# PROJECT REPORT

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| Team ID | PNT2022TMID07468 |
| Project Name | Estimate the crop yield using data analytics |

1. **INTRODUCTION**

# Project Overview

Agriculture is critical to human survival because it provides a basic need. It is a well-known fact that agriculture employs the majority of the Indian population (55%) There are bottlenecks for increasing crop production in India due to climatic variations. It has become a difficult task to meet desired crop yield targets in agriculture. Several factors must be considered that have a direct impact on crop production and productivity. Crop yield prediction is an important aspect of agricultural practices. Farmers require crop yield information before sowing seeds in their fields in order to maximize crop yield.In recent years, the use of technology in agriculture has increased, and data analytics is one such trend that has permeated the agricultural field. The main challenge in using big data in agriculture is determining the efficacy of big data analytics.Crop yield prediction assists farmers in a variety of ways by supplying a record of previous crop yield. This assists the government in developing crop-related policies such as crop insurance policies and supply chain operation policies. Knowing what crops have been grown and how much area has been shown historically, along with the prices at which they could have been sold at the nearest market-place, provides the farmer's income-growth profile.In India, the agriculture sector is struggling to increase crop productivity. Monsoon rainfall is the primary source of water for more than 60% of crops. Smart agriculture, powered by information technology, is a recent trend in agricultural research. The problem of yield prediction, which is a major concern, is one of the areas being investigated. Data analytics techniques are widely used as part of crop yield prediction solutions. Various data mining techniques are being evaluated for predicting crop production in future years. Data analytics is the process of discovering hidden patterns in large data sets through analysis.



# Purpose

To help the farmers to gain profit in crop yield by predicting the necessary parameters seems to lack knowledge which cannot determine the production and fertility of the land income is questionable. And the Supplier turns a profit by selling the crop can’t able to estimate the crop yield prediction and can’t be determined. Revenue growth is uncertain therefore to help the stakeholders to gain profit in all fields.

# LITERATURE SURVEY

* 1. **Existing problem**

**A Novel Approach using Big Data Analytics to Improve the Crop Yield in Precision Agriculture:** Agriculture is the main work field in India. Farming industry adopts less innovative technology compared to other industries. Information and Communication Technologies provides simple and cost effective techniques for farmers to enable precision agriculture. The work proposes a state of the art model in the agriculture field which will guide the rural farmers to use Information and Communication technologies (ICT) in agriculture fields. Big data analytics is used to improve the crop yield. It can be customized for precision agriculture to improve the quality of crops which improves the overall production rate.

# Agriculture Data Analytics in Crop Yield Estimation: A Critical Review

Agriculture is important for human survival because it serves the basic need. A well-known fact is that the majority of population (≥55%) in India is into agriculture. Due to variations in climatic conditions, there exist bottlenecks for increasing the crop production in India. It has become a challenging task to achieve desired targets in Agri based crop yield. Various factors are to be considered which have a direct impact on the production, productivity of the crops. Crop yield prediction is one of the important factors in agriculture practices. Farmers need information regarding crop yield before sowing seeds in their fields to achieve enhanced crop yield. The use of technology in agriculture has increased in recent year and data analytics is one such trend that has penetrated into the agriculture field. The main challenge in using big data in agriculture is identification of effectiveness of big data analytics.

# Advancing Precision Crop Yield Prediction With Data Analytics

Since 1980, farmers around the world have been turning to the World Agricultural Supply and Demand Estimates prepared by the U.S. Department of Agriculture (USDA) for help in making these decisions. Every month, the USDA releases supply-and-demand forecasts, an exhaustive analysis compiled from farmer surveys and historical weather patterns, for major crops like corn and soybeans Now, however, a number of other players have entered the game, bringing a new level of expertise and computing power to

the problem. Their efforts aren’t just making life easier for growers. Their ultimate goal: to make agriculture safer and more sustainable far into the future.

# How data analytics is transforming agriculture

Data analytics is a critical part of improving business operations in every industry. An organization can utilize data analytics to improve decision-making, analyze customer trends, track customer satisfaction and identify opportunities for new products and services to meet growing market needs. By integrating information and systems to gather data across the business, organizations are able to gain real-time insights into marketing, product demand, sales and finances.

With the world population expected to reach more than nine billion by the year 2050, The Food and Agriculture Organization (FAO) predicts a 70-percent growth in agricultural output will be needed to serve the projected demand. This driving force has greatly increased the interest in and utilization of data analytics in agribusiness.

* 1. **References** [**https://ieeexplore.ieee.org/document/9012549**](https://ieeexplore.ieee.org/document/9012549)

[**https://www.academia.edu/44236224/Agriculture\_Data\_Analytics\_in\_Crop\_Yield\_Estimation\_A\_C**](https://www.academia.edu/44236224/Agriculture_Data_Analytics_in_Crop_Yield_Estimation_A_Critical_Review)[**ritical\_Review**](https://www.academia.edu/44236224/Agriculture_Data_Analytics_in_Crop_Yield_Estimation_A_Critical_Review)

[**https://www.corteva.com/who-we-are/outlook/precision-crop-yield-prediction-with-data-analytics.ht**](https://www.corteva.com/who-we-are/outlook/precision-crop-yield-prediction-with-data-analytics.html)[**ml**](https://www.corteva.com/who-we-are/outlook/precision-crop-yield-prediction-with-data-analytics.html)

[**https://proagrica.com/news/how-data-analytics-is-transforming-agriculture/**](https://proagrica.com/news/how-data-analytics-is-transforming-agriculture/)

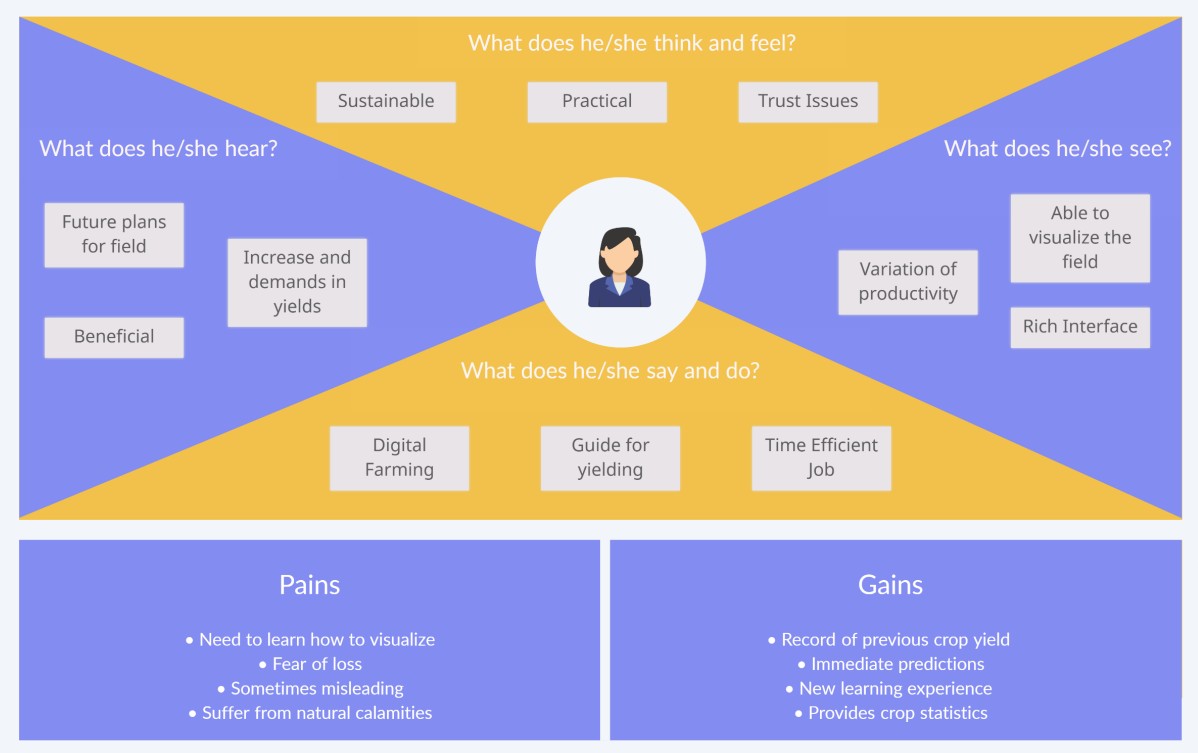
# Problem statement definition



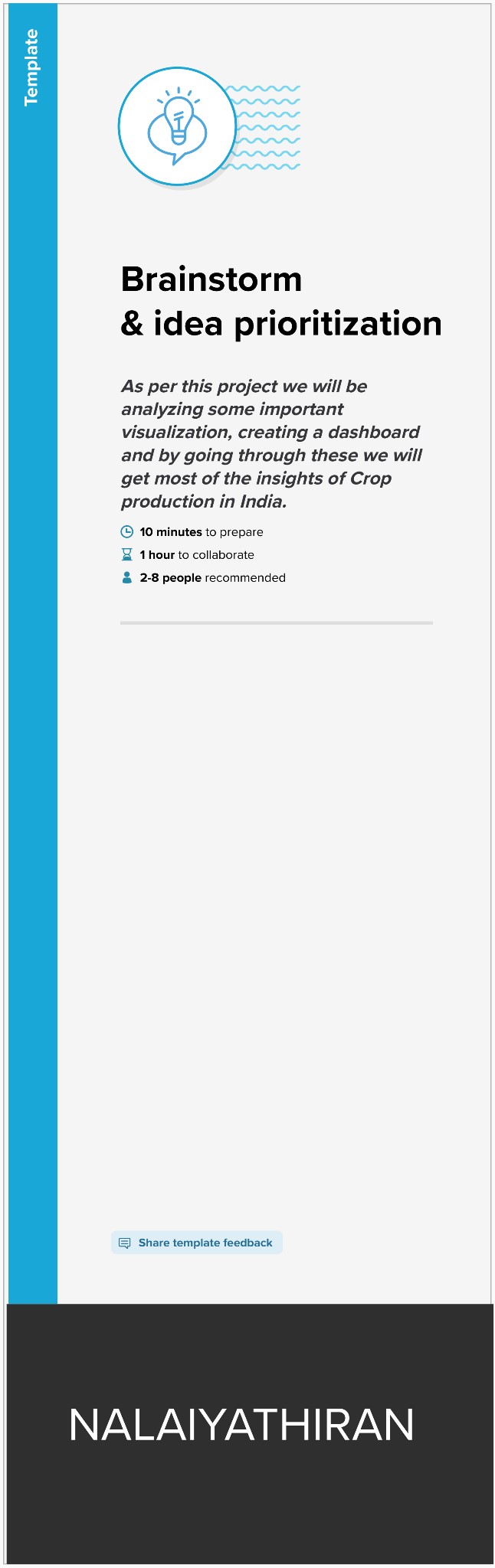
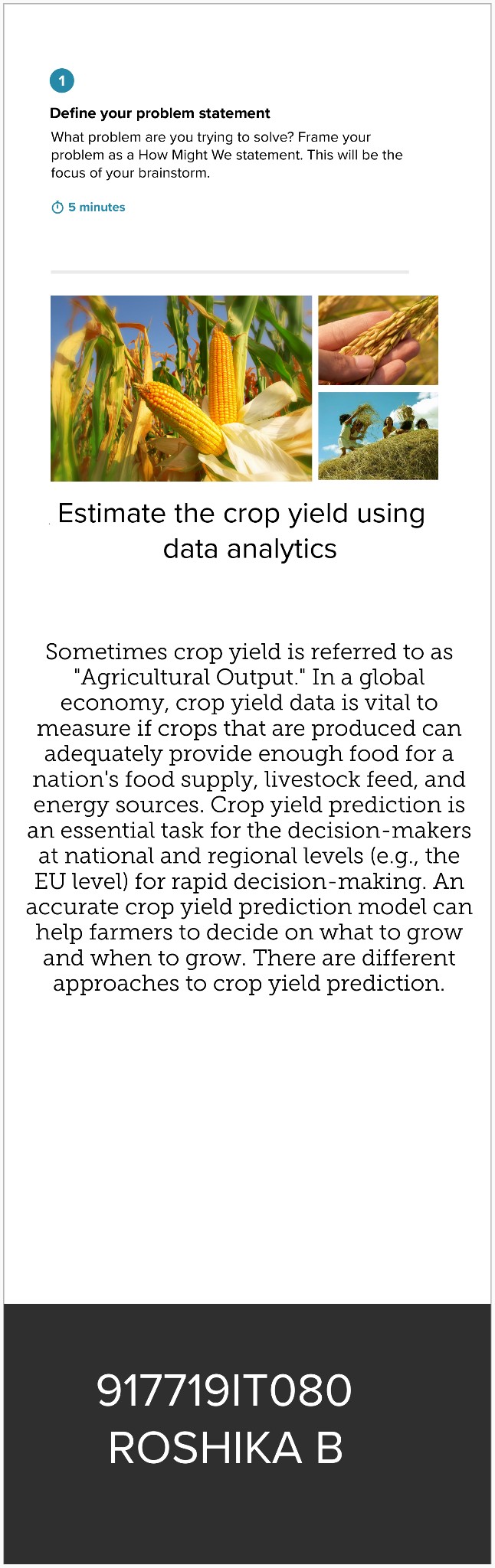
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| --- | --- | --- | --- | --- | --- |
| **Problem Statement**  **(PS)** | **I am (Customer)** | **I’m trying to** | **But** | **Because** | **Which makes me feel** |
| PS-1 | A Farmer | Gain profit in crop yield by predicting the necessary  parameters | seem to lack knowledge | cannot determine the production and fertility of the land | Income is questionable. |
| PS-2 | Supplier | Turn a profit by selling the crop. | Can’t able to estimate the  crop yield | Crop yield prediction can’t be  determined | Revenue growth is uncertain. |

1. **IDEATION & PROPOSED SOLUTION**

# Empathy Map Canvas



* 1. **Ideation & Brainstormin**



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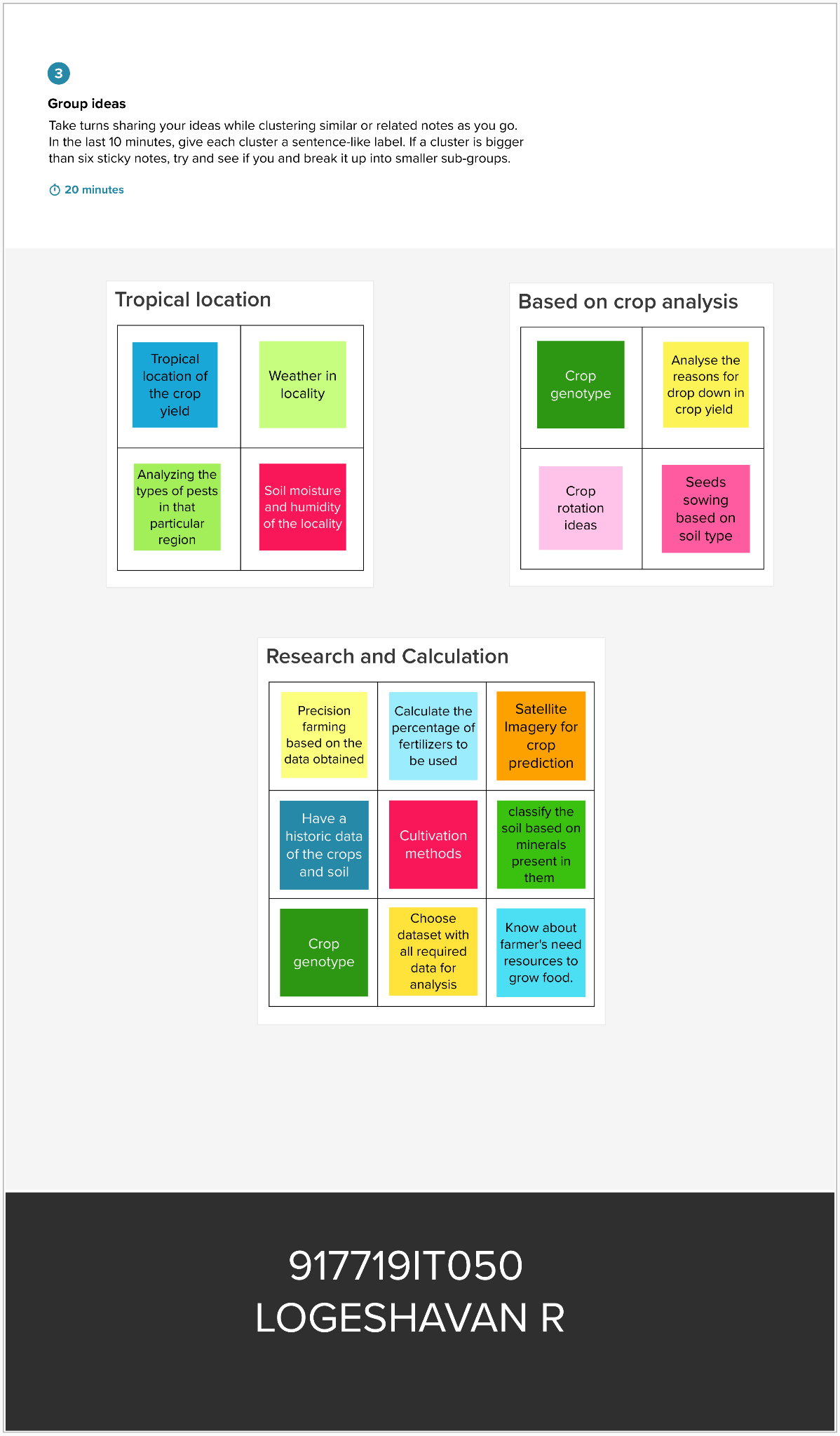
# MALLESHWARAN P



