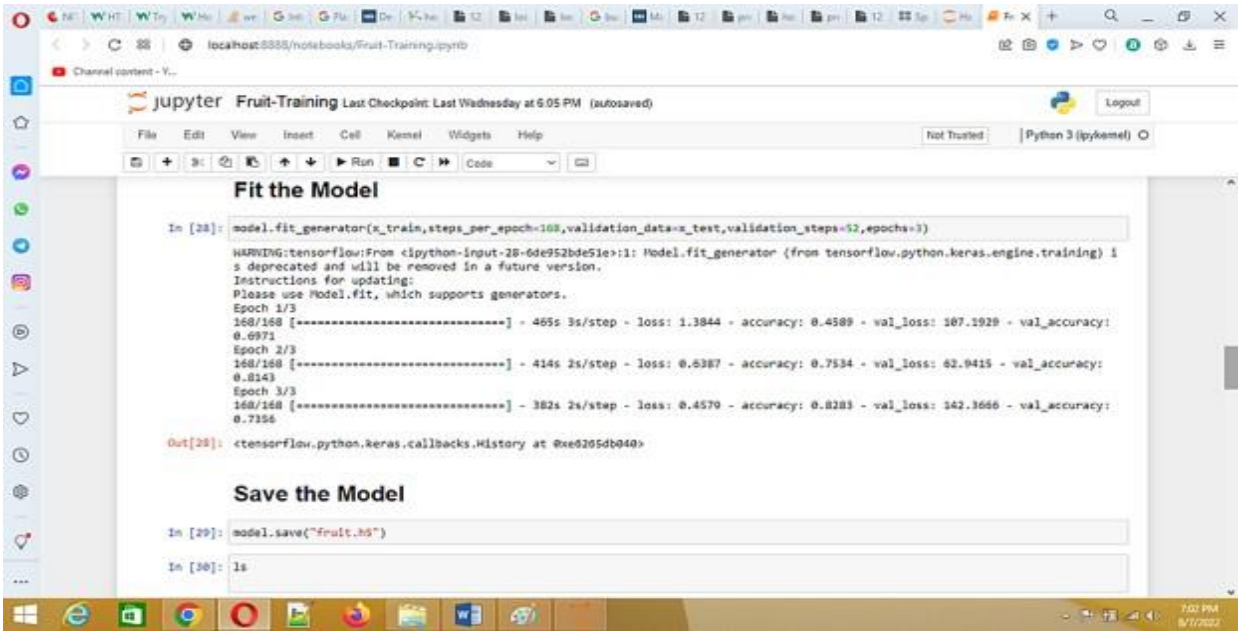


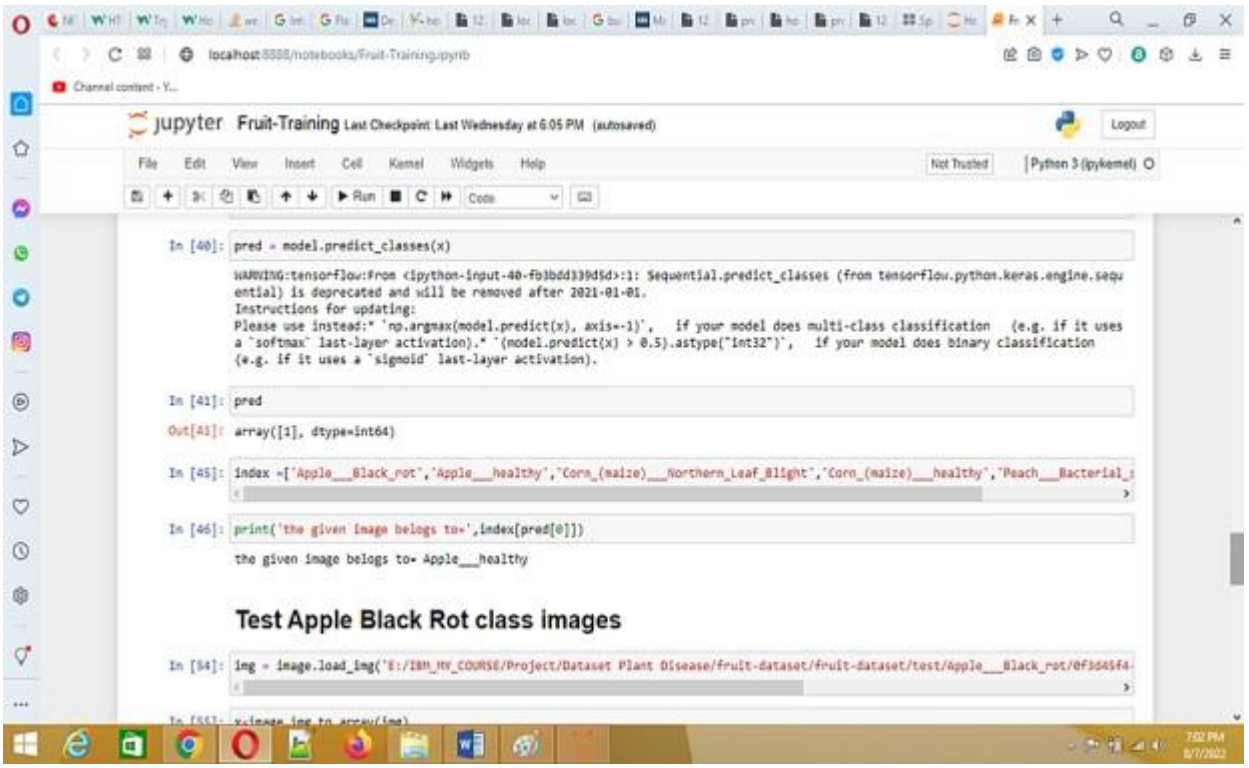
6. RESULT:

Final findings(output) of the project given below in the form

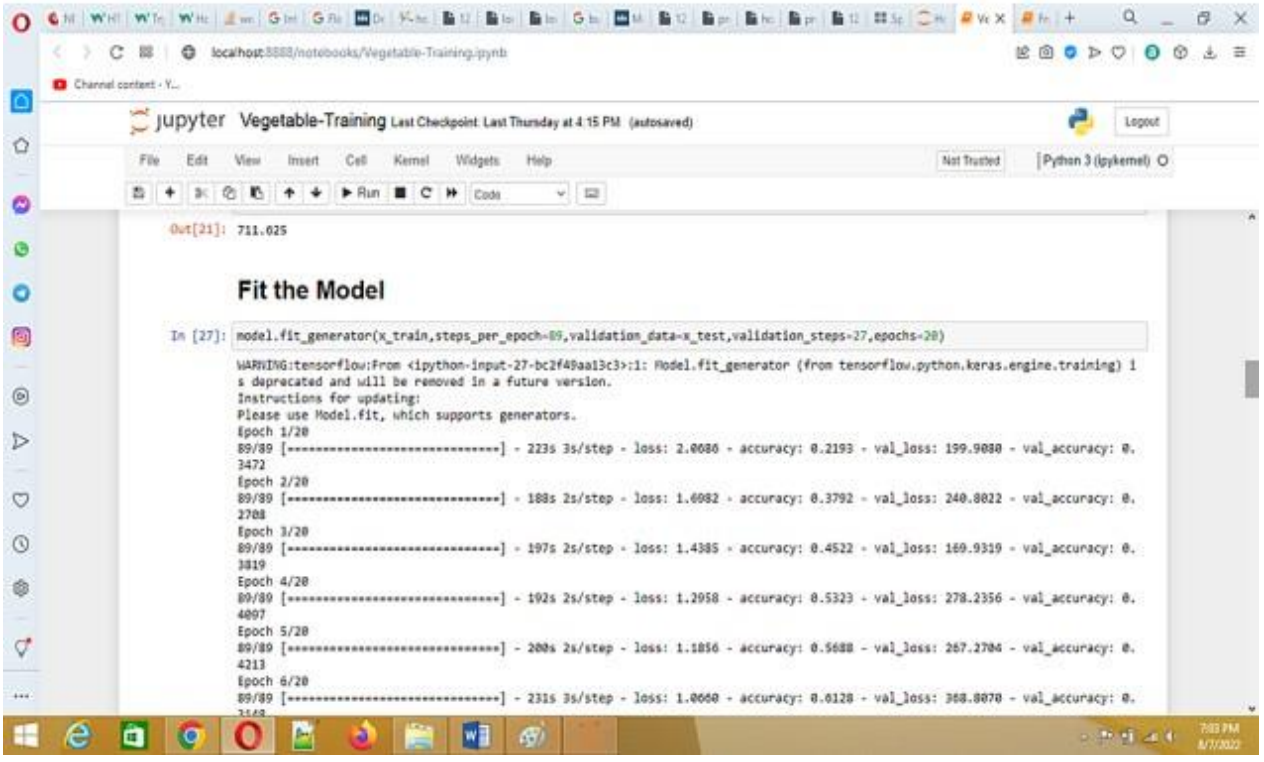
of screenshot:

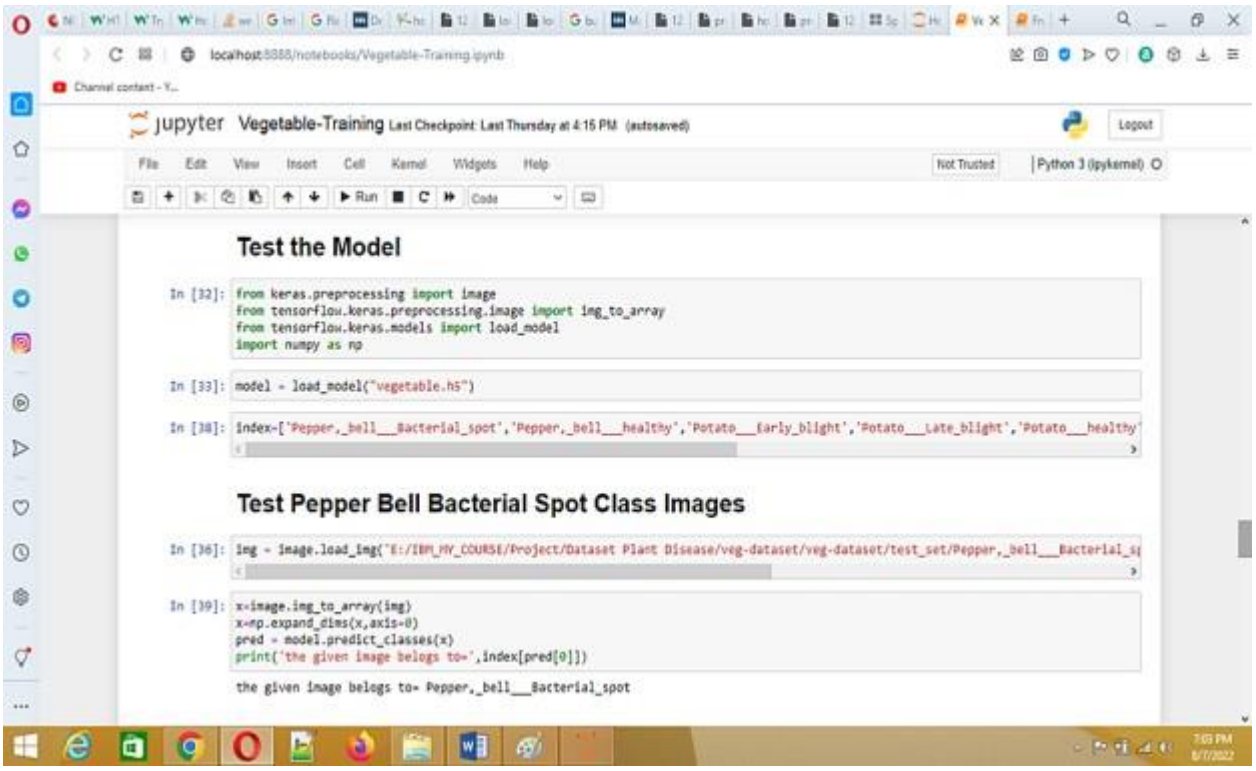
Training and Testing of Fruit dataset



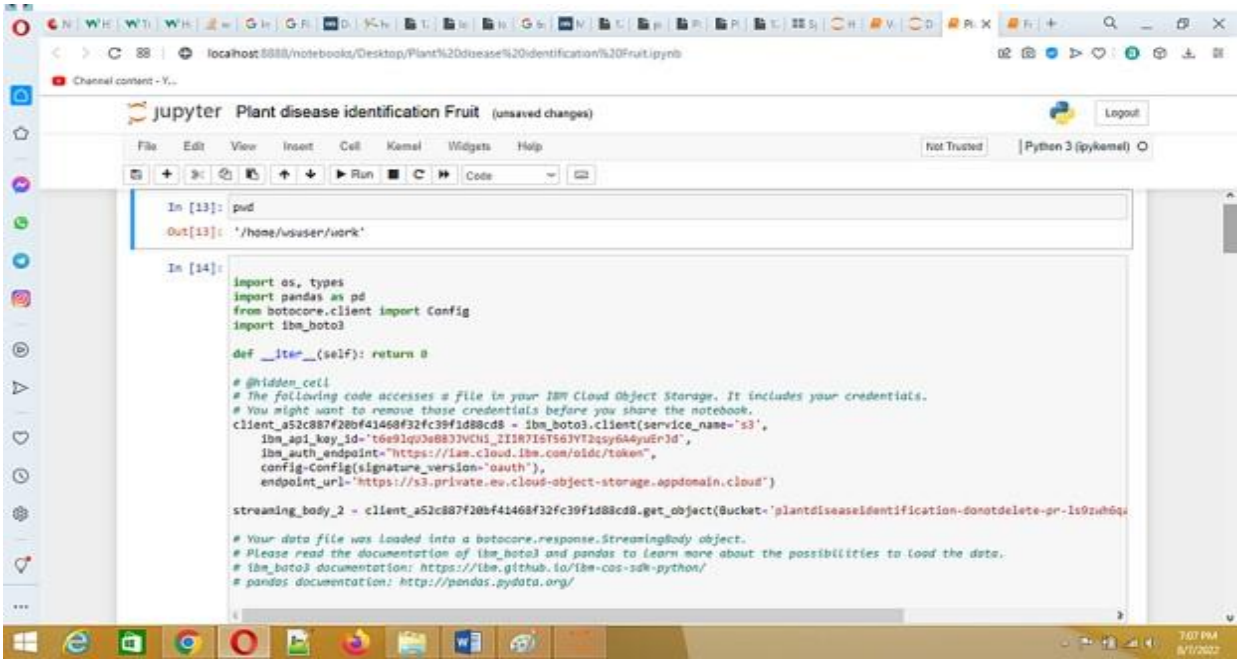


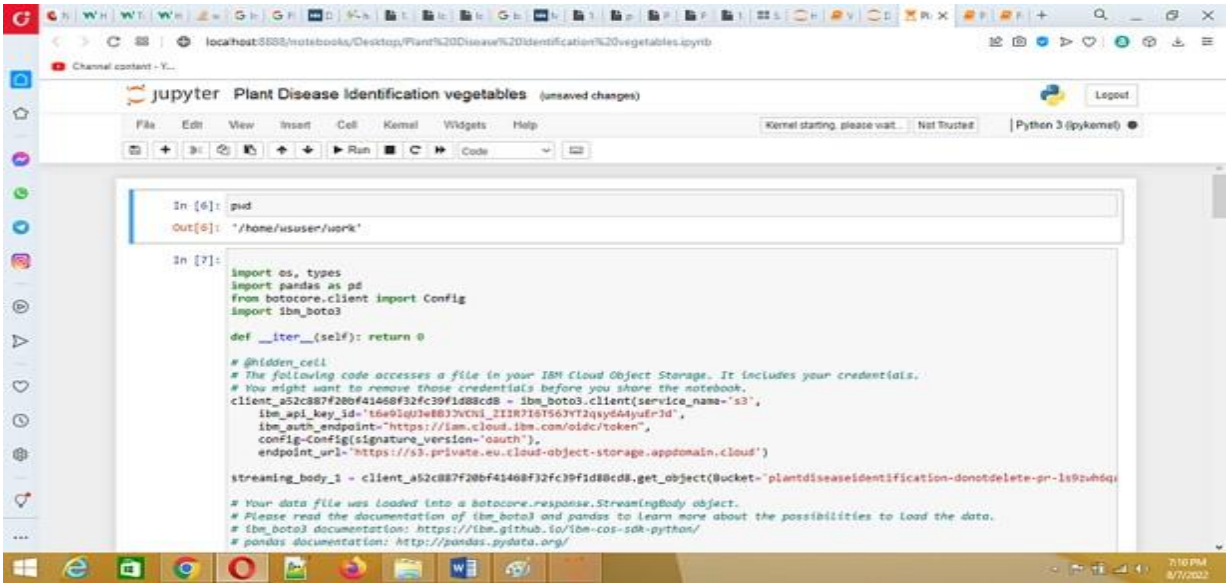