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VALLARASU R

Mallesh vallarasu vinoth udaya



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VINOTHKUMAR A



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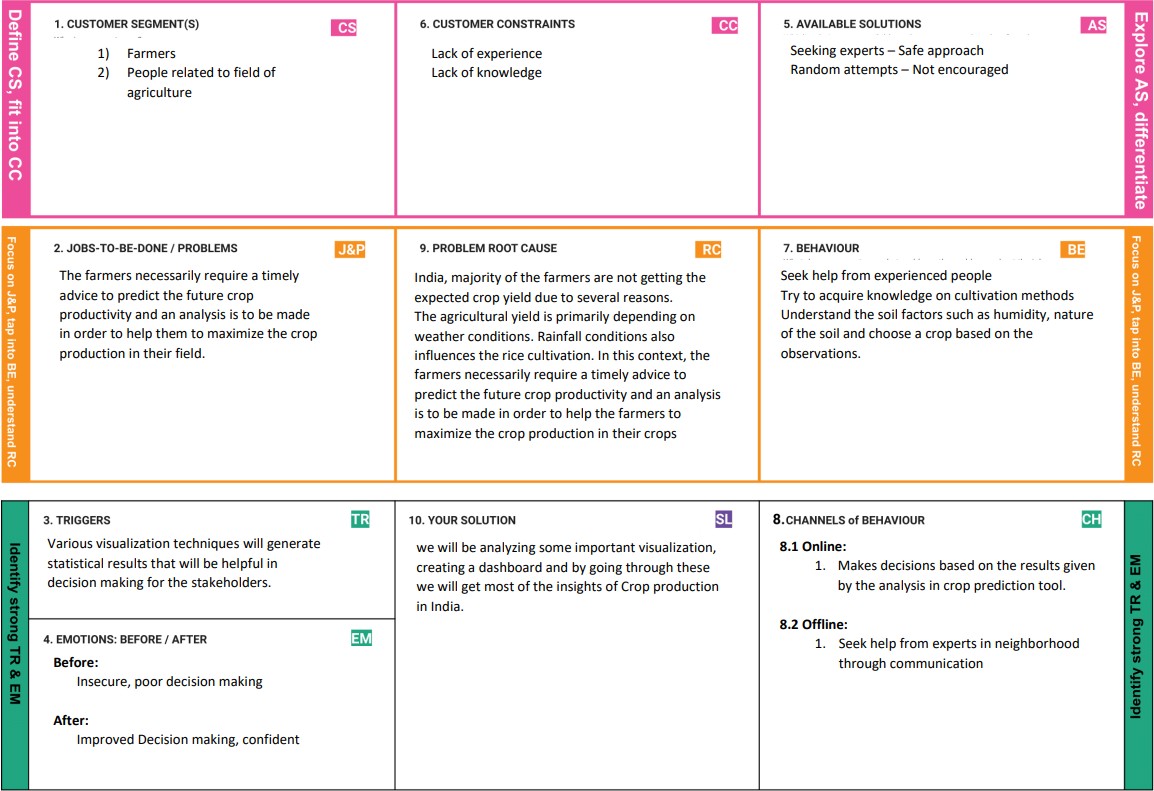
UDAYAKUMAR M

# Proposed Solution

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| --- | --- | --- |
| **S.No** | **Parameter** | **Description** |
| 1. | Problem Statement (Problem to be solved) | Estimating the crop yield using data analytics Agriculture is the backbone of the Indian Economy. In India, the majority of the farmers are not getting the expected crop yield due to several reasons. The agricultural yield is primarily dependent on weather conditions. Rainfall conditions also influence rice cultivation. In this context, the farmers necessarily require timely advice to predict the future crop productivity and an analysis is to be made in order to help the farmers to maximize the crop production in their crops. As per this project we will be analyzing some important visualization, creating a dashboard and by going through these we will get most of the insights of Crop production in India. |
| 2. | Idea / Solution Description | Agriculture mechanization has made significant progress. Farming strategies and programmers have been geared toward the replacement of traditional and inefficient implements with improved ones, allowing farmers to own tractors, power tillers, harvesters, and other machines. |
| 3. | Novelty / Uniqueness | Agriculture machines are also being developed for a broad industrial base. Efforts are being made to encourage farmers to use technologically advanced agricultural equipment. Climate variables had no significant impact on crop yields across the board. The regression analysis revealed a negative relationship between maize yield and summer precipitation, a positive relationship between wheat yield and winter minimum temperature, and a positive relationship between millet yield and summer maximum temperature. |
| 4. | Social Impact / Customer Satisfaction | The primary goals of this technique are crop production predictions, which can be very helpful to farmers in making |

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|  |  | plans for harvest and sale of grain harvest. For growers, raising agricultural yields is a top priority. There will be a greater crop and grain yield despite climate change and global warming. Utilizing crop yield analysis and estimation tools will also improve nutrition. |
| 5. | Business Model (Revenue Model) | The advancement of technology into the agriculture industry has resulted in significant increases in productivity. Technology advancements have given rise to new concepts such as precision agriculture, which has observed and analyzed the various crops grown, as well as their area and production levels in various states and districts. The planned method's goal is to be transparent, easily accessible, reproducible, and capable of predicting yield. Correct procedures and a long-term gain plan are simple to implement and require less capital. |
| 6. | Scalability of the Solution | * Meets social expectations and complies with community norms. * Livestock management system. * Warmer temperature. * Decreased moisture stress. * Possibility of growing new crops * Reduce time management complexity of farmers * The profitability of sustainable farming will be high |

* 1. **Problem Solution fit**



# REQUIREMENT ANALYSIS

* 1. **Functional requirement**

Following are the functional requirements of the proposed solution.

|  |  |  |
| --- | --- | --- |
| **FR No.** | **Functional Requirements (Epic)** | **Sub Requirement (Story/Sub task)** |
| FR - 1 | User Registration | * Registration through Form * Registration through Gmail * Registration through LinkedIn * Registration through Mobile Number |
| FR - 2 | User Confirmation | * Confirmation via mail * Confirmation via OTP * Two step verification for new device login |

|  |  |  |
| --- | --- | --- |
| FR - 3 | Admin | Admin have user details and maintain crop productions |

# Non-functional Requirements

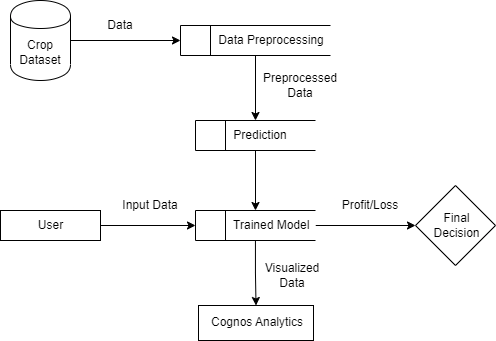
Following are the non-functional requirements of the proposed solution.

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| --- | --- | --- |
| **FR No.** | **Non-Functional Requirement** | **Description** |
| NFR - 1 | Usability | We have primarily focused on making our website easy to navigate in order to deliver the best usability for the farmers. Users may quickly log in using existing credentials, and if they don't already have an account, they can also register on their own by providing a unique, valid email address or a mobile number which make their process easier. Following effective navigation, we focused on visual clarity and created a web application that looks nice and is straightforward, making it easier for any elderly person to utilize. In order to improve user happiness, a Guide tour will also be offered to first-time visitors. |
| NFR - 2 | Security | A verification code will be provided to the registered email address or mobile number of any user before they attempt to log into their account on a new device. They won't be able to login until they enter their code. The code will also be made to expire after a certain period of time. Additionally, notifications will be provided for any action taken by a user. As a result, each user will have a safe account, and the admin side will maintain each user's information securely. |
| NFR - 3 | Reliability | Since we had split the crops into categories in order to make easier choices for the user. Data processing time for each and every individual will be lesser. Thus making our web application |

|  |  |  |
| --- | --- | --- |
|  |  | more reliable. |
| NFR-4 | Performance | In order to bring best performance, we have concentrated on overload of data. To minimize the overloads and to minimize the system’s response time we have processed the data in structured organized form. So that the data (crop) will be categorized according to the user’s needs. |
| NFR-5 | Availability | As the server is online the site is available 24/7 for the user's needs. |
| NFR-6 | Scalability | With respect to increase in streaming data , the data storage will also increase accordingly and the prediction will be previously stored. Rescaling is always adaptable here. |

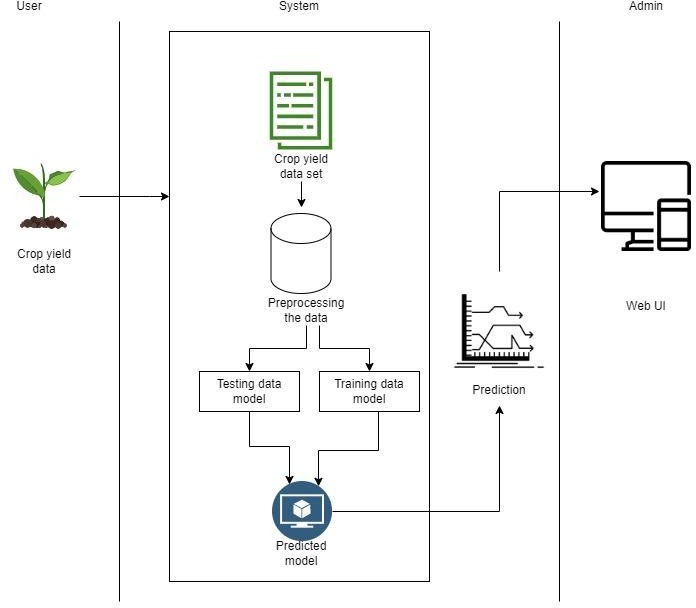
# PROJECT DESIGN

* 1. **Data Flow Diagrams**



# Solution & Technical Architecture Solution Architecture

**Technical Architecture**



# Components and Technologies

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No** | **Component** | **Description** | **Technology** |
| 1. | User Interface | The user interacts with the application through web UI. | HTML, CSS, python |
| 2. | Application Logic-1 | Logic for login in the application | Python |
| 3. | Application Logic-2 | Logic for registration in the application | Python |
| 4. | Application Logic-3 | Logic for a process in the application | IBM Watson Assistant |
| 5. | Cloud Database | Database Service on Cloud | IBM DB2 |
| 6. | File Storage | To store files such as prediction report | Local Filesystem |
| 7. | Data Analytics Model | Predictive modeling solutions are a form of data-mining technology that works by analyzing historical and current data and generating a model to help predict future outcomes. | Predictive modeling |
| 8. | Infrastructure (Server / Cloud) | Application Deployment on Local System  Local Server Configuration: built-in flask web server | Local web server |

**Application Characteristics**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No** | **Characteristics** | **Description** | **Technology** |
| 1. | Open-Source Frameworks | Flask | Micro web framework written in Python |
| 2. | Security Implementations | Basic HTTP authentication, Session based authentication, User Registration, Login Tracking | Flask Security |
| 3. | Scalable Architecture | Size is everything, and Flask’s status as a microframework means that you can use it to grow a tech project such as a web app incredibly quickly. Its simplicity of use and few dependencies enable it to run smoothly even as it scales up and up. | Flask |
| 4. | Availability | Higher compatibility with latest technologies and allows customization | Flask |
| 5. | Performance | * Integrated support for unit testing. * RESTful request dispatching. * Uses Jinja templating. * Support for secure cookies (client side sessions) 100% WSGI 1.0 compliant. | Flask |

# User Stories

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **User Type** | **Functional Requiremen t (Epic)** | **User Story Numbe**  **r** | **User Story / Task** | **Acceptance criteria** | **Priority** | **Release** |
| Customer | Registration | USN-1 | As a user, I can register for the | I can access my | High | Sprint-1 |
| (Web user) |  |  | application by entering my email, | account / |  |  |
|  |  |  | password, and confirming my | dashboard |  |  |
|  |  |  | password. |  |  |  |
|  |  | USN-2 | As a user, I will receive | I can receive | High | Sprint-1 |
|  |  |  | confirmation email once I have | confirmation email |  |  |
|  |  |  | registered for the application | & click confirm |  |  |
|  |  | USN-3 | As a user, I can register for the | I can register & | Low | Sprint-2 |
|  |  |  | application through Google | access the |  |  |
|  |  |  | Sign-on | dashboard with |  |  |
|  |  |  |  | Google sign-on |  |  |
|  |  |  |  | Login |  |  |
|  |  | USN-4 | As a user, I can register for the |  | Medium | Sprint-1 |
|  |  |  | application through Gmail |  |  |
|  | Login | USN-5 | As a user, I can log into the |  | High | Sprint-1 |
|  |  |  | application by entering email & |  |  |
|  |  |  | password |  |  |
|  | Dashboard | USN-6 | As a user, I can use the methods |  | Medium | Sprint-1 |
|  |  |  | used provided in the dashboard |  |  |
|  |  | USN-7 | As a user, I can view the previous |  | Low | Sprint-3 |
|  |  |  | results of predictions done by me |  |  |
|  | Prediction | USN-8 | As a user, with the results | Profit or Loss | High | Sprint-2 |
|  |  |  | obtained, I can determine whether |  |  |  |
|  |  |  | profit or loss is made |  |  |  |
|  | Accessing | USN-9 | As a user, I can Identify my | The resources can | High | Sprint-1 |
|  | the resources |  | account with set of unique | only be accessed |  |  |
|  |  |  | credentials | by me |  |  |

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| **User Type** | **Functional Requiremen t (Epic)** | **User Story Numbe**  **r** | **User Story / Task** | **Acceptance criteria** | **Priority** | **Release** |
| Administra tor | Data Maintenance | USN-10 | As a administrator, I can collect Data and maintain it and update  whenever necessary | Maintenance of dataset | Medium | Sprint-3 |
| Customer Tools | Tools | USN-11 | As a user, I use cognos analytics to perform data analysis on the  collected dataset | Ease of analysis | High | Sprint-2 |

1. **PROJECT PLANNING & SCHEDULING**

# Sprint Planning & Estimation

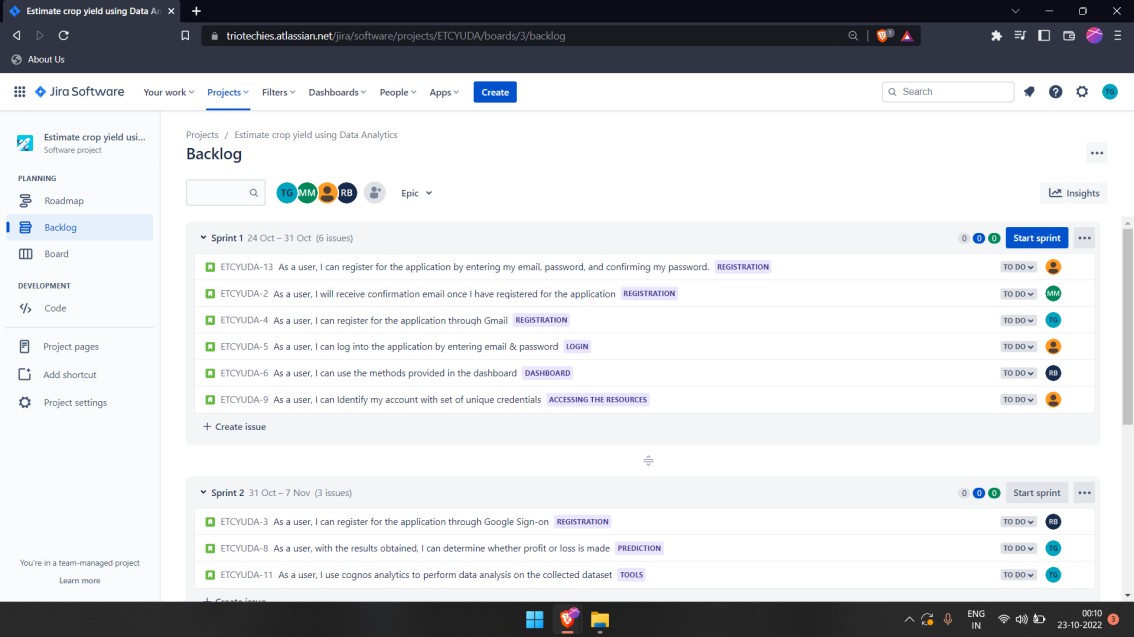
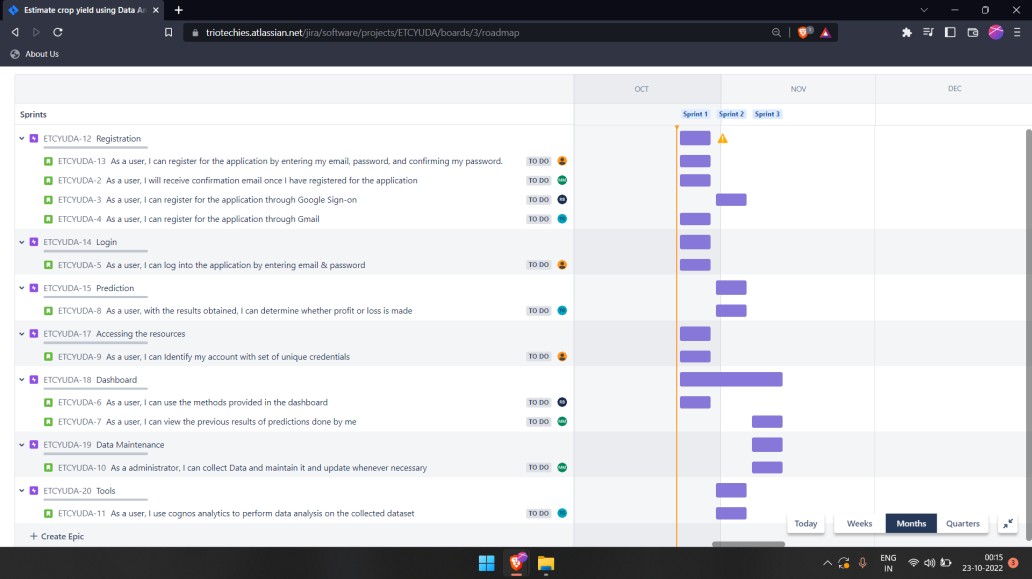
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| **Sprints** | **Functional**  **Requirement (Epic)** | **User**  **Story Number** | **User Story / Task** | **Story Points** | **Priority** | **Team Members** |
| Sprint-1 | Registration | USN-1 | As a user, I can register for the application by entering my email, password, and  confirming my password. | 1 | High | Malleshwaran P |
| Sprint-1 | USN-2 | As a user, I will receive confirmation email once I have registered for the  application | 2 | High | Vallarasu R |
| Sprint-2 | USN-3 | As a user, I can register for the application through Google  Sign-on | 2 | Low | Udayakumar M |
| Sprint-1 | USN-4 | As a user, I can register for the  application through Gmail | 1 | Medium | Vinothkumar A |
| Sprint-1 | Login | USN-5 | As a user, I can log into the  application by entering email & password | 1 | High | Malleshwaran P |

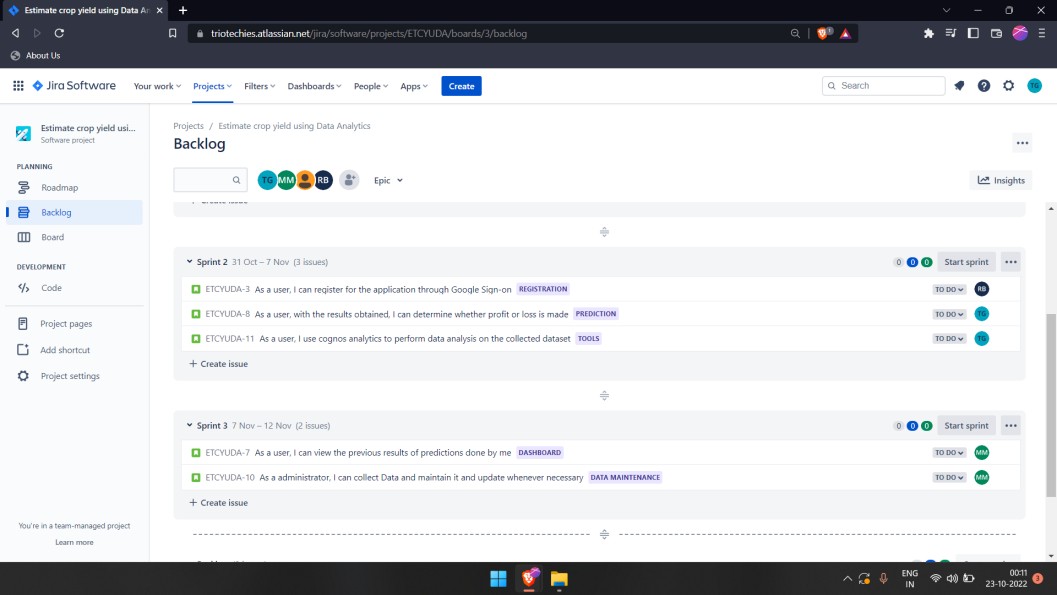
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| --- | --- | --- | --- | --- | --- | --- |
| **Sprints** | **Functional Requirement**  **(Epic)** | **User Story**  **Number** | **User Story / Task** | **Story Points** | **Priority** | **Team Members** |
| Sprint-1 | Dashboard | USN-6 | As a user, I can use the methods provided in the  dashboard | 2 | Medium | Vallarasu R |
| Sprint-3 | USN-7 | As a user, I can view the  previous results of predictions done by me | 2 | Low | Udayakumar M |
| Sprint-2 | Prediction | USN-8 | As a user, with the results  obtained, I can determine whether profit or loss is made | 2 | High | Vinothkumar A |
| Sprint-1 | Accessing the resources | USN-9 | As a user, I can Identify my account with set of unique  credentials | 2 | High | Malleshwaran P |
| Sprint-3 | Data Maintenance | USN-10 | As a administrator, I can collect Data and maintain it and update whenever  necessary | 1 | Medium | Vallarasu R |
| Sprint-2 | Tools | USN-11 | As a user, I use cognos analytics to perform data analysis on the collected  dataset | 1 | High | Udayakumar M |

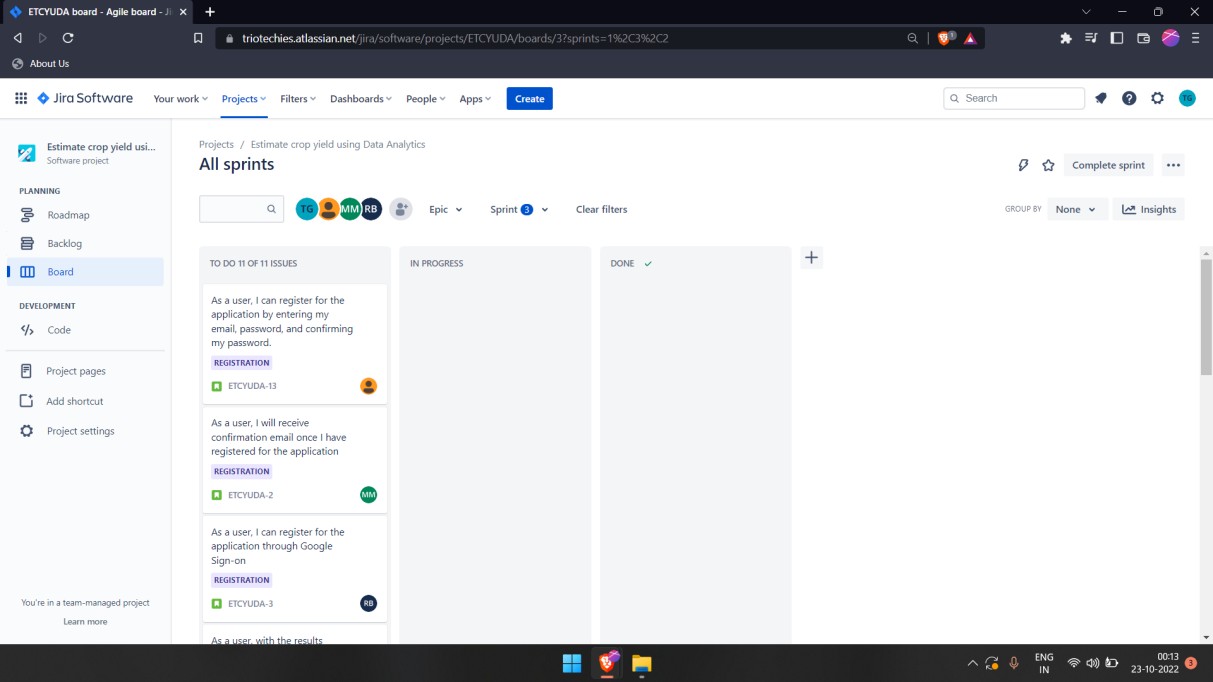
* 1. **Sprint Delivery Schedule**

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| --- | --- | --- | --- | --- | --- | --- |
| **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 | 29 Oct 2022 |
| Sprint-2 | 20 | 6 Days | 31 Oct 2022 | 05 Nov 2022 | 20 | 05 Nov 2022 |
| Sprint-3 | 20 | 6 Days | 07 Nov 2022 | 12 Nov 2022 | 20 | 12 Nov 2022 |
| Sprint-4 | 20 | 6 Days | 14 Nov 2022 | 19 Nov 2022 | 20 | 19 Nov 2022 |

# Reports from JIRA







1. **CODING & SOLUTIONING (Explain the features added in the project along with code) app.py**

from flask\_mysqldb import MySQL

from flask import Flask, render\_template, request, redirect, url\_for, session import pandas as pd

from joblib import Parallel, delayed import joblib

import json import smtplib

import MySQLdb.cursors

from email.mime.multipart import MIMEMultipart from email.mime.text import MIMEText

from authlib.integrations.flask\_client import OAuth def send\_simple\_message(msg,email):

sender\_address = 'healthyharvest.ibm@gmail.com' sender\_pass = 'nlsqdmlhkbrooouy' receiver\_address = email

message = MIMEMultipart() message['From'] = sender\_address message['To'] = email

message['Subject'] = 'Greetings from Healthy Harvest' message.attach(MIMEText(msg, 'plain'))

session = smtplib.SMTP('smtp.gmail.com', 587) session.starttls() session.login(sender\_address, sender\_pass) text = message.as\_string()

session.sendmail(sender\_address, receiver\_address, text) session.quit()

app = Flask( name )

app.secret\_key = 'your secret key' app.config['MYSQL\_HOST'] = 'localhost' app.config['MYSQL\_USER'] = 'root' app.config['MYSQL\_PASSWORD'] = 'password' app.config['MYSQL\_DB'] = 'ibm' app.config.from\_object('config')

oauth = OAuth(app) oauth.register(

name='google',

server\_metadata\_url='https://accounts.google.com/.well-known/openid-configurati on',

client\_kwargs={

'scope': 'openid email profile'

}

)

mysql = MySQL(app)

@app.route('/') def home():

return render\_template('welcome.html') @app.route('/login', methods =['GET', 'POST']) def login():

if (session):

print(session)

return render\_template('home.html', activeTab = "home") msg = ''

if request.method == 'POST' and 'loginEmail' in request.form and 'loginPassword' in request.form:

email = request.form['loginEmail'] password = request.form['loginPassword']

cursor = mysql.connection.cursor(MySQLdb.cursors.DictCursor) cursor.execute('SELECT \* FROM accounts WHERE email = % s AND password =

% s', (email, password, ))

account = cursor.fetchone() if account:

session['loggedin'] = True session['id'] = account['id']

session['username'] = account['username'] session['email'] = account['email']

return render\_template('home.html', activeTab = "home") else:

msg = 'Incorrect username / password !'

return render\_template('authentication.html', msg = msg)

@app.route('/crop\_recommendation') def crop\_recommendation():

return render\_template('recommendation.html')

@app.route('/logout')

def logout():

session.clear() session.pop('loggedin', None) session.pop('id', None) session.pop('username', None) session.pop('email', None) return redirect(url\_for('home'))

@app.route('/login\_using\_google') def login\_using\_google():

redirect\_uri = url\_for('auth', \_external=True) return oauth.google.authorize\_redirect(redirect\_uri)

@app.route('/auth') def auth():

token = oauth.google.authorize\_access\_token() email = token['userinfo']['email']

password = token['userinfo']['sub']

cursor = mysql.connection.cursor(MySQLdb.cursors.DictCursor) cursor.execute('SELECT \* FROM accounts WHERE email = % s and password !=

%s', (email, password, )) account = cursor.fetchone() if account:

msg = 'Account already exists !' else:

cursor.execute('SELECT \* FROM accounts WHERE email = % s AND password =

% s', (email, password, ))

account = cursor.fetchone() if account:

session['loggedin'] = True session['id'] = account['id']

session['username'] = account['username'] session['email'] = account['email']

return render\_template('home.html', activeTab = "home") username = token['userinfo']['name']

cursor.execute('Create Table `'+email+'`(id int primary key auto\_increment,state varchar(100),district varchar(100),crop\_year int,season varchar(50),crop varchar(100),area double,production double)')

mysql.connection.commit()

cursor.execute('INSERT INTO accounts VALUES (NULL, % s, % s, % s)', (username, password, email, ))

mysql.connection.commit()

cursor.execute('SELECT \* FROM accounts WHERE email = % s AND password =

% s', (email, password, ))

account = cursor.fetchone() if account:

session['loggedin'] = True session['id'] = account['id']

session['username'] = account['username'] session['email'] = account['email']

msg = ''' Hi '''+username+''',

We can’t wait for you to start using our product and seeing results in your business.

Please feel free to get started and learn more about how to use Healthy Harvest.

As always, our support team can be reached at [healthyharvest.ibm@gmail.com](mailto:healthyharvest.ibm@gmail.com) if you ever get stuck.

Have a great day!'''

send\_simple\_message(msg,email)

return render\_template('home.html', activeTab = "home") return render\_template('authentication.html', msg = msg)

@app.route('/signup', methods = ['POST','GET']) def signup():

if (request.method=='GET'):

return render\_template('welcome.html') if (session):

return render\_template('home.html', activeTab = "home") msg = ''

if request.method == 'POST' and 'username' in request.form and 'password' in request.form and 'email' in request.form :

username = request.form['username'] password = request.form['password'] email = request.form['email']

cursor = mysql.connection.cursor(MySQLdb.cursors.DictCursor) cursor.execute('SELECT \* FROM accounts WHERE email = % s', (email, )) account = cursor.fetchone()

if account:

msg = 'Account already exists !'

else:

cursor.execute('Create Table `'+email+'`(id int primary key

auto\_increment,state varchar(100),district varchar(100),crop\_year int,season varchar(50),crop varchar(100),area double,production double)')

mysql.connection.commit()

cursor.execute('INSERT INTO accounts VALUES (NULL, % s, % s, % s)', (username, password, email, ))

mysql.connection.commit()

cursor.execute('SELECT \* FROM accounts WHERE email = % s AND password = % s', (email, password, ))

account = cursor.fetchone() if account:

session['loggedin'] = True session['id'] = account['id']

session['username'] = account['username'] session['email'] = account['email']

msg = ''' Hi '''+username+''',

We can’t wait for you to start using our product and seeing results in your business.

Please feel free to get started and learn more about how to use Healthy Harvest.

As always, our support team can be reached at [healthyharvest.ibm@gmail.com](mailto:healthyharvest.ibm@gmail.com) if you ever get stuck.

Have a great day!'''

send\_simple\_message(msg,email)

return render\_template('home.html', activeTab = "home") return render\_template('authentication.html', msg = msg)

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

op = joblib.load('static/model/'+'Model.pkl')

d = {'Crop\_Year': 0, 'Area': 0, 'District\_Name\_24 PARAGANAS NORTH': 0, 'District\_Name\_24 PARAGANAS SOUTH': 0, 'District\_Name\_ADILABAD': 0,

'District\_Name\_AGAR MALWA': 0, 'District\_Name\_AGRA': 0,

'District\_Name\_AHMADABAD': 0, 'District\_Name\_AHMEDNAGAR': 0,

'District\_Name\_AIZAWL': 0, 'District\_Name\_AJMER': 0, 'District\_Name\_AKOLA': 0,

'District\_Name\_ALAPPUZHA': 0, 'District\_Name\_YAMUNANAGAR': 0,

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 'District\_Name\_YANAM': | |  | 0, | 'District\_Name\_YAVATMAL': | 0, |
| 'District\_Name\_ZUNHEBOTO': | | 0, |  | 'Season\_Autumn': 0, 'Season\_Kharif': | 0, |
| 'Season\_Rabi': 0, 'Season\_Summer': 0, 'Season\_Whole Year': 0, 'Season\_Winter':  0, 'Crop\_Apple': 0, 'Crop\_Arcanut (Processed)': 0, 'Crop\_Arecanut': 0,  'Crop\_Arhar/Tur': 0, 'Crop\_Ash Gourd': 0, 'Crop\_Atcanut (Raw)': 0,  'Crop\_Bajra': 0, 'Crop\_Banana': 0, 'Crop\_Barley': 0, 'Crop\_Bean': 0, | | | | | |
| 'Crop\_Beans & | Mutter(Vegetable)': 0, 'Crop\_Beet Root': 0, 'Crop\_Ber': | | | | 0, |
| 'Crop\_Bhindi': | 0, 'Crop\_Other Fibres': 0, 'Crop\_Other Fresh Fruits': | | | | 0, |

'Crop\_Other Kharif pulses': 0, 'Crop\_Other Misc. Pulses': 0, 'Crop\_Other Oilseeds': 0, 'Crop\_Other Vegetables': 0, 'Crop\_Paddy': 0, 'Crop\_Papaya': 0,

'Crop\_Peach': 0, 'Crop\_Pear': 0, 'Crop\_Peas (vegetable)': 0, 'Crop\_Peas &

beans (Pulses)': 0, 'Crop\_Perilla': 0, 'Crop\_Pineapple': 0, 'Crop\_Plums': 0,

'Crop\_Pome Fruit': 0, 'Crop\_Pome Granet': 0, 'Crop\_Potato': 0, 'Crop\_Pulses

total': 0, 'Crop\_Pump Kin': 0, 'Crop\_Ragi': 0, 'Crop\_Rajmash Kholar': 0,

'Crop\_Rapeseed &Mustard': 0, 'Crop\_Redish': 0, 'Crop\_Ribed Guard': 0,

'Crop\_Rice': 0, 'Crop\_Ricebean (nagadal)': 0, 'Crop\_Rubber': 0,

'Crop\_Safflower': 0, 'Crop\_Samai': 0, 'Crop\_Sannhamp': 0, 'Crop\_Sapota': 0,

'Crop\_Sesamum': 0, 'Crop\_Small millets': 0, 'Crop\_Snak Guard': 0,

'Crop\_Soyabean': 0, 'Crop\_Sugarcane': 0, 'Crop\_Sunflower': 0, 'Crop\_Sweet

potato': 0, 'Crop\_Tapioca': 0, 'Crop\_Tea': 0, 'Crop\_Tobacco': 0, 'Crop\_Tomato':