Train and Test Vegetable dataset



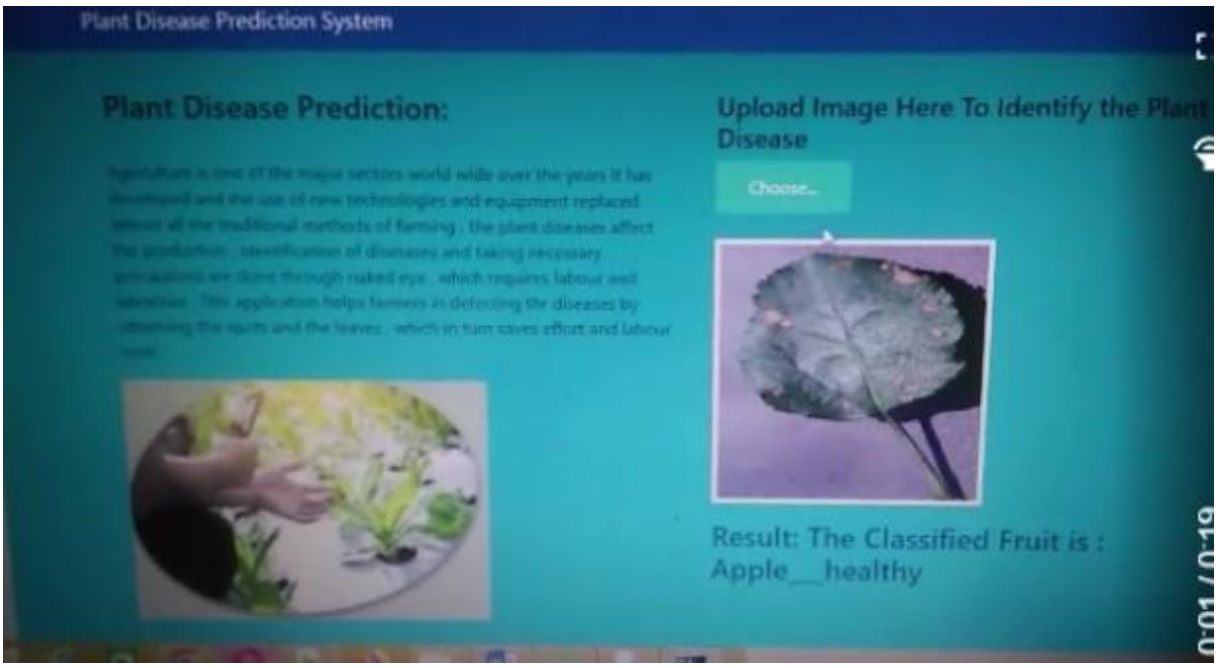


Train and Test Vegetable dataset





Flask web deployment



LOCUST REPORT:

Locust Test Report

During: 11/17/2022, 5:24:47 PM - 11/17/2022, 5:34:15 PM

Target Host: http://127.0.0.1:5000

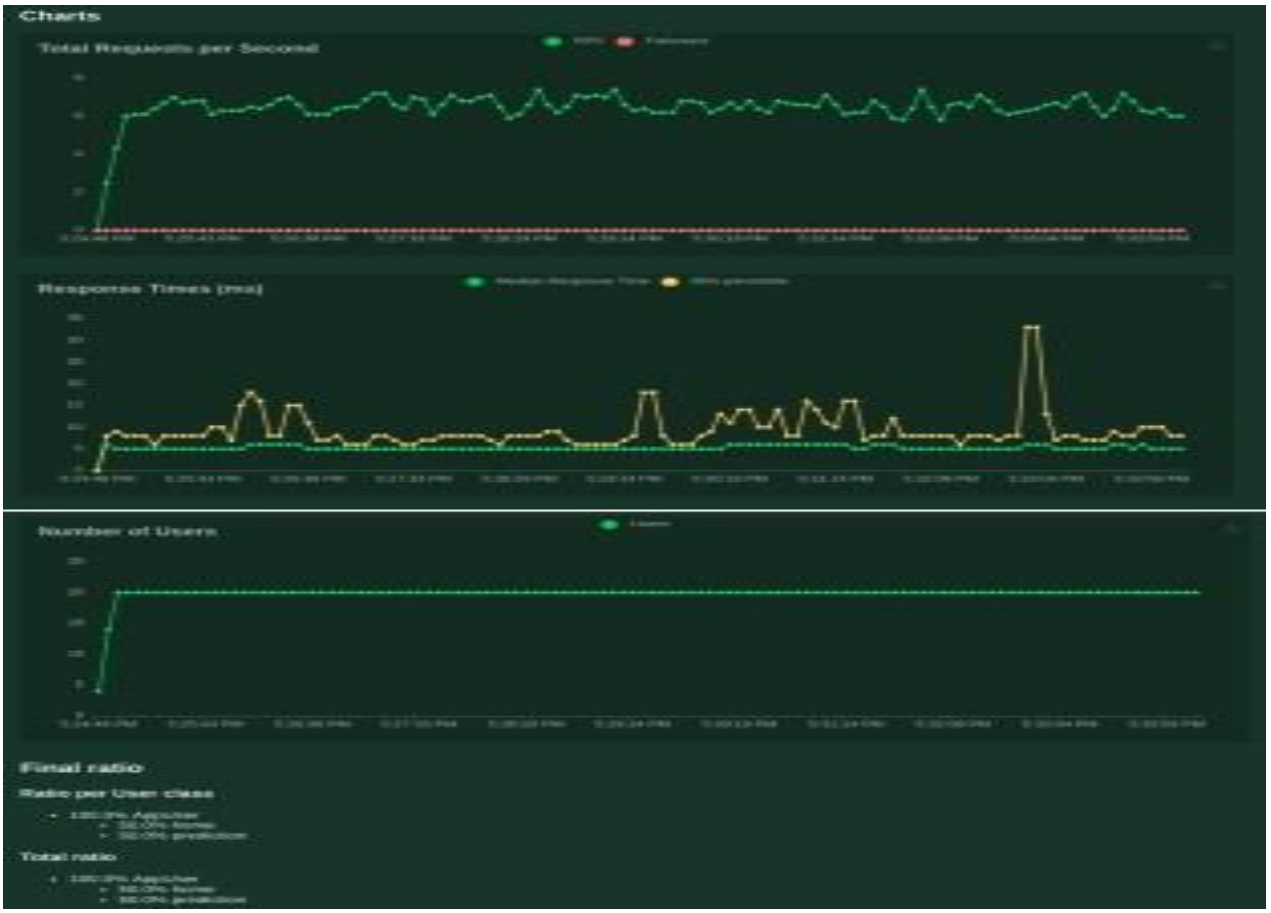
Script: locustfile.py

Request Statistics

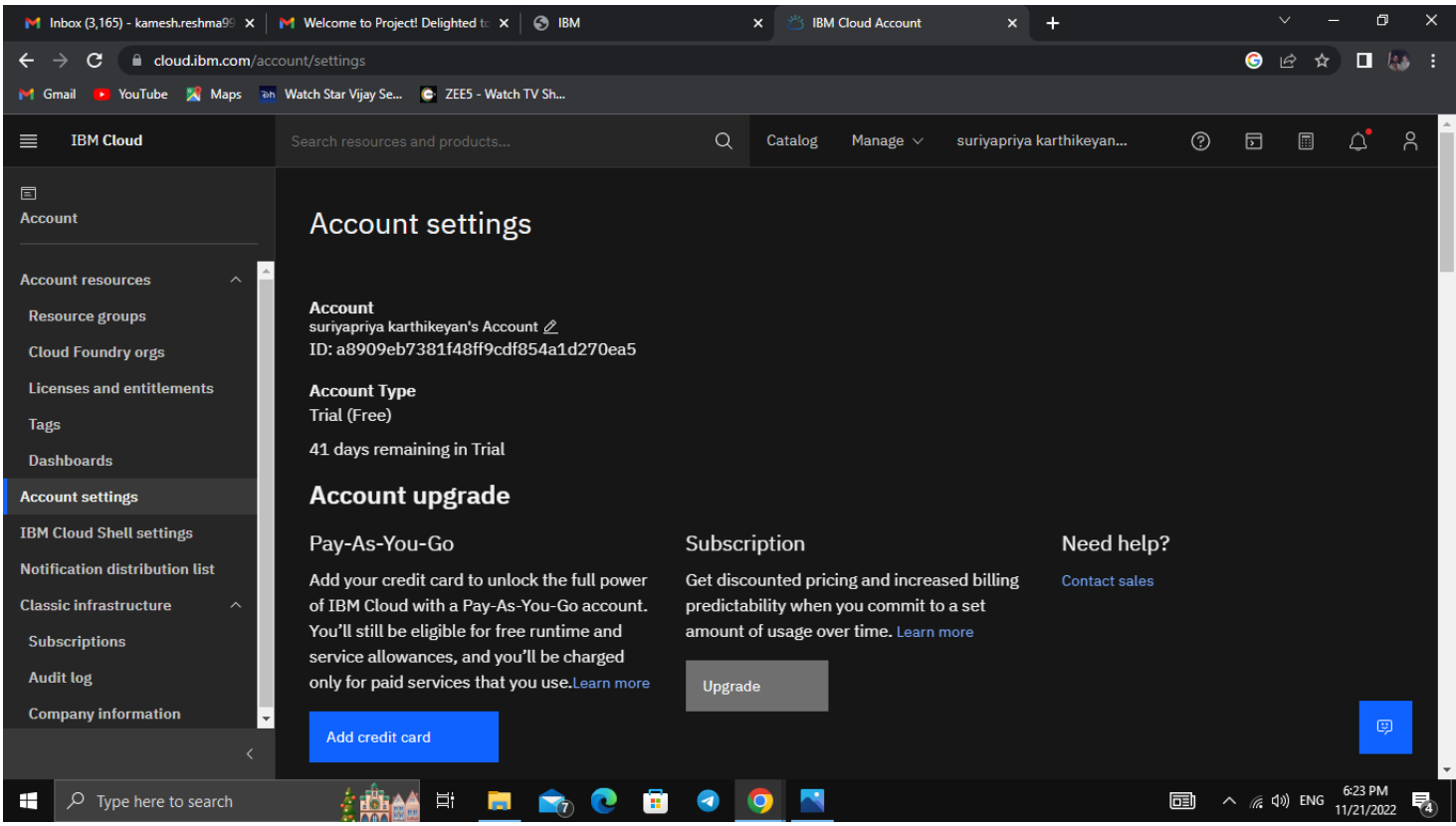
Method	Name	# Requests	# Fails	Average (ms)	Min (ms)	Max (ms)	Average size (bytes)	RPS	Failures/s
GET	/	1890	0	5	4	41	6381	3.3	0.0
GET	/prediction	1828	0	5	4	34	4484	3.2	0.0
	Aggregated	**3718**	**0**	**5**	**4**	**41**	**5448**	**6.5**	**0.0**