0, 'Crop\_Total foodgrain': 0, 'Crop\_Turmeric': 0, 'Crop\_Turnip': 0,

'Crop\_Urad': 0, 'Crop\_Varagu': 0, 'Crop\_Water Melon': 0, 'Crop\_Wheat': 0,

'Crop\_Yam': 0}

d["Crop\_Year"] = int(request.form['crop\_year']) d["Area"] = float(request.form['area']) d["Season\_"+request.form['season'].strip()] = 1

d["District\_Name\_"+request.form["district"].strip()] = 1

d["Crop\_"+request.form["crop"]] = 1

result = op.predict(pd.DataFrame(d, index=[0])) email = session.get('email')

cursor = mysql.connection.cursor(MySQLdb.cursors.DictCursor) estimated = float(request.form["estimated"])

if (result[0]<0): result[0] = 0 if (estimated <= result[0]):

profit\_or\_loss = "Profit" else:

profit\_or\_loss = "Loss"

cursor.execute('INSERT INTO

`'+email+'`(state,district,crop\_year,season,crop,area,production) Values ("'+request.form['state']+'","'+request.form['district']+'",'+request.form['cro

p\_year']+',"'+request.form['season']+'","'+request.form['crop']+'",'+request.fo rm['area']+','+str(round(result[0],2))+')')

mysql.connection.commit()

return render\_template('home.html', activeTab = "predict-production",

Predicted\_Production=round(result[0],2),profit\_or\_loss

Estimated\_Production=estimated)

=

profit\_or\_loss,

@app.route('/get\_history',methods=['GET']) def get\_history():

if (session):

email = session.get('email') print(email)

cursor = mysql.connection.cursor(MySQLdb.cursors.DictCursor) cursor.execute('SELECT \* FROM `'+email+"`")

results = cursor.fetchall() print(results)

if (results!=()):

return render\_template('home.html', activeTab = "prediction-history",history=json.dumps({"results":list(results)}))

else:

return render\_template('home.html', activeTab =

"prediction-history") else:

return redirect(url\_for('home')) if name == ' main ':

app.run(debug=True)

# config.py

**import os**

**GOOGLE\_CLIENT\_ID =**

**"751324271222-6s9os9entqlfvethcso6i44sbchq4drq.apps.googleusercontent.com" GOOGLE\_CLIENT\_SECRET = "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"**

* 1. **home.css**

\* {

box-sizing: border-box;

}

html, body { height: 100%;

margin: 0;

}

::-webkit-scrollbar { width: 8px;

}

::-webkit-scrollbar-track { background: transparent;

}

::-webkit-scrollbar-thumb { background: #888;

}

::-webkit-scrollbar-thumb:hover { background: #555;

}

body {

display: flex;

/\* flex-direction: column; \*/ justify-content: center; align-items: left; background: #aaa;

margin: 0px; padding: 0px;

font-family: "Manrope", "Arial";

}

.container {

width: fit-content;

/\* width: auto; \*/ height: 100%; display: flex;

justify-content: center; align-items: center; gap: 1em;

font-size: 1.6vh;

}

.container .bar {

--bg:#f0f2f5;

--bg-secundary:#c4c8cb40;

--bg-fade:#071d3510;

--color:#445261; min-width: 6em; height: 100%; display: flex;

flex-direction: column; justify-content: flex-start; align-items: center;

gap: 0.75em; color: #445261;

background: var(--bg); padding: 0 2em 0 2em; border-radius: 8px;

box-shadow: 0 8px 8px -4px #00000040; overflow: auto;

transition: all ease 0.5s;

}

.container .bar.opened .icon { justify-content: flex-start;

}

.container .bar.opened .icon .text { display: block;

}

.container .bar .icon { cursor: pointer; width: 100%; display: flex;

justify-content: center; align-items: center; gap: 1em;

padding: 1.5em; border-radius: 8px;

background: var(--bg-secundary); transition: all ease 0.5s;

}

.container .bar .icon:hover { color: black;

border: 1px solid black;

}

.container .bar .icon.signout { margin-top: auto;

margin-bottom: 10%;

color: #f05; background: #ff005510;

}

.container .bar .icon .text { font-size: 1.5em;

font-weight: 700; display: none;

animation: move-text ease 0.5s forwards;

}

.social { width: 100%; display: flex;

align-items: center; justify-content: center; gap: 1em;

}

.social .button { display: flex; align-items: center; gap: 0.5em;

color: #000;

text-decoration: none;

}

@keyframes move-text { from {

opacity: 0;

transform: translateX(-100%);

}

to { opacity: 1;

transform: translateX(0);

}

}

@keyframes move-text-out { from {

opacity: 1;

transform: translateX(0);

}

to {

opacity: 0;

transform: translateX(-100%);

}

}

# main.css

body{

margin: 0;

padding: 0;

}

.home{

width: 100%; height: 100vh;

}

.navbars{

z-index: 100; position: fixed; width: 100%; height: 120px;

}

.navlist{

padding: 0;

margin: 0;

list-style: none; display: flex;

justify-content: flex-end; align-items: center; height: 10rem;

padding-bottom: 25px;

/\*background: yellow;\*/

}

.navlist a{

text-decoration: none; color: white;

padding-right: 6rem;

font-family: 'Open Sans', sans-serif; font-size: 14px;

font-weight: 600; transition-property: color; transition-duration: 0.5s;

}

.navlist img{

margin-right: auto; margin-left: 7rem;

}

.bgcolor{

background-color:#46866C; transition: all ease-in-out 300ms; width: 100%;

}

.home-video{

width: 100%;

height: 100%;

opacity: 0.9; object-fit: cover;

}

.overlay{

height: 100%;

width: 100%;

top: 0;

left: 0;

position: absolute; background: rgba(0, 0, 0, 0.5); mix-blend-mode: overlay;

}

.home-content{ position: absolute; top: 40%;

left: 8%;

line-height: 30px; height: 240px;

}

.home-content a{

text-decoration: none;

}

.home-content h1{ font-size: 16px;

letter-spacing: 5px; color: #ffaa41;

font-family: 'Open Sans', sans-serif; font-weight: 600;

}

.home-content h2{ color: white; font-size: 45px;

font-family: 'Montserrat', sans-serif; font-weight: 700;

}

.home-content p{

font-family: 'Open Sans', sans-serif; font-size: 16px;

color: white;

}

.button{

position: relative; background-color: transparent; border: solid 2px #DE7900; color: #ffaa41;

padding: 10px 40px; font-size: 15px;

font-family: 'Open Sans', sans-serif; letter-spacing: 1px;

font-weight: 600; border-radius: 5px;

transition-property: all; transition-duration: 0.5s;

}

.button:hover, .signup-button:hover, .login-button:hover{ background-color:#46866C;

color: white;

border: solid 2px #46866C;

}

.navlist a:hover{ color: #ffaa41;

}

p{

color:yellow;

}

.registration, .login{

background-image: linear-gradient(rgba(0, 0, 0, 0.6), rgba(0, 0, 0, 0.5)), url('../images/temp3.jpg');

height: 100vh; background-size: cover;

background-position: center;

}

.registration-div, .login-div{

/\*background: yellow;\*/ height: 100%;

display: flex; align-items: center;

justify-content: center;

}

.registration-form, .login-form{ width: 400px;

padding: 0 10px 0 10px; color: white;

border: 1px solid white; margin-top: 40px;

}

.signup-button, .login-button{ background-color: transparent; border: solid 2px #DE7900; color: #ffaa41;

padding: 10px 25px 10px 25px; font-size: 14px;

font-family: 'Open Sans', sans-serif; letter-spacing: 1px;

font-weight: 600; border-radius: 5px; margin-top: 20px;

transition-property: all; transition-duration: 0.5s;

}

.form-control{

border-radius: 15px;

background: rgba(255, 255, 255, 0.15); color: white;

}

.about-top{

background-image: linear-gradient(rgba(0, 0, 0, 0.6), rgba(0, 0, 0, 0.5)), url('../images/about.jpg');

background-position: center; height: 400px;

width: 100%;

}

.about-top h1{

font-size: 16px; letter-spacing: 5px; color: #ffaa41;

font-family: 'Open Sans', sans-serif; font-weight: 600;

}

.about-top h3{

font-family: 'Montserrat', sans-serif; font-weight: 700;

font-size: 40px; color: white;

}

.about-top p{

font-family: 'Open Sans', sans-serif; font-size: 16px;

color: white;

}

.about-content h3{ font-weight: 550; font-size: 23px; padding-top: 60px; color: #666666;

}

.about-content h4{ font-size: 40px;

font-family: 'Montserrat', sans-serif; font-weight: 700;

color: black; margin-top: 30px; margin-bottom: 30px;

}

.aboutus-icon{ position: absolute; height: 80px; width:280px; opacity: 0.13; top: 40px;

left: 40px;

}

.about-content{ position: relative;

background-color: white; width: 50%;

margin-top: 50px; margin-left: 100px;

padding: 0 30px 90px 50px;

}

.about-content .women-image{ position: absolute; width: 500px;

height: 500px; left: 700px; top: 80px;

}

.about-content .corner-image{ position: absolute;

top: 300px; left: 470px; width: 900px; height: 400px; opacity: 0.1;

z-index: -1;

}

.weather, .platform, .search{ position: relative; padding-top: 110px;

}

.weather-image, .search-image{ height: 500px;

width: 650px;

filter: brightness(60%); position: absolute; right: 50px;

top: 50px;

}

.platform-image{ height: 500px; width: 650px;

filter: brightness(60%); position: absolute; left: 50px;

top: 50px;

}

.weather-content, .search-content{ position: relative;

width: 50%; height: 500px;

padding: 50px 60px 50px 60px; border: #e5eaec solid 3px; margin-left: 90px;

z-index: 1;

}

.platform-content{ position: relative; width: 50%; height: 500px;

padding: 50px 50px 50px 90px; border: #e5eaec solid 3px;

z-index: 1;

margin-left: 650px;

}

.weather-content p, .platform-content p, .search p{ color: #9BA0A7;

font-family: "Gotham-Book"; font-size: 20px;

}

.weather-content h1, .platform-content h1, .search-content h1{ font-size: 40px;

font-weight: 400; color: #3D3D3F; letter-spacing: 0.3px;

}

.explore-button{

font: 20px Gotham-Book; display: flex;

align-items: center; justify-content: center; width: 150px;

height: 52px;

text-decoration: none; color: #65e214;

border-top: 1px solid #65e214; border-right: 2px solid #65e214; border-bottom: 2px solid #65e214; border-left: 1px solid #65e214;

transition-property: all; transition-duration: 0.5s;

}

.explore-button:hover{ background-color: #65e214; color: white;

}

footer{

background-color: #333333; height: 650px;

padding-top: 50px;

}

.footer-container2 a:hover{ color: #EEC344;

}

.footer-container1{ display: flex;

justify-content: center;

}

.footer-container1 h1{ font-size: 30px; letter-spacing: 2px; color: #ffaa41;

}

.footer-container1 .left-corner{ flex-basis: 30%;

margin-right: 70px;

}

.footer-container1 .right-corner{ margin-left: 300px;

}

.footer-container1 .right-corner a{ margin-left: 20px;

}

.footer-container2{ padding-top: 60px; display: flex;

justify-content: center; align-items: flex-start;;

}

.footer-container2 div{

margin-left: 80px;

}

.footer-container2 .left-corner{ flex-basis: 30%;

}

.footer-container2 .footer-image{ height: 90px;

width: 300px;

}

.footer-container2 .middle-one{ flex-basis: 10%;

text-align: center; padding-top: 30px;

}

.footer-container2 .middle-two{ flex-basis: 10%;

text-align: center; padding-top: 30px;

}

.footer-container2 .right-corner{ flex-basis: 10%;

text-align: center; padding-top: 30px;

}

.footer-container2 ul{ list-style: none; padding: 0;

}

.footer-container2 .middle-one a, .middle-two a, .right-corner a{ text-decoration: none;

}

.footer-container2 h1{

font: 16px 'Open Sans', sans-serif; letter-spacing:1px;

font-weight: 600;

}

.footer-container2 ul li a{ color: #cccccc;

}

.footer-container2 p, .footer-container1 p{ color: #cccccc;

}

.social{

margin-left: 180px;

}

.social ul {

margin: 0;

}

.social ul li { margin: 5px;

list-style: none outside none; display: inline-block;

}

.social i {

width: 40px; height: 40px; color: #FFF;

background-color: #909AA0; font-size: 22px;

text-align:center; padding-top: 12px; border-radius: 50%;

-moz-border-radius: 50%;

-webkit-border-radius: 50%;

-o-border-radius: 50%; transition: all ease 0.3s;

-moz-transition: all ease 0.3s;

-webkit-transition: all ease 0.3s;

-o-transition: all ease 0.3s;

-ms-transition: all ease 0.3s;

}

.social i:hover { color: #FFF;

text-decoration: none; transition: all ease 0.3s;

-moz-transition: all ease 0.3s;

-webkit-transition: all ease 0.3s;

-o-transition: all ease 0.3s;

-ms-transition: all ease 0.3s;

}

.social .fa-facebook:hover { background: #4060A5;

}

.social .fa-twitter:hover { background: #00ABE3;

}

.social .fa-google-plus:hover { background: #e64522;

}

.social .fa-instagram:hover { background: #375989;

}

.social .fa-youtube-play:hover { background: #DF192A;

}

footer .divider { margin-top: 50px; width: 85%;

border: 0; height: 1px; background: #333;

background-image: linear-gradient(to right, #ccc, #333, #ccc);

}

.popup{

opacity: 1; position: absolute; top: 200px;

left: 20px;

/\*z-index: -1;\*/ background: white; display: flex;

flex-direction: column; align-items:center;

justify-content:space-between; height: 400px;

width: 320px; border-radius: 15px; top: 50%;

left: 50%;

transform: translate(-50%, -50%); transition: opacity 1s ease-out;

}

.table-div{

background-image: linear-gradient(rgba(0, 0, 0, 0.7), rgba(0, 0, 0, 0.7)), url('../images/farmer1.jpg');

background-position: center; background-size: cover; height: 100vh;

}

.shop-div{

background-image: linear-gradient(rgba(0, 0, 0, 0.6), rgba(0, 0, 0, 0.6)), url('../images/shop.jpg');

background-position: center; background-size: cover; height: 100vh;

}

/\*.fail{

background:red; width:100%; height:200px; display:flex;

justify-content:space-evenly; align-items: center;

flex-direction:column; border-top-left-radius: 15px;

border-top-right-radius: 15px;

}

.popup p{

padding-right: 25px; padding-left: 40px;

}

\*/

.table-content{

/\*background-color:yellow;\*/ display: flex;

justify-content: center; align-items: center; height: 100%;

padding: 0 30px 0 30px;

}

table {

font-family: arial, sans-serif; border-collapse: collapse; width: 70%;

/\*background-color: #000000;\*/

}

td, th{

background-color: transparent; border: 2px solid #858e99; text-align: center;

padding: 10px 0 10px 0; color: white;

font-size: 17px;

}

th{

}

background-color: #747474; color: white;

text-transform: uppercase;

.table-form{

display: none; position: absolute; background-color: black;

padding: 0 20px 10px 20px; border-radius: 15px;

z-index: 100;

left: 35%;

top: 4%; color: white;

/\*transform: translate(-50%,-50%);\*/

}

.train-form{

display: none; position: absolute; background-color: black;

padding: 0 20px 10px 20px; border-radius: 15px;

z-index: 100;

left: 40%;

top: 15%; color: white; width: 25%;

/\*transform: translate(-50%,-50%);\*/

}

.table-form input{ width: 390px;

}

.table-form label{ color: white;

}

.close-button{ position: relative; left: 220px;

font-size: 35px; cursor: pointer;

transition: all ease-in-out 300ms; font-weight: bold;

}

.close-button:hover{ color: red;

}

.image{

height: 50px; width: 50px;

}

#hearts{

background: transparent; border:none;

}

td:hover, #hearts:hover{ background-color: #ddd; color: black;

/\* font-size: 20px; \*/

}

.crop-input{

background-color: transparent; color: white;

border: 2px solid white; border-radius: 8px; height: 40px;

width: 200px;

transition: width 0.5s ease-in-out;

}

.crop-input:focus{

width: 300px;

}

.crop-input::placeholder{ color: grey;

padding-left: 10px;

}

.animate {

-webkit-animation: animatezoom 0.6s; animation: animatezoom 0.6s

}

th:hover{

cursor: pointer;

}

/\*contact us\*/

.BG{

margin-top: 35%;

margin-left: 12%; font-size: large;

}

.contactform{

position: absolute; top: 200px; right:5%;

background-color: white; color: black;

padding-left: 20px; padding-right: 18%; padding-bottom: 10px; border-radius: 5px;

/\*height: 100px;\*/

}

.contactform input[type=submit] { font-family: sans-serif; background-color: #46866C; color: white;

padding: 12px 20px; margin-top: 5px; border: none; border-radius: 4px; cursor: pointer;

}

input[type=submit]:hover { font-size: 17px;

}

.txtbr ,textarea{ height: 40px; width: 220%; border: none;

border-bottom: 2px solid silver; padding-left: 10px;

}

.shop-top{

background-color: #293e31; height: 390px;

}

.shop-heading{ color: white;

font-family: Bahnschrift;

}

.grid-box{

display: grid; background: #d1c3b5;

padding: 50px 280px 50px 280px;

grid-template-columns: auto auto auto; grid-row-gap: 50px;

/\*grid-column-gap: 50px;\*/

}

/\*.grid-item img{ height: 310px; width: 310px;

filter: brightness(0.7);

}\*/

.grid-item p{

color: #414141;

}

.grid-item h1{ color: #414141; font-size: 20px;

text-transform: capitalize;

}

.grid-item input{

width: 210px; height: 45px;

text-align: center;

}

.grid-item input[type=number]::-webkit-inner-spin-button,

.grid-item input[type=number]::-webkit-outer-spin-button {

-webkit-appearance: none;

}

.button-minus, .button-plus{ position: relative; font-size: 18px;

width: 40px !important; padding: 0 2px 0 2px;

}

.button-minus{ left: 4.5px;

}

.button-plus{

right: 5px;

}

.ride{

position: relative; left: 5px;

border-radius: 0; background-color:#46866C; color: white;

border: solid 2px #46866C; width: 250px;

transition: width 0.5s ease-in-out;

}

.ride:hover{

width: 290px;

}

@keyframes animatezoom { from {transform: scale(0)} to {transform: scale(1)}

}

/\* grid animation\*/ figure {

width: 290px; height: 290px;

margin: 0;

padding: 0; overflow: hidden;

filter: brightness(0.8);

}

figure:hover{

bottom: -36px; opacity: 1;

}

figure img {

-webkit-transform: scale(1); transform: scale(1);

-webkit-transition: .3s ease-in-out; transition: .3s ease-in-out;

width: 290px; height: 290px;

}

figure:hover img {

-webkit-transform: scale(1.3); transform: scale(1.3);

}

.cart{

position:relative; width:50px; height:50px; margin:0 !important; right:30px;

transition: .3s ease-in-out;

}

.cart:hover{

cursor: pointer;

-webkit-transform: scale(1.3);

}

.side-cart{

position: fixed; right: 0;

background-color: white; z-index: 200;

/\*padding: 0 50px 50px 28px;\*/

/\*width: 26.9%;\*/ height: 100vh;

display: flex;

flex-direction:column;

justify-content: space-between; width: 0;

transition: width .5s; overflow-x: hidden;

}

.side-item{

display: flex;

justify-content: space-around;

}

.side-cart img{ height: 100px; width: 100px; float: left;

}

.side-item h1{

font-size: 16px;

text-transform: capitalize; color: grey;

}

.side-item p { color: black;

}

.side-item h2{

font-size: 16px; border: 1px solid black; padding: 4px 0 4px 0; text-align: center; width: 70px;

color: grey;

}

.side-content{ position: relative; right:90px;

}

.side-cart span{ position: absolute; font-size: 40px; color: white; left: 30px;

top: 5px;

}

.side-cart span:hover{ cursor: pointer; color: #ffaa41;

}

.details-top{

background-color: #293e31; height: 140px;

}

.details-content{ background: #d1c3b5; font-family: Bahnschrift; color: black;

}

.detail-item{

display: flex;

justify-content: center; align-items: center; padding: 50px 0 50px 0;

}

.detail-item img{ width: 500px; height: 334px; margin-right: 50px;

}

.detail-description{ position: relative; margin-left: 380px; width: 50%; bottom: 30px;

padding-bottom: 10px;

}

/\* .dropdown { float: left; overflow: hidden;

} \*/

.dropdown .dropbtn { font-size: 15px; border: none; outline: none; color: white; padding: 14px 16px;

background-color: inherit; font-family: inherit; margin-right: 80px;

}

.dropdown-content { display: none; position: absolute;

/\* background-color: ; \*/ min-width: 160px;

box-shadow: 0px 8px 16px 0px rgba(0,0,0,0.2); z-index: 1;

}

.dropdown-content a { float: none; color: white; padding: 12px 16px;

text-decoration: none; display: block;

text-align: left;

}

.dropdown-content a:hover {

/\* background-color: #ddd; \*/

}

.dropdown:hover .dropdown-content { display: block;

}

# styles.css

@import url('https://fonts.googleapis.com/css?family=Poppins:400,500,600,700&display=sw ap');

\*{

margin: 0;

padding: 0;

box-sizing: border-box;

font-family: 'Poppins', sans-serif;

}

html,body{

display: grid; height: 100%;

width: 100%;

place-items: center;

/\* background: -webkit-linear-gradient(left, #a445b2, #fa4299); \*/ background: url('../img/bg.jpg');

/\* background: url("bg.jpg"); \*/ background-size: cover; background-repeat: no-repeat;

}

::selection{ background: #fa4299;

/\* background: -webkit-linear-gradient(left, #00ccff, #0033cc); \*/ color: #fff;

}

.wrapper{ height:600px; overflow: hidden; max-width: 400px;

/\* background: #fff; \*/ background: white;

/\* background: -webkit-linear-gradient(left, #00ccff, #0033cc); \*/

/\* opacity: 0.5; \*/ padding: 30px;

filter: brightness(95%); border-radius: 5px;

/\* border: 1px solid white; \*/

box-shadow: 0px 15px 20px rgba(0,0,0,0.1);

}

.wrapper .title-text{ display: flex; width: 200%;

}

.wrapper .title{ width: 50%; font-size: 26px;

font-weight: 600; text-align: center;

transition: all 0.6s cubic-bezier(0.68,-0.55,0.265,1.55);

}

.wrapper .slide-controls{

position: relative; display: flex; height: 50px; width: 100%; overflow: hidden;

margin: 30px 0 10px 0;

justify-content: space-between; border: 1px solid lightgrey; border-radius: 5px;

}

.slide-controls .slide{ height: 100%;

width: 100%; color: #fff; font-size: 18px; font-weight: 500;

text-align: center; line-height: 48px; cursor: pointer;

z-index: 1;

transition: all 0.6s ease;

}

.slide-controls label.signup{ color: #000;

}

.slide-controls .slider-tab{ position: absolute; height: 100%;

width: 50%;

left: 0;

z-index: 0;

border-radius: 5px;

/\* background: -webkit-linear-gradient(left, #a445b2, #fa4299); \*/ background: -webkit-linear-gradient(right, #00ccff, #0033cc); transition: all 0.6s cubic-bezier(0.68,-0.55,0.265,1.55);

}

input[type="radio"]{ display: none;

}

#signup:checked ~ .slider-tab{ left: 50%;

}

#signup:checked ~ label.signup{ color: #fff;

cursor: default; user-select: none;

}

#signup:checked ~ label.login{ color: #000;

}

#login:checked ~ label.signup{ color: #000;

}

#login:checked ~ label.login{ cursor: default;

user-select: none;

}

.wrapper .form-container{ width: 100%;

overflow: hidden;

}

.form-container .form-inner{ display: flex;

width: 200%;

}

.form-container .form-inner form{ width: 50%;

transition: all 0.6s cubic-bezier(0.68,-0.55,0.265,1.55);

}

.form-inner form .field{ height: 50px;

width: 100%; margin-top: 20px;

}

.form-inner form .field input{ height: 100%;

width: 100%; outline: none; padding-left: 15px; border-radius: 5px;

border: 1px solid lightgrey; border-bottom-width: 2px; font-size: 17px; transition: all 0.3s ease;

}

.form-inner form .field input:focus{

/\* border-color: #fc83bb; \*/ border-color: grey;

/\* box-shadow: inset 0 0 3px #fb6aae; \*/

}

.form-inner form .field input::placeholder{ color: #999;

transition: all 0.3s ease;

}

form .field input:focus::placeholder{ color: #b3b3b3;

}

.form-inner form .pass-link{ margin-top: 5px;

}

.form-inner form .signup-link{ text-align: center;

margin-top: 30px;

}

.form-inner form .pass-link a,

.form-inner form .signup-link a{

/\* color: #fa4299; \*/ color: rgb(55, 55, 223); text-decoration: none;

}

.form-inner form .pass-link a:hover,

.form-inner form .signup-link a:hover{ text-decoration: underline;

}

form .btn{ height: 50px; width: 100%;

border-radius: 5px; position: relative; overflow: hidden;

}

form .btn .btn-layer{ height: 100%;

width: 300%; position: absolute; left: -100%;

/\* background: -webkit-linear-gradient(right, #a445b2, #fa4299, #a445b2, #fa4299); \*/

/\* background: -webkit-linear-gradient(right, #00ccff, #0033cc); \*/ background-color: rgb(43, 43, 229);

border-radius: 5px; transition: all 0.4s ease;;

}

form .btn:hover .btn-layer{ left: 0;

}

form .btn input[type="submit"]{ height: 100%;

width: 100%;

z-index: 1; position: relative; background: none; border: none; color: #fff; padding-left: 0; border-radius: 5px; font-size: 20px; font-weight: 500; cursor: pointer;

}

@keyframes fadeOut { 0% {opacity: 1;}

70% {opacity: 1;}

100% {opacity: 0;}

}

# authentication.html

<!DOCTYPE html>

<!-- Created By CodingNepal -->

<html lang="en" dir="ltr">

<head>

<meta charset="utf-8">

<title>Healthy Harvest</title>

<link rel="stylesheet" href="../static/css/styles.css">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<link rel="icon" type="image/x-icon" href="../static/img/logo-white-fav.png">

</head>

<body>

<div style="display:flex;align-items: center;justify-items: center;flex-direction: column;">

<div class="wrapper">

<div class="title-text">

<div class="title login"> Help us identify you!

</div>

<div class="title signup"> Please Join Us!

</div>

</div>

<div class="form-container">

<div class="slide-controls">

<input type="radio" name="slide" id="login" checked>

<input type="radio" name="slide" id="signup">

<label for="login" class="slide login">Login</label>

<label for="signup" class="slide signup">Signup</label>

<div class="slider-tab"></div>

</div>

<div class="form-inner">

<form method="post" action="/login" class="login"><br>

<div class="field">

<input type="email" name="loginEmail" id="loginEmail" placeholder="Email" required>

</div><br>

<div class="field">

<input type="password" name="loginPassword" id="loginPassword" placeholder="Password" required>

</div>

<br>

<div class="field btn">

<div class="btn-layer"></div>

<input type="submit" value="Login">

</div><br>

<div>

<img src="../static/img/googlesingin.png"

style="height: 50px;width:335px;cursor: pointer;" onclick="window.location.pathname='/login\_using\_google'">

</div>

<div class="signup-link">

Not a member? <a href="">Signup now</a>

</div>

</form>

<form method="Post" action="/signup" class="signup">

<div class="field">

<input type="text" name="username" id="username" placeholder="Username" required>

</div>

<div class="field">

<input type="email" name="email" id="email" placeholder="Email Address" required>

</div>

<div class="field">

<input type="password" name="password" id="password" placeholder="Password" required>

</div>

<div class="field">

<input type="password" name="confirmPassword" id="confirmPassword" placeholder="Confirm password" required>

</div>

<div class="field btn">

<div class="btn-layer"></div>

<input type="submit" onclick="checkPassword();"

value="Signup">

</div><br>

<div>

<img src="../static/img/googlesingin.png"

style="height: 50px;width:335px;cursor:pointer;" onclick="window.location.pathname='/login\_using\_google'">

</div>

</form>

</div>

</div>

</div><br>

<div style="color: red;font-size: 25px;animation: fadeOut 4s;animation-fill-mode: forwards;">{{ msg }}</div>

</div>

<script>

function checkPassword() {

var password = document.getElementById('password').value;

var

confirmPassword

=

document.getElementById('confirmPassword').value; console.log(password+" "+confirmPassword); if (password!=confirmPassword) {

alert("Password and Confirm Password are not same"); event.preventDefault();

}

}

const loginText = document.querySelector(".title-text .login"); const loginForm = document.querySelector("form.login");

const loginBtn = document.querySelector("label.login"); const signupBtn = document.querySelector("label.signup");

const signupLink = document.querySelector("form .signup-link a"); signupBtn.onclick = (()=>{

loginForm.style.marginLeft = "-50%";

loginText.style.marginLeft = "-50%";

});

loginBtn.onclick = (()=>{ loginForm.style.marginLeft = "0%";

loginText.style.marginLeft = "0%";

});

signupLink.onclick = (()=>{ signupBtn.click(); return false;

});

</script>

</body>

</html>

# home.html

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta http-equiv="X-UA-Compatible" content="IE=edge">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>Healthy Harvest</title>

<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.6.0/jquery.min.js"></script

>

<link rel="stylesheet" href="../static/css/home.css">

<script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.8.2/angular.min.js"></sc ript>

<script src="https://cdn.plot.ly/plotly-latest.min.js"></script>

<link rel="icon" type="image/x-icon" href="../static/img/logo-white-fav.png">

<style>

input::-webkit-outer-spin-button, input::-webkit-inner-spin-button {

-webkit-appearance: none; margin: 0;

}

input[type=number]{

-moz-appearance: textfield;

}

select {

appearance: none;

}

.button-style {

background-color:darkcyan; color:white;

height:3em; width: 10em;

border: 1px solid white; font-size: 17px;

}

.button-style:hover { background-color: white; color: darkcyan;

border: 1px solid darkcyan; transition-duration: 0.4s;

}

@keyframes rightFade { from{right:-300px;opacity:0} to{right:0;opacity:1}

}

table {

--accent-color: #362f4b;

--text-color: slategray;

--bgColorDarker: #ececec;

--bgColorLighter: #fcfcfc;

--insideBorderColor: lightgray; width: 100%;

border: 1px solid var(--accent-color); border-collapse: collapse;

color: var(--text-color); table-layout: fixed;

}

table caption { margin: 1rem 0; color: slategray; font-size: 1.5rem; font-weight: 600;

letter-spacing: 0.055rem; text-align: center;

}

table th tr {

color: whitesmoke;

background-color: var(--accent-color); font-size: 1rem;

}

table tbody tr {

border: 1px solid var(--insideBorderColor); background-color: var(--bgColorDarker);

}

table tbody tr:nth-child(odd) {

background-color: var(--bgColorLighter);

}

table th {

letter-spacing: 0.075rem;

}

table th, table td {

padding: 0.75rem 1rem; font-weight: normal; text-align: left;

}

/\* table th:nth-child(4), table td:nth-child(4) {

text-align: right;

} \*/

@media screen and (max-width: 768px) { table {

border: none;

}

table caption {

padding: 0.75rem 1rem; border-radius: 6px 6px 0 0; color: whitesmoke;

font-size: 1.35rem;

background-color: var(--accent-color);

}

table th {

/\* position: absolute; \*/ width: 1px;

height: 1px;

clip: rect(0 0 0 0); overflow: hidden;

}

table tbody tr {

margin-bottom: 2rem; display: block;

}

table td {

font-size: 0.875rem; text-align: right; display: block;

}

table td:before {

content: attr(data-label); font-size: 0.75rem;

font-weight: 600;

letter-spacing: 0.075rem; text-transform: uppercase; float: left;

opacity: 0.5;

}

table td:not(:last-child) {

border-bottom: 1px solid var(--insideBorderColor);

}

}

</style>

</head>

<body>

<div class="container">

<div class="bar opened">

<Br><br>

<img style="animation:move-text ease 0.5s forwards" src="../static/img/logo-black.png" height="100px" width="290px">

<br><br>

<div class="icon" id="home" onclick="setActiveTab(this.id)">

<svg stroke="currentColor" fill="none" stroke-width="2" viewBox="0 0 24 24" stroke-linecap="round" stroke-linejoin="round" height="2.5em" width="2.5em" xmlns="<http://www.w3.org/2000/svg>">

<path stroke="none" d="M0 0h24v24H0z" fill="none"></path>

<path d="M4 4h6v8h-6z"></path>

<path d="M4 16h6v4h-6z"></path>

<path d="M14 12h6v8h-6z"></path>

<path d="M14 4h6v4h-6z"></path>

</svg>

<span class="text">Home</span>

</div>

<div class="icon" id="analytics"

onclick="showGraph();toggle('p1','p2')">

<svg stroke="currentColor" fill="currentColor" stroke-width="0" viewBox="0 0 24 24" height="2.5em" width="2.5em" xmlns="<http://www.w3.org/2000/svg>">

<path d="M3 3v17a1 1 0 0 0 1 1h17v-2H5V3H3z"></path>

<path d="M15.293 14.707a.999.999 0 0 0 1.414

0l5-5-1.414-1.414L16 12.586l-2.293-2.293a.999.999 0 0 0-1.414 0l-5 5 1.414

1.414L13 12.414l2.293 2.293z"></path>

</svg>

<span class="text">Analytics</span>

</div>

<div class="icon" id="predict-production"

onclick="setActiveTab(this.id)">

<svg xmlns="<http://www.w3.org/2000/svg>" viewBox="0 0 320 512" height="2.5em" width="2.5em"><!--! Font Awesome Free 6.1.1 by @fontawesome - https://fontawesome.com License - https://fontawesome.com/license/free (Icons: CC BY 4.0, Fonts: SIL OFL 1.1, Code: MIT License) Copyright 2022 Fonticons, Inc. --><path d="M.0022 64C.0022 46.33 14.33 32 32 32H288C305.7 32 320 46.33

320 64C320 81.67 305.7 96 288 96H231.8C241.4 110.4 248.5 126.6 252.4

144H288C305.7 144 320 158.3 320 176C320 193.7 305.7 208 288 208H252.4C239.2

266.3 190.5 311.2 130.3 318.9L274.6 421.1C288.1 432.2 292.3 452.2 282

466.6C271.8 480.1 251.8 484.3 237.4 474L13.4 314C2.083 305.1-2.716 291.5 1.529

278.2C5.774 264.1 18.09 256 32 256H112C144.8 256 173 236.3 185.3 208H32C14.33

208 .0022 193.7 .0022 176C.0022 158.3 14.33 144 32 144H185.3C173 115.7 144.8 96

112 96H32C14.33 96 .0022 81.67 .0022 64V64z" id="mainIconPathAttribute" fill="currentColor"></path></svg>

<!-- <svg stroke="currentColor" fill="none" stroke-width="2" viewBox="0 0 24 24" stroke-linecap="round" stroke-linejoin="round" height="2.5em" width="2.5em" xmlns="<http://www.w3.org/2000/svg>">

<line x1="12" y1="1" x2="12" y2="23"></line>

<path d="M.0022 64C.0022 46.33 14.33 32 32 32H288C305.7 32

320 46.33 320 64C320 81.67 305.7 96 288 96H231.8C241.4 110.4 248.5 126.6 252.4

144H288C305.7 144 320 158.3 320 176C320 193.7 305.7 208 288 208H252.4C239.2

266.3 190.5 311.2 130.3 318.9L274.6 421.1C288.1 432.2 292.3 452.2 282

466.6C271.8 480.1 251.8 484.3 237.4 474L13.4 314C2.083 305.1-2.716 291.5 1.529

278.2C5.774 264.1 18.09 256 32 256H112C144.8 256 173 236.3 185.3 208H32C14.33

208 .0022 193.7 .0022 176C.0022 158.3 14.33 144 32 144H185.3C173 115.7 144.8 96

112 96H32C14.33 96 .0022 81.67 .0022 64V64z"/>

</svg> -->

<span class="text">Predict Production</span>

</div>

<div class="icon" id="prediction-history" onclick="window.location.pathname = '/get\_history';">

<svg xmlns="<http://www.w3.org/2000/svg>" stroke-width="0.4" stroke="currentColor" fill="currentColor" stroke-linecap="round" enable-background="new 0 0 10 10" viewBox="0 0 24 24"height="2.5em" width="2.5em">

<path d="M16.4,3.3C12.5,1.1,7.7,1.8,4.6,4.8V3c0-0.6-0.4-1-1-1s-1,0.4-1,1v4.5c0,0.6,0.