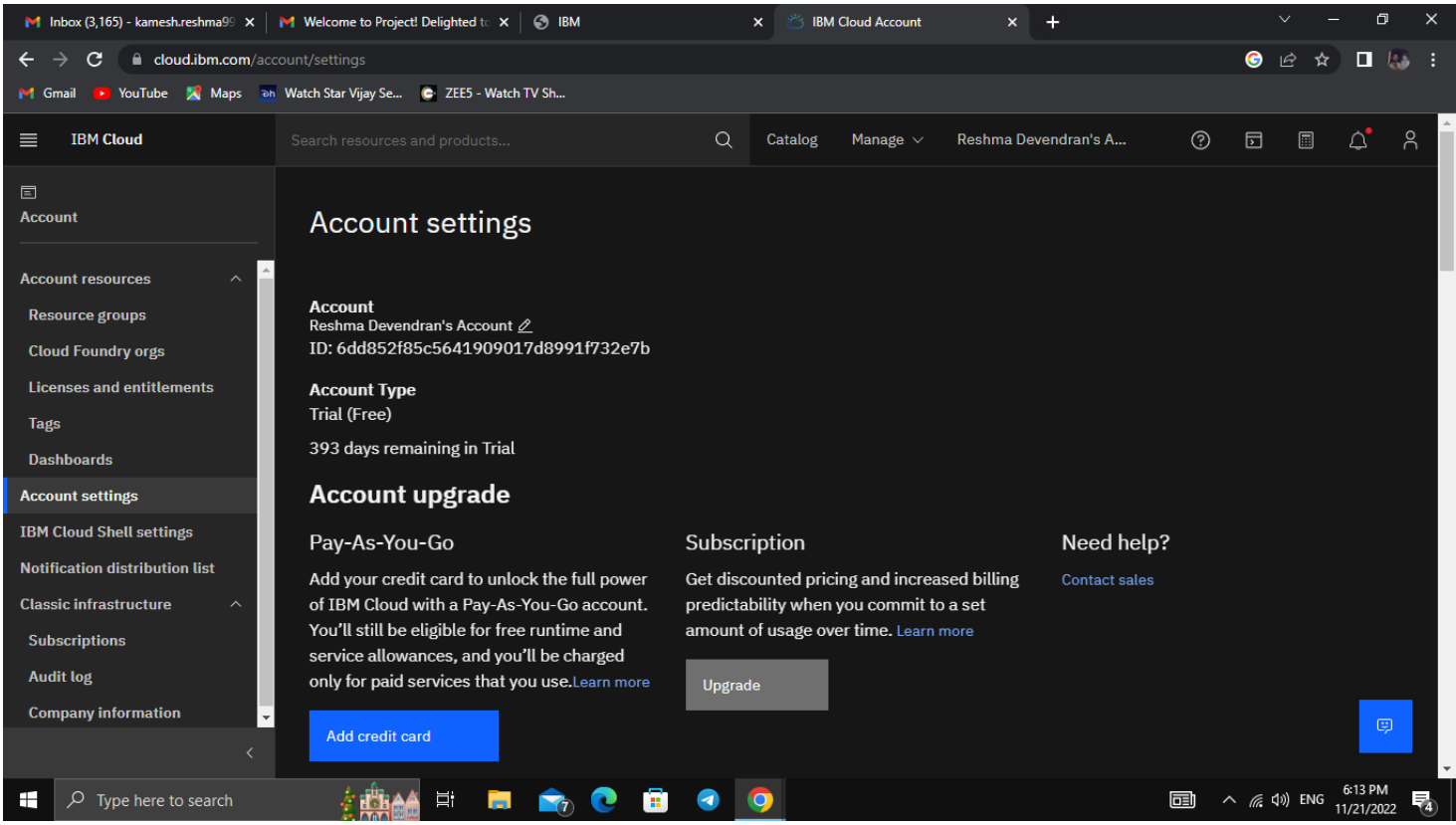
Response Time Statistics

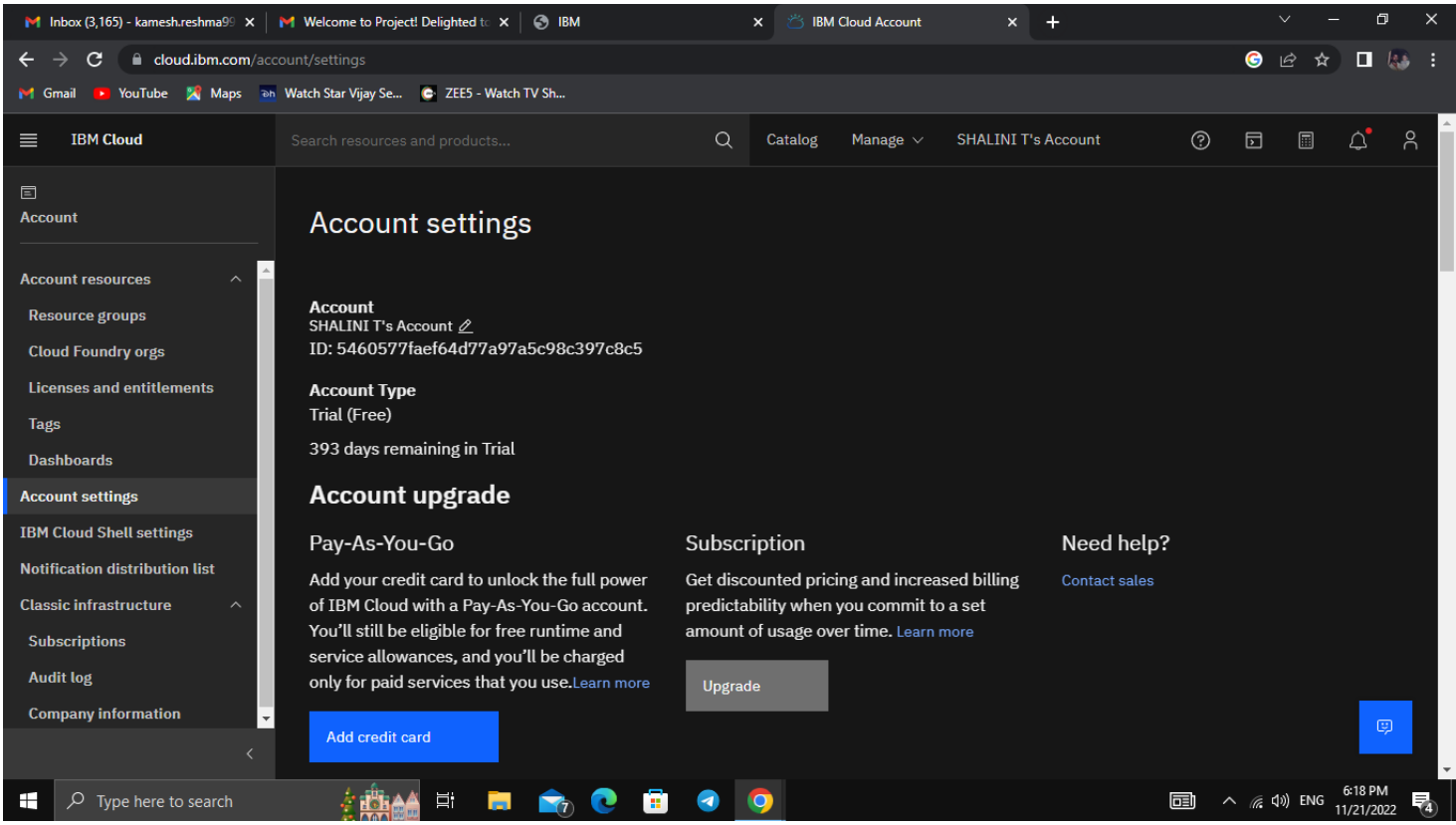
Method	Name	50%ile (ms)	60%ile (ms)	70%ile (ms)	80%ile (ms)	90%ile (ms)	95%ile (ms)	99%ile (ms)	100%ile (ms)
GET	/	5	5	6	6	7	9	19	41
GET	/prediction	5	5	6	6	7	9	19	34
	Aggregated	**5**	**5**	**6**	**6**	**7**	**9**	**19**	**41**