4,1,1,1h4.5c0.6,0,1-0.4,1-1s-0.4-1-1-1H5.7C7.1,4.9,9.2,4,11.5,4c4.4,0,8,3.6,8,8

s-3.6,8-8,8c-0.6,0-1,0.4-1,1s0.4,1,1,1c3.6,0,6.9-1.9,8.7-5C22.9,12.2,21.2,6.1,1

6.4,3.3z

M11.4,8c-0.6,0-1,0.4-1,1v3c0,0.6,0.4,1,1,1h2c0.6,0,1-0.4,1-1s-0.4-1-1-1h-1V9C12

.4,8.4,12,8,11.4,8z"/></svg>

<span class="text">Prediction History</span>

</div>

<a href="/crop\_recommendation" target="\_blank" style="text-decoration:none;color:currentColor;"><div class="icon" id="recommendation">

<svg xmlns="<http://www.w3.org/2000/svg>" viewBox="0 0 256 256" id="IconChangeColor" height="30" width="30"><rect width="256" height="256" fill="none"></rect><path d="M32,104H80a0,0,0,0,1,0,0V208a0,0,0,0,1,0,0H32a8,8,0,0,1-8-8V112A8,8,0,0,1,32

,104Z" fill="currentColor" stroke="#4f4f4f" stroke-linecap="round" stroke-linejoin="round" stroke-width="24" id="mainIconPathAttribute"></path><path

d="M80,104l40-80a32,32,0,0,1,32,32V80h61.9a15.9,15.9,0,0,1,15.8,18l-12,96a16,16

,0,0,1-15.8,14H80" fill="none" stroke="#4f4f4f" stroke-linecap="round" stroke-linejoin="round" stroke-width="24" id="mainIconPathAttribute"></path></svg>

<span class="text">Crop Recommendation</span>

</div>

</a>

<div class="icon signout"

onclick="window.location.pathname='/logout'">

<svg stroke="currentColor" fill="currentColor" stroke-width="0" viewBox="0 0 16 17" height="2.5em" width="2.5em" xmlns="<http://www.w3.org/2000/svg>">

<path fill-rule="evenodd" d="M12 9V7H8V5h4V3l4 3-4 3zm-2 3H6V3L2 1h8v3h1V1c0-.55-.45-1-1-1H1C.45 0 0 .45 0 1v11.38c0 .39.22.73.55.91L6

16.01V13h4c.55 0 1-.45 1-1V8h-1v4z"></path>

</svg>

<span class="text">Sign Out</span>

</div>

</div>

</div>

<div id="tabContent" style="background-color:skyblue;display:flex;justify-content:center;align-items

:center;width: 100%;height: 100%;flex-direction: column;">

</div>

<script>

var i = 0;

var txt = 'We provide a crop production prediction system that estimates the yield for you'; /\* The text \*/

var speed = 30; /\* The speed/duration of the effect in milliseconds \*/ setActiveTab("{{ activeTab }}");

// setActiveTab("home"); function checkInputs() {

var state = document.getElementById('state').value;

var district = document.getElementById('district').value; var season = document.getElementById('season').value; var crop = document.getElementById('crop').value;

var area = document.getElementById('area').value;

var crop\_year = document.getElementById('crop\_year').value;

if (state!="Select State" && district!="Select District" && season!="Select Season" && crop!="Select Crop" && area!="" && crop\_year!="") {

document.getElementById("PredictButton").style["animation"] = "move-text ease 0.5s forwards";

document.getElementById("PredictButton").style["display"] =

"flex";

document.getElementById("EstimatedProduction").style["animation"] = "move-text ease 0.5s forwards";

document.getElementById("EstimatedProduction").style["display"]

= "flex";

}

// EstimatedProduction

else {

!= "none") {

if (document.getElementById("PredictButton").style["display"] document.getElementById("PredictButton").style["animation"]

= "move-text-out ease 0.5s forwards";

document.getElementById("PredictButton").style["display"] =

"flex";

document.getElementById("EstimatedProduction").style["animation"] = "move-text-out ease 0.5s forwards";

document.getElementById("EstimatedProduction").style["display"] = "flex";

}

}

}

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| var Season = ['Autumn', 'Kharif', 'Rabi', 'Summer', 'Whole Year',  'Winter'];  var SeasonProduction = [13065.67, 42743.34, 31011.0, 11522.38,  2395012.0, 71826.42];  var Seasonlayout = {title:"Average Production Based on Season"};  var State =['Andaman and Nicobar Islands', 'Andhra Pradesh', 'Arunachal Pradesh', 'Assam', 'Bihar', 'Chandigarh', 'Chhattisgarh', 'Dadra and Nagar Haveli', 'Goa', 'Gujarat', 'Haryana', 'Himachal Pradesh', 'Jammu and Kashmir', 'Jharkhand', 'Karnataka', 'Kerala', 'Madhya Pradesh', 'Maharashtra', 'Manipur', 'Meghalaya', 'Mizoram', 'Nagaland', 'Odisha', 'Puducherry', 'Punjab', 'Rajasthan', 'Sikkim', 'Tamil Nadu', 'Telangana', 'Tripura', 'Uttar Pradesh', 'Uttarakhand', 'West Bengal']; | | | | |
|  | var StateProduction = [1677.031841, 13754.55695, | | | 1714.868369, |
| 4813.209684, | 6796.096694, 140.47191, 7998.780189, 1507.661597, | | | 5824.533816, |
| 18520.756007, | 19716.844273, 4073.052524, 5676.851103, 7417.888017, | | | 9626.101286, |
| 7944.604567, | 14589.95138, 25783.133563, 1585.508689, 1407.404255, | | | 1041.551541, |
| 1550.521004, | 8123.596125, 629.284404, 40316.635698, 22276.498757, | | | 2135.12465, |
| 7192.593774, | 14543.131104, | 3287.258499, | 13065.24246, | 3894.716477, |

22444.826599];

var Statelayout = {title:"Average Area based on States"}; function showGraph() {

document.getElementById("home").style["background"] = "#c4c8cb40"; document.getElementById("analytics").style["background-color"] =

"#bfbfbf"; "#c4c8cb40"; "#c4c8cb40";

document.getElementById("predict-production").style["background"] = document.getElementById("prediction-history").style["background"] =

document.getElementById("tabContent").innerHTML = `<div

id='graphContent'

style='display:flex;justify-content:center;align-items:center;width:70vw;height

:80vh;'></div><br>

<div

style='display:flex;justify-content:center;align-items:center;'>

<div id='p1' onclick='toggle("p1","p2")' style='cursor:pointer;background-color:grey;width:40px;height:40px;color:white; display:flex;align-items:center;justify-content:center;margin:5px;'>1</div>

<div id='p2' onclick='toggle("p2","p1")' style='cursor:pointer;background-color:grey;display:flex;align-items:center;jus tify-content:center;color:white;width:40px;height:40px;margin:5px;'>2</div>

</div>`;

}

function toggle(value1,value2) { document.getElementById(value1).style['height'] = "50px"; document.getElementById(value1).style['width'] = "50px"; document.getElementById(value2).style['height'] = "40px"; document.getElementById(value2).style['width'] = "40px"; if (value1=="p1") {

var data = [{

x: Season,

y: SeasonProduction, type: "bar" }];

Plotly.newPlot("graphContent", data, Seasonlayout);

}

else {

var data = [{

x: State,

y: StateProduction, type: "bar" }];

Plotly.newPlot("graphContent", data, Statelayout);

}

}

function setActiveTab(TabName) { document.getElementById('tabContent').innerHTML = ''; document.getElementById("home").style["background"] = "#c4c8cb40";

document.getElementById("analytics").style["background-color"] =

"#c4c8cb40"; "#c4c8cb40"; "#c4c8cb40";

"#bfbfbf";

document.getElementById("predict-production").style["background"] = document.getElementById("prediction-history").style["background"] = document.getElementById(TabName).style["background-color"] =

var home = `

<div style="width:80%;height:30%;">

<h1 style="font-family:'Candara';font-size: 50px;padding: 0px;margin: 0;">Let us help you</h1>

<h2>WELCOME TO HEALTHY HARVEST</h2>

<p id="description"></p>

<div id="predict-button" style="padding:0px;width:70%;display:none;justify-content:space-between;">

<button class="button-style" onclick="setActiveTab('predict-production')">Predict Yield</button>

<!-- <button class="button-style" onclick="setActiveTab('prediction-history')">Prediction History</button> -->

</div>

</div>

`;

var predict\_production = ` <div style="display: flex;justify-content:center;align-items:center;padding: 15px;width:90%;background-color: gainsboro;border-radius: 10px;flex-direction: column;">

<h2>One step away from the result</h2><br>

<form action="/predict" method="POST" style="display: flex;justify-content:center;align-items:center;flex-direction: column;width:100%;">

<div style="display:flex;justify-content:space-around;align-items:center;width:100%; ">

<fieldset style="border-right:none;border-bottom:none;border-radius:10px;padding: 15px;">

<legend>State</legend>

<select id="state" name="state" onchange="checkInputs();changeDistricts(this.value);" style="background-color: aliceblue;border:none;height:3em;border-radius:

10px;padding:5px;font-size:15px;width:250px;outline:none;">

<option value="Select State" hidden></option>

<option value='Water Melon'>Water Melon</option>

<option value='Wheat'>Wheat</option>

<option value='Yam'>Yam</option>

</select>

</fieldset>

<fieldset style="border-right:none;border-bottom:none;border-radius:10px;padding: 15px;">

<legend>Area (in Hectares)</legend>

<input type="number" required id="area" name="area" step="any" oninput="checkInputs()" style="background-color: aliceblue;border:none;height:3em;border-radius:

10px;padding:5px;font-size:15px;width:250px;outline:none;"/>

</fieldset>

</div><br><br><br>

<div id="finalBox" style="height:70px;display:flex;justify-content:space-around;align-items:center

;width:80%;">

<fieldset id="EstimatedProduction" style="display:none;border-right:none;border-bottom:none;border-radius:10px;pad ding: 15px;">

<legend>Estimated Yield(In Tons)</legend>

<input type="number" required id="estimated" name="estimated" step="any" style="background-color: aliceblue;border:none;height:3em;border-radius:

10px;padding:5px;font-size:15px;width:250px;outline:none;"/>

</fieldset>

<div id="PredictButton" style="width:40%;display:none;justify-content:center;align-items:center;">

<button

style="font-size:15px;color:white;cursor:pointer;background-color: #017aff;border:1px solid white;height:50px;width:120px;border-radius: 5px;" onclick="validateInputs()">Get Results</button>

</div>

</div><br>

</form>

</div><br>

<div id="Output" style="height:10%;width:100%;display:flex;align-items:center;justify-content:sp ace-around;font-size:22px;">

<div>

{% if Estimated\_Production %}

Estimated Result: <b>{{ Estimated\_Production }}</b>&nbsp;Metric

Tons

{% endif %}

</div>

<div>

{% if Predicted\_Production %}

Predicted Result:&nbsp;<b>{{ Predicted\_Production

}}</b>&nbsp;Metric Tons

{% endif %}

</div>

</div>

<div

style="width:100%;justify-content:center;display:flex;align-items:center;font-s ize:22px;">

{% if profit\_or\_loss %}

Result: <b>{{ profit\_or\_loss }}</b>

{% endif %}

</div>`;

var analytics = '';

var prediction\_history = `{% if history %}

<div style="display:

flex;justify-content:center;align-items:center;padding:

15px;width:100%;border-radius: 10px;flex-direction: column;" ng-app="myApp" ng-controller="myController">

<div style="display:flex;width:80%;align-items:center;justify-content:space-around;"

>

<input type="text" style="border: 1px solid black;height:40px;width:150px;background:transparent;color:black;font-size:15px

;" ng-model="inp\_state" placeholder="Filter State"/>

<input type="text" style="border: 1px solid black;height:40px;width:150px;background:transparent;color:black;font-size:15px

;" ng-model="inp\_district" placeholder="Filter District"/>

<input type="text" style="border: 1px solid black;height:40px;width:150px;background:transparent;color:black;font-size:15px

;" ng-model="inp\_crop\_year" placeholder="Filter Crop Year"/>

<input type="text" style="border: 1px solid black;height:40px;width:150px;background:transparent;color:black;font-size:15px

;" ng-model="inp\_season" placeholder="Filter Season"/>

<input type="text" style="border: 1px solid black;height:40px;width:150px;background:transparent;color:black;font-size:15px

;" ng-model="inp\_crop" placeholder="Filter Crop"/>

</div><br>

<table cellspacing="0" cellpadding="0" border="0">

<tr>

<td>

<table cellspacing="0" cellpadding="0" border="1">

<tr style='background: linear-gradient(to right, #0f0c29, #302b63, #24243e);color:white;'>

ng-click="orderfn('state')">State</th>

ng-click="orderfn('district')">District</th> ng-click="orderfn('crop\_year')">Crop Year</th> ng-click="orderfn('season')">Season</th>

ng-click="orderfn('crop')">Crop</th>

<th style="cursor: pointer;"

<th style="cursor: pointer;"

<th style="cursor: pointer;"

<th style="cursor: pointer;"

<th style="cursor: pointer;"

ng-click="orderfn('area')">Area</th>

<th style="cursor: pointer;"

<th style="cursor: pointer;"

ng-click="orderfn('production')">Production(In Tons)</th>

</tr>

</table>

</td>

</tr>

<tr>

<td>

<div style="width:100%; height:500px; overflow:auto;">

<table>

</tr>

<tr ng-repeat = "result in history\_results | filter: {state: inp\_state} | filter: {district: inp\_district} | filter: {crop\_year: inp\_crop\_year} | filter: {season: inp\_season} | filter: {crop: inp\_crop} | orderBy: cate">

<td>[[result.state]]</td>

<td>[[result.district]]</td>

<td>[[result.crop\_year]]</td>

<td>[[result.season]]</td>

<td>[[result.crop]]</td>

<td>[[result.area]]</td>

<td>[[result.production]]</td>

</tr>

</table>

</div>

</div>

{% else %}

<h2>No Prediction history found</h2>

{% endif %}`;

if (TabName=="home") { i = 0;

document.getElementById('tabContent').style["background"] = 'radial-gradient( circle farthest-corner at 10% 20%, rgba(97,186,255,1) 0%,

rgba(166,239,253,1) 90.1% )';

document.getElementById('tabContent').innerHTML = home; typeWriter();

"skyblue";

}

if (TabName=="analytics") {

document.getElementById('tabContent').style["background"] =

document.getElementById('tabContent').innerHTML = analytics;

}

"skyblue";

if (TabName=="predict-production") { document.getElementById('tabContent').style["background"] =

document.getElementById('tabContent').innerHTML =

predict\_production;

}

if (TabName=="prediction-history") { document.getElementById('tabContent').style["background"] =

"skyblue";

prediction\_history;

document.getElementById('tabContent').innerHTML =

var history\_results = '{{history | safe }}'; if (history\_results=="") {

console.log('empty');

}

else {

history\_results = JSON.parse(history\_results); var app = angular.module("myApp",[]);

app.config(['$interpolateProvider',

function($interpolateProvider) {

$interpolateProvider.startSymbol('[[');

$interpolateProvider.endSymbol(']]');

}]);

app.controller("myController",function($scope) {

$scope.history\_results = history\_results["results"]; console.log($scope.history\_results);

$scope.orderfn = function(x1) { console.log(x1);

if ($scope.cate==x1) {

if ($scope.cate[0]=='-') $scope.cate =

$scope.cate.slice(1);

else $scope.cate = '-'+$scope.cate;