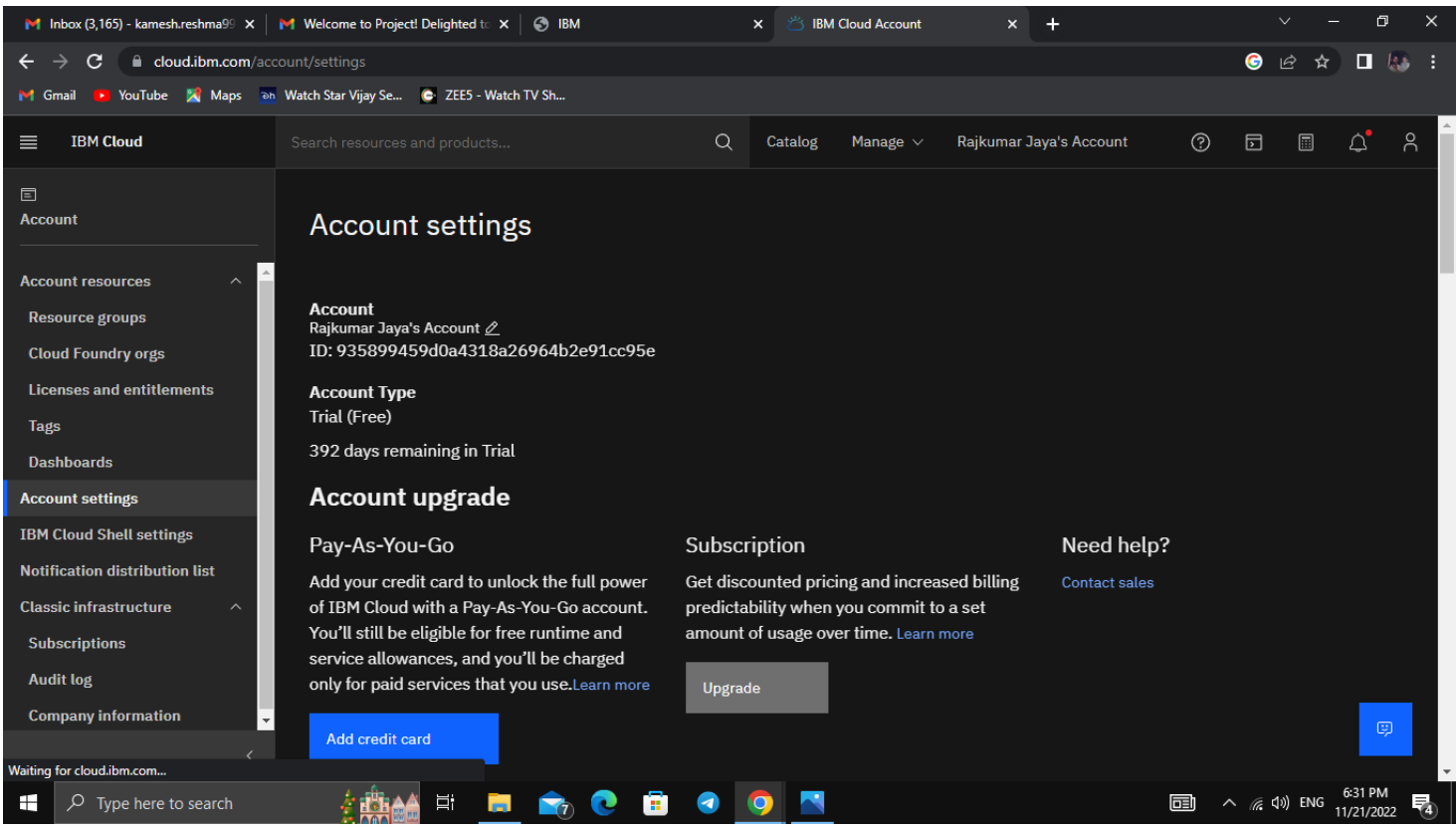


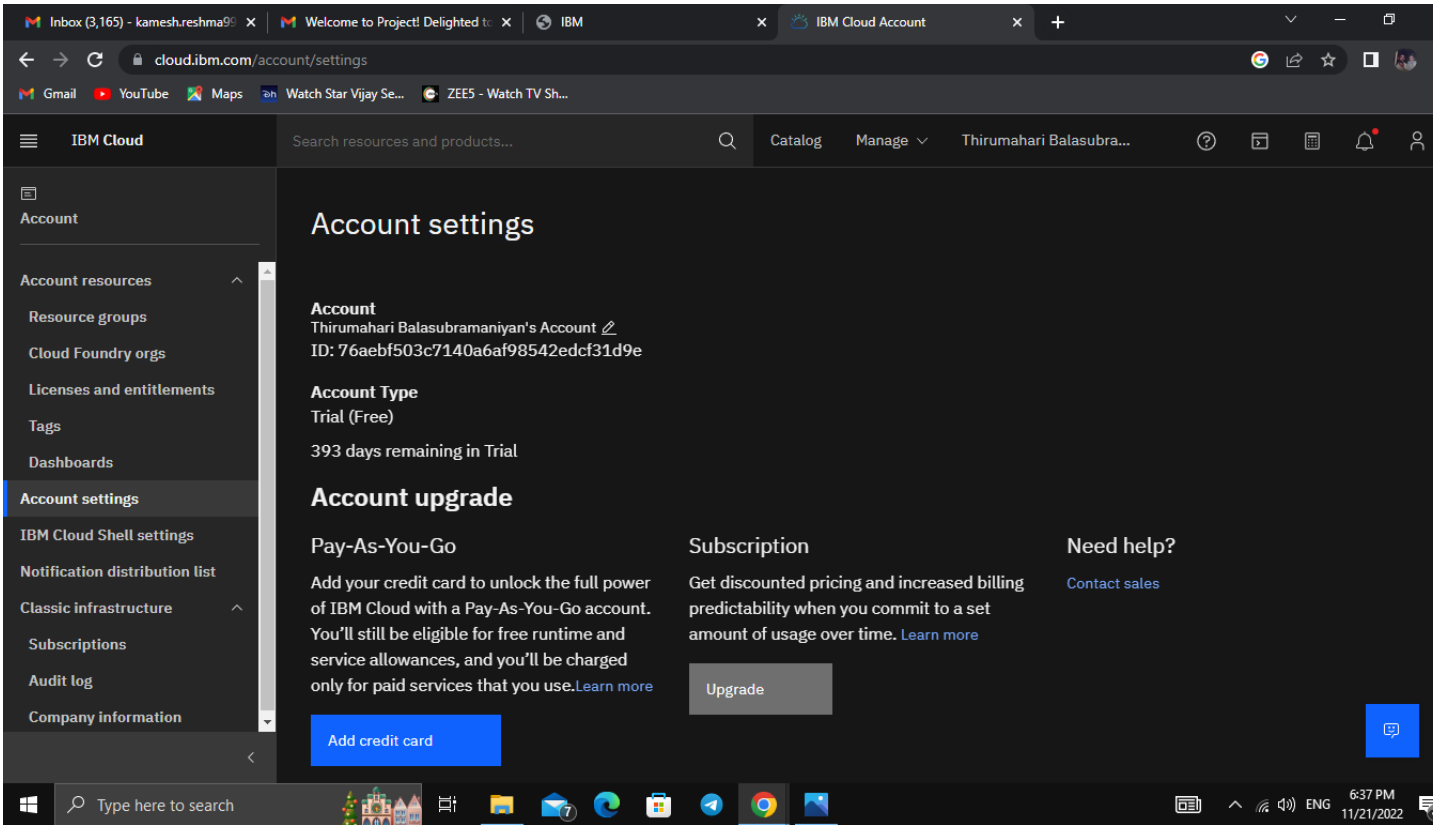
1. TRAIN THE MODEL:IBM CLOUD REGISTRATION:




Inbox (3,165) - kamesh.reshma9
Welcome to Project! Delighted t
IBM
IBM Cloud Account
cloud.ibm.com/account/settings
Gmail
YouTube
Maps
Watch Star Vijay Se...
ZEE5 - Watch TV Sh...
IBM Cloud
Search resources and products...
Catalog
Manage
Reshma Devendran's A...
Account
Account resources
Resource groups
Cloud Foundry orgs
Licenses and entitlements
Tags
Dashboards
Account settings
IBM Cloud Shell settings
Notification distribution list
Classic infrastructure
Subscriptions
Audit log
Company information
Account settings
Account
Reshma Devendran's Account
ID: 6dd852f85c5641909017d8991f732e7b
Account Type
Trial (Free)
393 days remaining in Trial
Account upgrade
Pay-As-You-Go
Add your credit card to unlock the full power of IBM Cloud with a Pay-As-You-Go account. You'll still be eligible for free runtime and service allowances, and you'll be charged only for paid services that you use.Learn more
Add credit card
Subscription
Get discounted pricing and increased billing predictability when you commit to a set amount of usage over time. Learn more
Upgrade
Need help?
Contact sales
Type here to search
ENG
6:13 PM
11/21/2022