}

else {

$scope.cate = x1;

}

}

});

}

}

}

function validateInputs() {

var area = parseInt(document.getElementById('area').value);

var crop\_year =

parseInt(document.getElementById('crop\_year').value); if (area<=0) {

alert("Area should be greater than 0"); event.preventDefault();

}

else if (crop\_year<2000) {

alert("Crop Year cannot be less than 2000"); event.preventDefault();

}

}

function typeWriter() { if (i < txt.length) {

document.getElementById("description").innerHTML +=

txt.charAt(i);

}

i++;

setTimeout(typeWriter, speed);

else {

document.getElementById("predict-button").style["animation"] = "rightFade 2s forwards";

document.getElementById("predict-button").style["display"] =

"flex";

}

}

function changeDistricts(state) {

if (state=='Select State') return; var states = {

AndamanandNicobarIslands: ['NICOBARS', 'NORTH AND MIDDLE ANDAMAN', 'SOUTH ANDAMANS'] ,

AndhraPradesh: ['ANANTAPUR', 'CHITTOOR', 'EAST GODAVARI', 'GUNTUR', 'KADAPA', 'KRISHNA', 'KURNOOL', 'PRAKASAM', 'SPSR NELLORE', 'SRIKAKULAM', 'VISAKHAPATANAM', 'VIZIANAGARAM', 'WEST GODAVARI'] ,

ArunachalPradesh: ['ANJAW', 'CHANGLANG', 'DIBANG VALLEY', 'EAST KAMENG', 'EAST SIANG', 'KURUNG KUMEY', 'LOHIT', 'LONGDING', 'LOWER DIBANG

VALLEY', 'LOWER SUBANSIRI', 'NAMSAI', 'PAPUM PARE', 'TAWANG', 'TIRAP', 'UPPER SIANG', 'UPPER SUBANSIRI', 'WEST KAMENG', 'WEST SIANG'] ,

Assam: ['BAKSA', 'BARPETA', 'BONGAIGAON', 'CACHAR', 'CHIRANG', 'DARRANG', 'DHEMAJI', 'DHUBRI', 'DIBRUGARH', 'DIMA HASAO', 'GOALPARA', 'GOLAGHAT', 'HAILAKANDI', 'JORHAT', 'KAMRUP', 'KAMRUP METRO', 'KARBI ANGLONG', 'KARIMGANJ', 'KOKRAJHAR', 'LAKHIMPUR', 'MARIGAON', 'NAGAON', 'NALBARI', 'SIVASAGAR', 'SONITPUR', 'TINSUKIA', 'UDALGURI'] ,

UttarPradesh: ['AGRA', 'ALIGARH', 'ALLAHABAD', 'AMBEDKAR NAGAR', 'AMETHI', 'AMROHA', 'AURAIYA', 'AZAMGARH', 'BAGHPAT', 'BAHRAICH', 'BALLIA', 'BALRAMPUR', 'BANDA', 'BARABANKI', 'BAREILLY', 'BASTI', 'BIJNOR', 'BUDAUN', 'BULANDSHAHR', 'CHANDAULI', 'CHITRAKOOT', 'DEORIA', 'ETAH', 'ETAWAH', 'FAIZABAD', 'FARRUKHABAD', 'FATEHPUR', 'FIROZABAD', 'GAUTAM BUDDHA NAGAR', 'GHAZIABAD', 'GHAZIPUR', 'GONDA', 'GORAKHPUR', 'HAMIRPUR', 'HAPUR', 'HARDOI', 'HATHRAS', 'JALAUN', 'JAUNPUR', 'JHANSI', 'KANNAUJ', 'KANPUR DEHAT', 'KANPUR NAGAR', 'KASGANJ', 'KAUSHAMBI', 'KHERI', 'KUSHI NAGAR', 'LALITPUR', 'LUCKNOW', 'MAHARAJGANJ', 'MAHOBA', 'MAINPURI', 'MATHURA', 'MAU', 'MEERUT', 'MIRZAPUR', 'MORADABAD', 'MUZAFFARNAGAR', 'PILIBHIT', 'PRATAPGARH', 'RAE BARELI', 'RAMPUR', 'SAHARANPUR', 'SAMBHAL', 'SANT KABEER NAGAR', 'SANT RAVIDAS NAGAR', 'SHAHJAHANPUR', 'SHAMLI', 'SHRAVASTI', 'SIDDHARTH NAGAR', 'SITAPUR', 'SONBHADRA', 'SULTANPUR', 'UNNAO', 'VARANASI'] ,

Uttarakhand: ['ALMORA', 'BAGESHWAR', 'CHAMOLI', 'CHAMPAWAT', 'DEHRADUN', 'HARIDWAR', 'NAINITAL', 'PAURI GARHWAL', 'PITHORAGARH', 'RUDRA PRAYAG', 'TEHRI GARHWAL', 'UDAM SINGH NAGAR', 'UTTAR KASHI'] ,

WestBengal: ['24 PARAGANAS NORTH', '24 PARAGANAS SOUTH', 'BANKURA', 'BARDHAMAN', 'BIRBHUM', 'COOCHBEHAR', 'DARJEELING', 'DINAJPUR DAKSHIN', 'DINAJPUR UTTAR', 'HOOGHLY', 'HOWRAH', 'JALPAIGURI', 'MALDAH', 'MEDINIPUR EAST', 'MEDINIPUR WEST', 'MURSHIDABAD', 'NADIA', 'PURULIA']

}

var districts = states[state.replaceAll(" ","")];

var contents = `<option value="Select District"

hidden></option><br>`;

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

value="${districts[i]}">${districts[i]}</option><br>`;

}

contents += `<option

document.getElementById("district").innerHTML = contents;

}

</script>

</body>

</html>

# recommendation.html

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta http-equiv="X-UA-Compatible" content="IE=edge">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>Healthy Harvest</title>

<link rel="icon" type="image/x-icon" href="../static/img/logo-white-fav.png">

<style>

.card {

width: 10vw; height: 10vh;

background-color: purple; color: white;

padding: 5px; display: flex; align-items: center;

justify-content: center; margin: 5px;

font-size: 18px; border: 1px solid black;

}

</style>

</head>

<body style="background:skyblue;display: flex;flex-direction: column;align-items: center;">

<div style="display: flex;justify-content:center;">

<h1>Crop Recommendation System</h1>

</div><br>

<div style="display: flex;justify-content:center;gap:5em;border: 3px solid saddlebrown;border-bottom:none;padding: 20px;width:50%;">

<div>

<span style="font-size:20px;">Enter State:</span>

<select id="district\_name" name="district\_name" style="height:30px;font-size:20px;" onchange="fillContents()">

<option value="Null">Null</option>

<option value='24 PARAGANAS NORTH'>24 PARAGANAS NORTH</option>

<option value='24 PARAGANAS SOUTH'>24 PARAGANAS SOUTH</option>

<option value='ZUNHEBOTO'>ZUNHEBOTO</option>

</select>

</div>

<div>

<span style="font-size:20px;">Enter Season:</span>

<select id="season" name="season" style="height:30px;font-size:20px;" onchange="fillContents()">

<option value="Null">Null</option>

<option value="Kharif">Kharif</option>

. . .

<option value="Whole Year">Whole Year</option>

<option value="Autumn">Autumn</option>

<option value="Rabi">Rabi</option>

<option value="Summer">Summer</option>

<option value="Winter">Winter</option>

</select>

</div>

</div>

<div id="content" style="width:fit-content;

flex-wrap: wrap;height:max-content;display:flex;align-items:center;justify-content:center; padding: 10px;">

</div>

<script>

var districts = {

"24 PARAGANAS NORTH": ['Arecanut', 'Arhar/Tur', 'Coconut ', 'Cotton(lint)', 'Dry chillies', 'Dry ginger', 'Garlic', 'Gram', 'Groundnut', 'Jute', 'Khesari', 'Linseed', 'Maize', 'Masoor', 'Mesta', 'Moong(Green Gram)', 'Oilseeds total', 'Peas & beans (Pulses)', 'Potato', 'Pulses total', 'Rapeseed &Mustard', 'Rice', 'Safflower', 'Sesamum', 'Sugarcane', 'Sunflower', 'Turmeric', 'Urad', 'Wheat']

,

"24 PARAGANAS SOUTH": ['Arecanut', 'Arhar/Tur', 'Barley', 'Coconut ', 'Cotton(lint)', 'Dry chillies', 'Dry ginger', 'Garlic', 'Gram', 'Groundnut', 'Jute', 'Khesari', 'Linseed', 'Maize', 'Masoor', 'Mesta', 'Moong(Green Gram)', 'Oilseeds total', 'Peas & beans (Pulses)', 'Potato', 'Pulses total', 'Rapeseed &Mustard', 'Rice', 'Sesamum', 'Sugarcane', 'Sunflower', 'Turmeric', 'Urad', 'Wheat'] ,

"ADILABAD": ['Arhar/Tur', 'Bajra', 'Banana', 'Beans & Mutter(Vegetable)', 'Bhindi', 'Bottle Gourd', 'Brinjal', 'Cabbage', 'Cashewnut', 'Castor seed', 'Citrus Fruit', 'Coriander', 'Cotton(lint)', 'Cowpea(Lobia)', 'Cucumber', 'Dry chillies', 'Garlic', 'Ginger', 'Gram', 'Groundnut', 'Horse-gram', 'Jowar',

'Linseed', 'Maize', 'Mango', 'Masoor', 'Mesta', 'Moong(Green Gram)', 'Onion', 'Orange', 'Other Rabi pulses', 'Other Fibres', 'Other Fresh Fruits', 'Other Kharif pulses', 'Other Misc. Pulses', 'Other Oilseeds', 'Other Vegetables', 'Pome Fruit', 'Potato', 'Ragi', 'Rapeseed &Mustard', 'Rice', 'Safflower',

'Samai', 'Sesamum', 'Small millets', 'Soyabean', 'Sugarcane', 'Sunflower', 'Sweet potato', 'Tobacco', 'Tomato', 'Turmeric', 'Urad', 'Varagu', 'Wheat'] , "AGAR MALWA": ['Arhar/Tur', 'Bajra', 'Barley', 'Coriander', 'Dry chillies', 'Dry ginger', 'Garlic', 'Gram', 'Groundnut', 'Jowar', 'Linseed', 'Maize', 'Masoor', 'Moong(Green Gram)', 'Onion', 'Other Rabi pulses', 'Other Kharif pulses', 'Peas & beans (Pulses)', 'Potato', 'Rapeseed &Mustard', 'Rice', 'Sannhamp', 'Sesamum', 'Soyabean', 'Sugarcane', 'Sweet potato', 'Urad', 'Wheat'] ,

"AHMADABAD": ['Arhar/Tur', 'Bajra', 'Banana', 'Castor seed', 'Cotton(lint)', 'Dry chillies', 'Garlic', 'Gram', 'Groundnut', 'Guar seed', 'Jowar', 'Maize', 'Moong(Green Gram)', 'Moth', 'Oilseeds total', 'Onion', 'Other Cereals & Millets', 'Other Kharif pulses', 'Other Oilseeds', 'Potato', 'Pulses total', 'Rapeseed &Mustard', 'Rice', 'Sesamum', 'Small millets', 'Sugarcane', 'Tobacco', 'Urad', 'Wheat'] ,

"AHMEDNAGAR": ['Arhar/Tur', 'Bajra', 'Banana', 'Castor seed', 'Cotton(lint)', 'Gram', 'Grapes', 'Groundnut', 'Jowar', 'Linseed', 'Maize', 'Mango', 'Moong(Green Gram)', 'Niger seed', 'Onion', 'Other Rabi pulses', 'Other Cereals & Millets', 'Other Kharif pulses', 'Other Oilseeds', 'Pulses total', 'Ragi', 'Rapeseed &Mustard', 'Rice', 'Safflower', 'Sesamum', 'Small millets', 'Soyabean', 'Sugarcane', 'Sunflower', 'Tomato', 'Total foodgrain', 'Urad', 'Wheat'] ,

"AIZAWL": ['Arhar/Tur', 'Coconut ', 'Cotton(lint)', 'Gram', 'Groundnut', 'Kapas', 'Maize', 'Masoor', 'Moong(Green Gram)', 'Other Rabi pulses', 'Other Kharif pulses', 'Other Oilseeds', 'Peas & beans (Pulses)', 'Potato', 'Rapeseed &Mustard', 'Rice', 'Sesamum', 'Soyabean', 'Sugarcane', 'Tapioca', 'Tobacco', 'Urad', 'Wheat'] ,

"AKOLA": ['Arhar/Tur', 'Bajra', 'Banana', 'Castor seed', 'Cotton(lint)',

'Gram', 'Grapes', 'Groundnut', 'Jowar', 'Maize', 'Mango', 'Moong(Green Gram)', 'Onion', 'Other Rabi pulses', 'Other Cereals & Millets', 'Other Kharif pulses', 'Pulses total', 'Rapeseed &Mustard', 'Rice', 'Safflower', 'Sesamum', 'Small millets', 'Soyabean', 'Sugarcane', 'Sunflower', 'Tomato', 'Total foodgrain', 'Urad', 'Wheat'] ,

"ALAPPUZHA": ['Arecanut', 'Banana', 'Bhindi', 'Bitter Gourd', 'Black pepper', 'Brinjal', 'Cashewnut', 'Cashewnut Raw', 'Coconut ', 'Drum Stick', 'Dry ginger', 'Jack Fruit', 'Mango', 'Other Fresh Fruits', 'Other Oilseeds', 'Other Vegetables', 'Papaya', 'Pineapple', 'Potato', 'Ragi', 'Rice', 'Rubber', 'Sesamum', 'Small millets', 'Snak Guard', 'Sugarcane', 'Sweet potato', 'Tapioca', 'Turmeric'] ,

"ALIGARH": ['Arhar/Tur', 'Bajra', 'Banana', 'Barley', 'Coriander', 'Cotton(lint)', 'Dry chillies', 'Dry ginger', 'Garlic', 'Gram', 'Groundnut', 'Guar seed', 'Jowar', 'Linseed', 'Maize', 'Masoor', 'Moong(Green Gram)', 'Moth']

}

var seasons = {

"Kharif": ['Arecanut', 'Arhar/Tur', 'Bajra', 'Banana', 'Barley',

'Bean', 'Black pepper', 'Blackgram', 'Brinjal', 'Cabbage', 'Cardamom', 'Cashewnut', 'Castor seed', 'Coconut ', 'Colocosia', 'Cond-spcs other', 'Coriander', 'Cotton(lint)', 'Cowpea(Lobia)', 'Dry chillies', 'Dry ginger', 'Garlic', 'Ginger', 'Gram', 'Grapes', 'Groundnut', 'Guar seed', 'Horse-gram',

'Jobster', 'Jowar', 'Jute', 'Jute & mesta', 'Kapas', 'Khesari', 'Korra',

'Lemon', 'Linseed', 'Maize', 'Mango', 'Masoor', 'Mesta', 'Moong(Green Gram)', 'Moth', 'Niger seed', 'Oilseeds total', 'Onion', 'Orange', 'Other Cereals & Millets', 'Other Kharif pulses', 'Other Misc. Pulses', 'Other Oilseeds', 'Paddy', 'Papaya', 'Peas & beans (Pulses)', 'Perilla', 'Pome Granet', 'Potato', 'Pulses total', 'Ragi', 'Rajmash Kholar', 'Rapeseed &Mustard', 'Rice', 'Ricebean (nagadal)', 'Safflower', 'Samai', 'Sannhamp', 'Sapota', 'Sesamum', 'Small millets', 'Soyabean', 'Sugarcane', 'Sunflower', 'Sweet potato', 'Tapioca', 'Tea', 'Tobacco', 'Tomato', 'Total foodgrain', 'Turmeric', 'Urad', 'Varagu', 'Wheat'] ,

"Whole Year": ['Apple', 'Arcanut (Processed)', 'Arecanut', 'Arhar/Tur', 'Ash Gourd', 'Atcanut (Raw)', 'Bajra', 'Banana', 'Barley', 'Beans & Mutter(Vegetable)', 'Beet Root', 'Ber', 'Bhindi', 'Bitter Gourd', 'Black pepper', 'Bottle Gourd', 'Brinjal', 'Cabbage', 'Cardamom', 'Carrot', 'Cashewnut', 'Cashewnut Processed', 'Cashewnut Raw', 'Castor seed', 'Cauliflower', 'Citrus Fruit', 'Coconut ', 'Coffee', 'Coriander', 'Cotton(lint)', 'Cucumber', 'Drum Stick', 'Dry chillies', 'Dry ginger', 'Garlic', 'Ginger', 'Gram', 'Grapes', 'Groundnut', 'Guar seed', 'Horse-gram',

'Jack Fruit', 'Jowar', 'Jute & mesta', 'Kapas', 'Khesari', 'Lab-Lab',

'Linseed', 'Litchi', 'Maize', 'Mango', 'Masoor', 'Mesta', 'Moong(Green Gram)', 'Moth', 'Niger seed', 'Oilseeds total', 'Onion', 'Orange', 'Other Citrus Fruit', 'Other Dry Fruit', 'Other Fibres', 'Other Fresh Fruits', 'Other Oilseeds', 'Other Vegetables', 'Papaya', 'Peach', 'Pear', 'Peas (vegetable)', 'Peas & beans (Pulses)', 'Pineapple', 'Plums', 'Pome Fruit', 'Pome Granet', 'Potato', 'Pulses total', 'Pump Kin', 'Ragi', 'Rapeseed &Mustard', 'Redish', 'Ribed Guard', 'Rice', 'Rubber', 'Safflower', 'Sannhamp', 'Sesamum', 'Small millets', 'Snak Guard', 'Soyabean', 'Sugarcane', 'Sunflower', 'Sweet potato', 'Tapioca', 'Tea', 'Tobacco', 'Tomato', 'Total foodgrain', 'Turmeric', 'Turnip', 'Urad', 'Water Melon', 'Wheat', 'Yam'] ,