Inbox (3,165) - kamesh.reshma9
Welcome to Project! Delighted t
IBM
IBM Cloud Account
cloud.ibm.com/account/settings
Gmail
YouTube
Maps
Watch Star Vijay Se...
ZEE5 - Watch TV Sh...
IBM Cloud
Search resources and products...
Catalog
Manage
SHALINI T's Account
Account
Account resources
Resource groups
Cloud Foundry orgs
Licenses and entitlements
Tags
Dashboards
Account settings
IBM Cloud Shell settings
Notification distribution list
Classic infrastructure
Subscriptions
Audit log
Company information
Account settings
Account
SHALINI T's Account
ID: 5460577faef64d77a97a5c98c397c8c5
Account Type
Trial (Free)
393 days remaining in Trial
Account upgrade
Pay-As-You-Go
Add your credit card to unlock the full power of IBM Cloud with a Pay-As-You-Go account. You'll still be eligible for free runtime and service allowances, and you'll be charged only for paid services that you use.Learn more
Add credit card
Subscription
Get discounted pricing and increased billing predictability when you commit to a set amount of usage over time. Learn more
Upgrade
Need help?
Contact sales
Type here to search
ENG
6:18 PM
11/21/2022


Inbox (3,165) - kamesh.reshma9
Welcome to Project! Delighted t
IBM
IBM Cloud Account
cloud.ibm.com/account/settings
Gmail
YouTube
Maps
Watch Star Vijay Se...
ZEE5 - Watch TV Sh...
IBM Cloud
Search resources and products...
Catalog
Manage
Rajkumar Jaya's Account
Account
Account resources
Resource groups
Cloud Foundry orgs
Licenses and entitlements
Tags
Dashboards
Account settings
IBM Cloud Shell settings
Notification distribution list
Classic infrastructure
Subscriptions
Audit log
Company information
Account settings
Account
Rajkumar Jaya's Account
ID: 935899459d0a4318a26964b2e91cc95e
Account Type
Trial (Free)
392 days remaining in Trial
Account upgrade
Pay-As-You-Go
Add your credit card to unlock the full power of IBM Cloud with a Pay-As-You-Go account. You'll still be eligible for free runtime and service allowances, and you'll be charged only for paid services that you use.Learn more
Add credit card
Subscription
Get discounted pricing and increased billing predictability when you commit to a set amount of usage over time. Learn more
Upgrade
Need help?
Contact sales
Waiting for cloud.ibm.com...
Type here to search
ENG
6:31 PM
11/21/2022



7. ADVANTAGE AND DISADVANTAGE:

List of advantages

- The proposed model here produces very high accuracy

of classification.

- Very large datasets can also be trained and tested.
- Images of very high can be resized within the proposed

itself.

List of disadvantages

- For training and testing, the proposed model requires very high computational time

- The neural network architecture used in this project work has high complexity.

8.APPLICATION:

1. The trained network model used to classify the image patterns with high accuracy.

2. The proposed model not only used for plant disease classification but also for other image pattern classification such as animal classification.

3. This project work application involves not only image classification but also for pattern recognition.

9.CONCLUSION:

The model proposed here involves image classification of fruit datasets and vegetable datasets. The following points are observed during model testing and training:

- The accuracy of classification increased by increasing the number of epochs.
- For different batch sizes, different classification accuracies are obtained.

- The accuracies are increased by increasing more convolution layers.
- The accuracy of classification also increased by varying dense layers.
- Different accuracies are obtained by varying the size of kernel used in the convolution layer output.
- Accuracies are different while varying the size of the train and test datasets.

10.FUTURE GOALS:

The proposed model in this project work can be extended to image recognition. The entire model can be converted to application software using python to exe software. The real time image classification, image recognition and vidoe processing are possible with help OpenCV python library. This project work can be extended for security applications such as figure print recognition, iris recognition and face recognition.

11.APPENDIX:

APPLICATION

BULIDING:

```
import requests

from tensorflow.keras.preprocessing import image

from tensorflow.keras.models import load_model

import numpy as np

import pandas as pd

import tensorflow as tf

from flask import Flask, request, render_template, redirect, url_for

import os

from werkzeug.utils import secure_filename

from tensorflow.python.keras.backend import set_session

app = Flask(__name__)

global sess

global graph

graph=tf.compat.v1.get_default_graph()

model = load_model(r"C:\Users\Sree Ram\OneDrive\Desktop\IBM Project\fruit.h5")

model1=load_model(r"C:\Users\SreeRam\OneDrive\Desktop\IBM

Project\vegetable.h5")

@app.route('/')

def home():

return render_template('home.html')

@app.route('/prediction')

def prediction():

return render_template('predict.html')

@app.route('/predict',methods=['POST'])

def predict():
```

```
if request.method == 'POST':

f = request.files['image']

basepath = os.path.dirname(__file__)

file_path = os.path.join(

basepath, 'Dataset Plant Disease', secure_filename(f.filename))

f.save(file_path)

img = image.load_img(file_path, target_size=(128, 128))

x = image.img_to_array(img)

x = np.expand_dims(x, axis=0)

plant=request.form['plant']

print(plant)

if(plant=="vegetable"):

preds = model.predict(x)

preds = np.argmax(preds)

print(preds)

df=pd.read_excel('precautions - veg.xlsx')

print(df.iloc[preds]['caution'])

else:

preds = model1.predict(x)

preds = np.argmax(preds)

df=pd.read_excel('precautions - fruits.xlsx')

print(df.iloc[preds]['caution']

return df.iloc[preds]['caution']

if__name__== "__main__":

app.run(debug=False)
```

[HTML Code]:

Home Page:

```
<!DOCTYPE html>

<html >

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<title> Plant Disease Prediction</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') }}">

<link href='https://fonts.googleapis.com/css?family=Merriweather' rel='stylesheet'>

<link href='https://fonts.googleapis.com/css?family=Josefin Sans' rel='stylesheet'>

<link href='https://fonts.googleapis.com/css?family=Montserrat' rel='stylesheet'>

<style>

.header {

top:0;

margin:0px;

left: 0px;
```

```
right: 0px;

position: fixed;

background-color: #28272c;

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: #333;

}

.topnav-right a {

float: left;

color: #f2f2f2;

text-align: center;

padding: 14px 16px;

text-decoration: none;

font-size: 18px;

}
```

```
.topnav-right a:hover {

background-color: #ddd;

color: black;

}

.topnav-right a.active {

background-color: #565961;

color: white;

}

.topnav-right {

float: right;

padding-right:100px;

}

body {

font-family:'Times New Roman', Times, serif;

background-image: url("../static/images/s1.jpg");

background-color:#ffffff;

background-repeat: no-repeat;

background-size:cover;

background-position: 0px 0px;

}

.button {

background-color: #28272c;

border: none;

color: white;

padding: 15px 32px;
```

```
text-align: center;

text-decoration: none;

display: inline-block;

font-size: 16px;

border-radius: 12px;

}

.button:hover {

box-shadow: 0 12px 16px 0 rgba(0,0,0,0.24), 0 17px 50px 0 rgba(0,0,0,0.19);

}

form {border: 3px solid #f1f1f1; margin-left:400px;margin-right:400px;}

input[type=text], input[type=password] {

width: 100%;

padding: 12px 20px;

display: inline-block;

margin-bottom:18px;

border: 1px solid #ccc;

box-sizing: border-box;

}

button {

background-color: #28272c;

color: white;

padding: 14px 20px;

margin-bottom:8px;

border: none;

cursor: pointer;
```

```
width: 15%;

border-radius:4px;

}

button:hover {

opacity: 0.8;

}

.cancelbtn {

width: auto;

padding: 10px 18px;

background-color: #f44336;

}

.imgcontainer {

text-align: center;

margin: 24px 0 12px 0;

}

img.avatar {

width: 30%;

border-radius: 50%;

}

.container {

padding: 16px;

}

span.psw {

float: right;

padding-top: 16px;
```

```
}

/* Change styles for span and cancel button on extra small screens */

@media screen and (max-width: 300px) {

span.psw {

display: block;

float: none;

}

.cancelbtn {

width: 100%;

}

}

.home{

margin:80px;

width: 84%;

height: 500px;

padding-top:10px;

padding-left: 30px;

}

.login{

margin:80px;

box-sizing: content-box;

width: 84%;

height: 420px;

padding: 30px;

border: 10px solid blue;
```

```
}

.left,.right{

box-sizing: content-box;

height: 400px;

margin:20px;

border: 10px solid blue;

}

.mySlides {display: none;}

img {vertical-align: middle;}

/* Slideshow container */

.slideshow-container {

max-width: 1000px;

position: relative;

margin: auto;

}

/* Caption text */

.text {

color: #f2f2f2;

font-size: 15px;

padding: 8px 12px;

position: absolute;

bottom: 8px;

width: 100%;

text-align: center;

}
```

```
/* The dots/bullets/indicators */

.dot {

height: 15px;

width: 15px;

margin: 0 2px;

background-color: #bbb;

border-radius: 50%;

display: inline-block;

transition: background-color 0.6s ease;

}

.active {

background-color: #717171;

}

/* Fading animation */

.fade {

-webkit-animation-name: fade;

-webkit-animation-duration: 1.5s;

animation-name: fade;

animation-duration: 1.5s;

}

@-webkit-keyframes fade {

from {opacity: .4}

to {opacity: 1}

}

@keyframes fade {
```

```
from {opacity: .4}

to {opacity: 1}

}

/* On smaller screens, decrease text size */

@media only screen and (max-width: 300px) {

.text {font-size: 11px}

}

</style>

</head>

<body>

<div class="header">

<div style="width:50%;float:left;font-size:2vw;text-align:left;color:white; paddingtop:1%">Plant Disease Prediction</div>

<div class="topnav-right"style="padding-top:0.5%;">

<a class="active" href="{{ url_for('home')}}">Home</a>

<a href="{{ url_for('prediction')}}">Predict</a>

</div>

</div>

<div style="background-color:#ffffff;">

<div style="width:60%;float:left;">

<div style="font-size:40px;color:#013220;font-family:Montserrat;padding-left:20px;textalign:center;padding-top:10%;">

<b>Fertilizers Recommendation System<br> For Disease Prediction!!</b>

</div><br>

<div style="font-size:20px;color:#ffffff;font-family:Arial Black;padding-left:70px;paddingright:30px;text-align:justify;">Agriculture is one of the major sectors worls wide. Over the

years it has developed and the use of new technologies and equipment replaced almost

all the traditional methods of farming. The plant diseases effect the production.
```

Identification of diseases and taking necessary precautions is all done through naked

eye, which requires labour and laboratries. This application helps farmers in detecting

the diseases by observing the spots on the leaves, which inturn saves effort and labour

costs.

<script>

var slideIndex = 0;

showSlides();

function showSlides() {

var i;

var slides = document.getElementsByClassName("mySlides");

var dots = document.getElementsByClassName("dot");

for (i = 0; i < slides.length; i++) {

slides[i].style.display = "none";

}

slideIndex++;

if (slideIndex > slides.length) {slideIndex = 1}

for (i = 0; i < dots.length; i++) {

```
dots[i].className = dots[i].className.replace(" active", "");

}

slides[slideIndex-1].style.display = "block";

dots[slideIndex-1].className += " active";

setTimeout(showSlides, 2000); // Change image every 2 seconds

}

</script>

</body>

</html>
```

Prediction Page:

```
<!DOCTYPE html>

<html >

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<title> Plant Disease Prediction</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://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='https://fonts.googleapis.com/css?family=Open+Sans+Condensed:300'

rel='stylesheet' type='text/css'>

<link href='https://fonts.googleapis.com/css?family=Merriweather' rel='stylesheet'>

<link href='https://fonts.googleapis.com/css?family=Josefin Sans' rel='stylesheet'>

<link href='https://fonts.googleapis.com/css?family=Montserrat' rel='stylesheet'>

<link href="{{ url_for('static', filename='css/final.css') }}" rel="stylesheet">

<style>

.header {

top:0;

margin:0px;

left: 0px;

right: 0px;

position: fixed;

background-color: #28272c;

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: #333;

}

.topnav-right a {

float: left;

color: #f2f2f2;

text-align: center;

padding: 14px 16px;

text-decoration: none;

font-size: 18px;

}

.topnav-right a:hover {

background-color: #ddd;

color: black;

}

.topnav-right a.active {

background-color: #565961;

color: white;

}

.topnav-right {

float: right;

padding-right:100px;

}
```

```
.login{

margin-top:-70px;

}

body {

background-image: url("../static/images/s2.jpg");

background-color:#ffffff;

background-repeat: no-repeat;

background-size:cover;

background-position: 0px 0px;

}

.login{

margin-top:100px;

}

.container {

margin-top:40px;

padding: 16px;

}

select {

width: 100%;

margin-bottom: 10px;

background: rgba(255,255,255,255);

border: none;

outline: none;

padding: 10px;

font-size: 13px;
```

```
color: #000000;

text-shadow: 1px 1px 1px rgba(0,0,0,0.3);

border: 1px solid rgba(0,0,0,0.3);

border-radius: 4px;

box-shadow: inset 0 -5px 45px rgba(100,100,100,0.2), 0 1px 1px

rgba(255,255,255,0.2);

-webkit-transition: box-shadow .5s ease;

-moz-transition: box-shadow .5s ease;

-o-transition: box-shadow .5s ease;

-ms-transition: box-shadow .5s ease;

transition: box-shadow .5s ease;

}

</style>

</head>

<body style="font-family:Montserrat;overflow:scroll;">

<div class="header">

<div style="width:50%;float:left;font-size:2vw;text-align:left;color:white; paddingtop:1%">Plant Disease Prediction</div>

<div class="topnav-right" style="padding-top:0.5%;">

</div>

</div>

<div class="container">

<div id="content" style="margin-top:2em">

<div class="container">

<div class="row">

<div class="col-sm-6 bd" >
```


<h4>Drop in the image to get the prediction </h4>

<form action = "" id="upload-file" method="post" enctype="multipart/form-data">

<select name="plant">

<option value="select" selected>Select plant type</option>

<option value="fruit">Fruit</option>

<option value="vegetable">Vegetable</option>

</select>

<label for="imageUpload" class="upload-label" style="background: #28272c;">

Choose...

</label>

<input type="file" name="image" id="imageUpload" accept=".png, .jpg, .jpeg">

</form>

<button type="button" class="btn btn-info btn-lg " id="btn-predict" style="background:

#28272c;">Predict!</button>

<h3>

</h3>

</body>

<footer>

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

</footer>

</htm>

•

12.GITHUB LINK

https://github.com/IBM-EPBL/IBM-Project-53461-1661407948