"Autumn": ['Arhar/Tur', 'Banana', 'Cotton(lint)', 'Dry chillies', 'Dry ginger', 'Groundnut', 'Jowar', 'Jute', 'Maize', 'Moong(Green Gram)',

'Onion', 'Paddy', 'Peas & beans (Pulses)', 'Potato', 'Ragi', 'Rice', 'Sannhamp', 'Sesamum', 'Small millets', 'Soyabean', 'Sugarcane', 'Sweet potato', 'Tapioca', 'Turmeric', 'Urad'] ,

"Rabi": ['Arecanut', 'Arhar/Tur', 'Bajra', 'Banana', 'Barley', 'Black pepper', 'Blackgram', 'Brinjal', 'Cabbage', 'Cashewnut', 'Castor seed', 'Cond-spcs other', 'Coriander', 'Cotton(lint)', 'Cowpea(Lobia)', 'Dry chillies', 'Dry ginger', 'Garlic', 'Ginger', 'Gram', 'Groundnut', 'Horse-gram', 'Jowar', 'Jute', 'Khesari', 'Korra', 'Lentil', 'Linseed', 'Maize', 'Masoor', 'Mesta', 'Moong(Green Gram)', 'Moth', 'Niger seed', 'Oilseeds total', 'Onion', 'Other Rabi pulses', 'Other Cereals & Millets', 'Other Kharif pulses', 'Other Misc. Pulses', 'Other Oilseeds', 'Paddy', 'Papaya', 'Peas & beans (Pulses)', 'Pineapple', 'Potato', 'Pulses total', 'Ragi', 'Rajmash Kholar', 'Rapeseed &Mustard', 'Rice', 'Safflower', 'Samai', 'Sannhamp', 'Sesamum', 'Small millets', 'Soyabean', 'Sugarcane', 'Sunflower', 'Sweet potato', 'Tapioca', 'Tobacco', 'Tomato', 'Total foodgrain', 'Turmeric', 'Urad', 'Varagu', 'Wheat']

,

"Summer": ['Arhar/Tur', 'Bajra', 'Banana', 'Brinjal', 'Cotton(lint)', 'Cowpea(Lobia)', 'Dry chillies', 'Dry ginger', 'Groundnut', 'Horse-gram', 'Jowar', 'Jute', 'Maize', 'Moong(Green Gram)', 'Onion', 'Other Rabi pulses', 'Paddy', 'Peas & beans (Pulses)', 'Potato', 'Pulses total', 'Ragi', 'Rice', 'Sesamum', 'Small millets', 'Sugarcane', 'Sunflower', 'Tobacco', 'Total foodgrain', 'Turmeric', 'Urad', 'Wheat'] ,

"Winter": ['Arhar/Tur', 'Banana', 'Coriander', 'Cotton(lint)', 'Dry chillies', 'Dry ginger', 'Gram', 'Groundnut', 'Horse-gram', 'Maize', 'Moong(Green Gram)', 'Niger seed', 'Onion', 'Paddy', 'Peas & beans (Pulses)', 'Potato', 'Ragi', 'Rapeseed &Mustard', 'Rice', 'Sannhamp', 'Sesamum', 'Soyabean', 'Sugarcane', 'Sunflower', 'Sweet potato', 'Turmeric', 'Urad', 'Wheat'] ,

}

function fillContents() { var content = "";

var district\_name = document.getElementById('district\_name').value; var season = document.getElementById('season').value;

if (district\_name == "Null" && season == "Null") { document.getElementById("content").innerHTML = ""; return;

}

else if (season == "Null") {

var list = districts[district\_name];

}

else if (district\_name == "Null") { var list = seasons[season];

}

else {

var list= districts[district\_name].filter(value => seasons[season].includes(value));

}

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

content += `<div class="card">${list[i]}</div>`;

}

document.getElementById("content").innerHTML = content;

}

</script>

</body>

</html>

# welcome.html

<html>

<head>

<meta charset="utf-8">

<title>Healthy Harvest</title>

<link

rel="stylesheet"

href="https://maxcdn.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css">

<link rel="stylesheet" href="../static/css/font-awesome.min.css">

<link rel="stylesheet" href="../static/css/main.css">

<link href="../static/img/logo-white-fav.png">

</head>

<body>

<div class="home">

rel="icon"

type="image/x-icon"

<video class="home-video" src = "../static/img/Pexels Videos 1620050.mp4" muted loop autoplay></video>

<div class="overlay">

</div>

<div class="home-content">

<h1 id="head">LET US HELP YOU</h1>

<h2>WELCOME TO HEALTHY HARVEST</h2>

<p>we provide a crop production prediction system that estimates the yield for you</p>

<a href="/login" class="button">GET STARTED</a>

</div>

</div>

</body>

</html>

* 1. **Login System:**

The login system consists of 2 tabs. Login Tab and Sign-up Tab. For a user to sign up, the user either needs a logged in google account or unregistered email, username and password. If the user attempts to sign-up with an existing email, then the user is alerted with the warning message that ‘Account with that email already exists’. Upon a successful sign-up, the user receives a welcome mail and an account is created for the user. The user is then navigated to the home page.

# Analytics:

The analytics tab consists of 2 charts that provide statistical information about the crops in India. The user can view the charts by selecting the page number on the bottom of the page. The first chart is a bar plot containing Average production on various seasons such as Autumn, Winter, Summer, Rabi, Whole Year. The second chart is a bar plot containing Average Area based on States. The user can also download the charts in png formats or perform various functions such as zoom, pan, box select, lasso select, zoom in, zoom out, auto-scale, reset axes, toggle spike line, show closest data on hover, compare data on hover.

# Predict Production:

The predict production tab helps the user to predict the yield outcome as profit/loss. The user provides information such as state, district, crop year, crop, season, area (in hectares) and finally estimated production (in metric tons). The result is displayed after the user clicks the predict yield button. Estimated result, predicted result, Profit/Loss is displayed in the page. The prediction results are also stored so that users can view the results anytime.

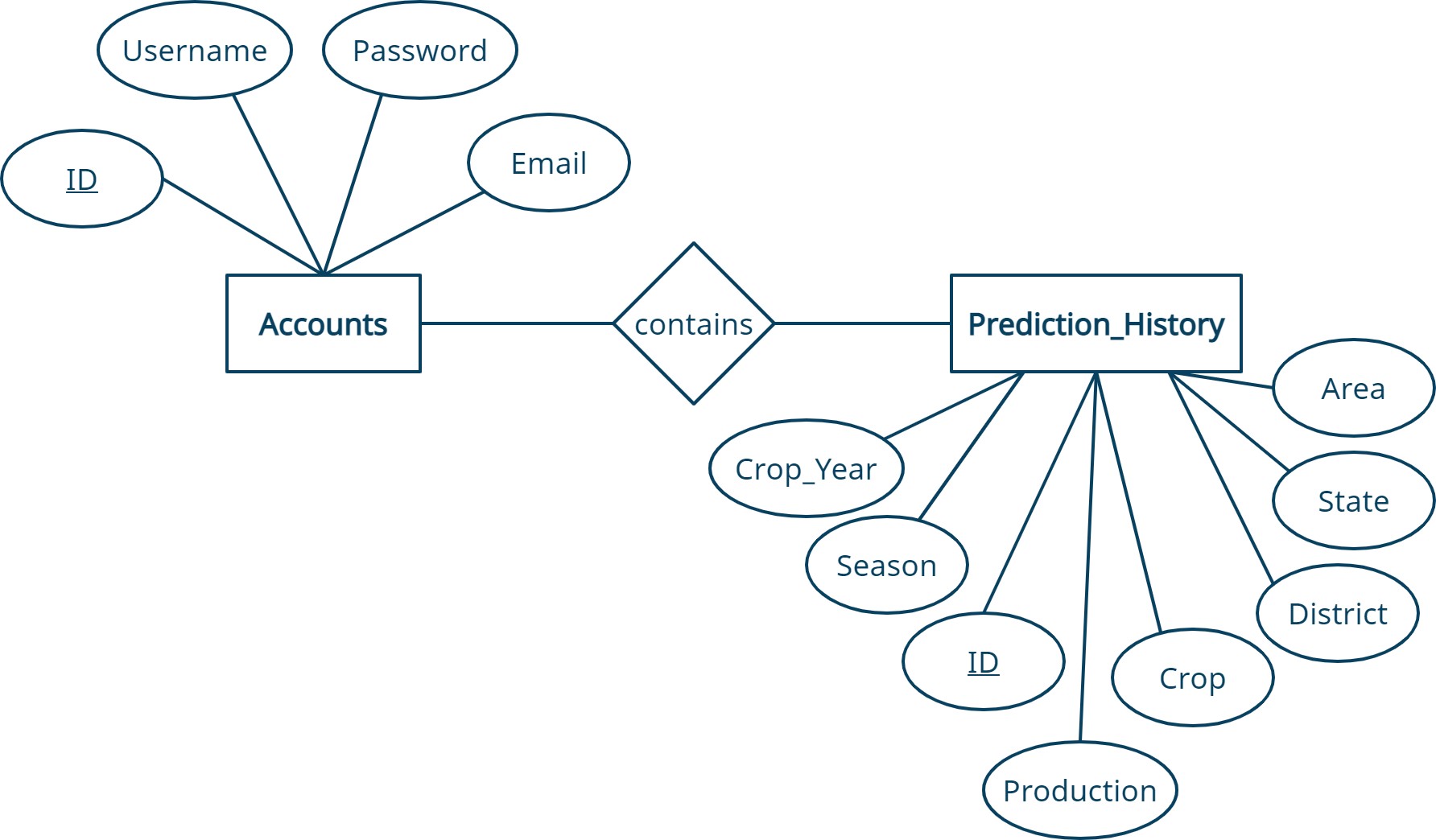
# Prediction History:

The prediction history tab provides information about the prediction that was done by the user before. The prediction information can be sorted in ascending or descending order based on the user clicking on the table head’s name. If the user clicks on a table head’ name (for example Season column), the results are displayed in season’s ascending order. If the user clicks the same table head’s name again, then the results are displayed in the season's descending order. Filter option is also available for various fields such as state, district, crop year, season and crop. The user will be able to view the results based on the filter.

# Crop Recommendation

The crop recommendation system is used to help the user in deciding the crop for a particular district based on the season. The user can select a district to see the crops that are recommended for the particular district. The user can select the season to see the crops that are recommended for the particular season. The user can also both select districts and select seasons to see the crops that are recommended for a particular district and season. The user can get a better idea for deciding the crop based on the results from the crop recommendation system.

# 7.10 Database Schema



1. **TESTING**

# Test Cases

* + 1. User should able to choose from login or signup
    2. The UI elements should correspond to the appropriate fields such as email, password and username that gets stored in the database
    3. The login page is valid only if the user has already registered
    4. The registered user should login to view the dashboard
    5. The credentials should match for both login and register
    6. The email account should be valid

# User Acceptance Testing

**Defect Analysis:**

This report shows the number of resolved or closed bugs at each severity level, and how they were resolved.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Resolution** | **Severity 1** | **Severity 2** | **Severity 3** | **Severity 4** | **Subtotal** |
| By Design | 10 | 2 | 1 | 4 | 17 |
| Duplicate | 1 | 0 | 3 | 0 | 4 |
| External | 1 | 4 | 0 | 0 | 4 |
| Fixed | 8 | 2 | 4 | 12 | 26 |
| Not Reproduced | 0 | 0 | 0 | 0 | 0 |
| Skipped | 0 | 0 | 0 | 1 | 1 |
| Won't Fix | 0 | 2 | 1 | 1 | 4 |
| Totals | 20 | 10 | 9 | 19 | 56 |

# Test case Analysis:

This report shows the number of test cases that have passed, failed, and untested

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Section** | **Total Cases** | **Not Tested** | **Fail** | **Pass** |
| Dashboard | 15 | 0 | 0 | 15 |
| Client Application | 27 | 0 | 0 | 27 |
| Security | 7 | 0 | 0 | 7 |
| Predictive model | 5 | 0 | 0 | 5 |
| Visualizations | 10 | 0 | 0 | 10 |
| Design and UI | 4 | 0 | 0 | 4 |
| Version Control | 1 | 0 | 0 | 1 |

# RESULTS

**9.1 Performance Metrics**

Project team shall fill the following information in the model performance testing template.

|  |  |  |
| --- | --- | --- |
| **S.No.** | **Parameter** | **Screenshot / Values** |
| 1. | Dashboard design | No of Visulizations / Graphs - 5 |
| 2. | Data Responsiveness |  |
| 3. | Amount Data to Rendered (DB2 Metrics) |  |
| 4. | Utilization of Data Filters |  |
| 5. | Effective User Story | No of Scene Added - USN-1 |

|  |  |  |
| --- | --- | --- |
|  |  | USN - 2      USN - 4 |

|  |  |  |
| --- | --- | --- |
|  |  | USN - 5      USN - 6 |

|  |  |  |
| --- | --- | --- |
|  |  | USN - 9 |

|  |  |  |
| --- | --- | --- |
|  |  | USN-8        USN-11  All visualization graphs from cognos analytics  USN-7 |

|  |  |  |
| --- | --- | --- |
|  |  | USN-10 |
| 6. | Descriptive Reports | No of Visualizations / Graphs -   1. Seasons with Average productions 2. With years usage of area and production 3. Top 10 states with most area 4. State with crop production 5. States with the crop production along with season (text table) |

|  |  |  |
| --- | --- | --- |
|  |  |  |

|  |  |  |
| --- | --- | --- |
|  |  |  |

# ADVANTAGES & DISADVANTAGES

**Advantages**

Crop yield prediction systems enable better production planning and decision-making. The proposed system includes a prediction module based on the Random Forest data mining classification algorithm, which is used to forecast the yield of major crops based on historical data. Random Forest is a supervised learning technique that is used to classify and predict datasets. It will randomly select a set of features from the dataset's attributes and build a set of decision trees by locating the root.

Crop yield prediction is also used by farmers to make decisions about when to plant and harvest crops based on soil moisture content, pest infestations, and other factors such as weather conditions and fertilizer requirements.

Agricultural producers take into account the amount of harvest per unit area for measurement. The extrapolation for the entire farm then gets done based on the harvested weight of the crop each year.

The site provides the profit/loss amount of production so that the farmers can plan accordingly.

The user can view the history of their search and filter the data according to the selected attribute like based on year, crop yield etc.

# Disadvantages

Previously yield was predicted on the basis of the farmers prior experience but now weather conditions may change drastically so they cannot guess the yield.

Any mismatch in the crop’s climate and soil adaptations compared to the actual climate/soil conditions that it’s grown in.

Other stress factors like drought stress, flood stress, and whatever temperature conditions might prevail during a given year, compared to the climate averages.

Soil topography is prohibited from taking and growing more than one crop in a particular area. Crop rotation is not always advisable. Changing weather conditions and other accidents interfere with crop rotation. The type of soil may generally be suitable only for certain crops.

The disadvantages to widespread pesticide use are significant. They include domestic animal contaminations and deaths, loss of natural antagonists to pests, pesticide resistance, honeybee and pollination decline, losses to adjacent crops, fishery and bird losses, and contamination of groundwater.

# CONCLUSION

The productivity of agriculture has slightly increased as a result of technology's introduction. New ideas like digital agriculture, smart farming, precision agriculture, etc. have been made possible by the innovations. In the literature, it has been noted that analyses of agricultural soils and the detection of hidden patterns utilizing data sets relating to meteorological conditions and crop yields have been conducted. Numerous operations are involved in the agriculture industry, including crop yield prediction, seed selection, soil quality evaluation, and weather forecasting. The specific activity of agricultural yield prediction has been examined in this research, and the key patterns have been noted. Machine learning has been used to conduct the analysis. It may be said that research into using IT trends like data analytics in agriculture is still in its early stages. Since food is a basic human need, attaining the highest yields possible while using the best available resources will soon become a necessity due to the world's expanding population. The results of the poll show that crop yield analytics require more advanced methods. There is a wide range of research potential in this field.

# FUTURE SCOPE

The application has features such as analytics, predicting the yield, crop recommendation. The yield results are displayed to the user in terms of metric tons and if the estimated yield is lower than the predicted yield, then it is said to be profit, otherwise loss. In future scope, we have decided to predict the cost of yield so that we can predict the result as profit/loss based on the investment and yield of the crop on market price. There are many factors for predicting the market price on the end of yield. Therefore, a separate model must be trained to predict the market price on the end of yield. The market price should be multiplied with the yield to predict the yield cost and based on the difference between investment and yield cost, we can predict whether the user has gain/loss.

# APPENDIX

Source Code :

[https://github.com/IBM-EPBL/IBM-Project-34385-1660234888/tree/main/Final%20Deliverables/](https://github.com/IBM-EPBL/IBM-Project-34385-1660234888/tree/main/Final%20Deliverables/Code) [Code](https://github.com/IBM-EPBL/IBM-Project-34385-1660234888/tree/main/Final%20Deliverables/Code)

GitHub:

<https://github.com/IBM-EPBL/IBM-Project-34385-1660234888>

Project demo link : <https://www.youtube.com/watch?v=LJyRgJ10GL8>