

## About Project

### Details

"The Agricultural Crop Recommendation System using machine learning is a software application that utilizes artificial intelligence algorithms to provide recommendations to farmers on the best crops to plant based on their specific farming conditions. The system collects and analyzes various data sources, such as soil quality, climate, and historical crop yields, to make personalized crop recommendations. The system is easy to use and can be accessed through a web-based platform or mobile app."

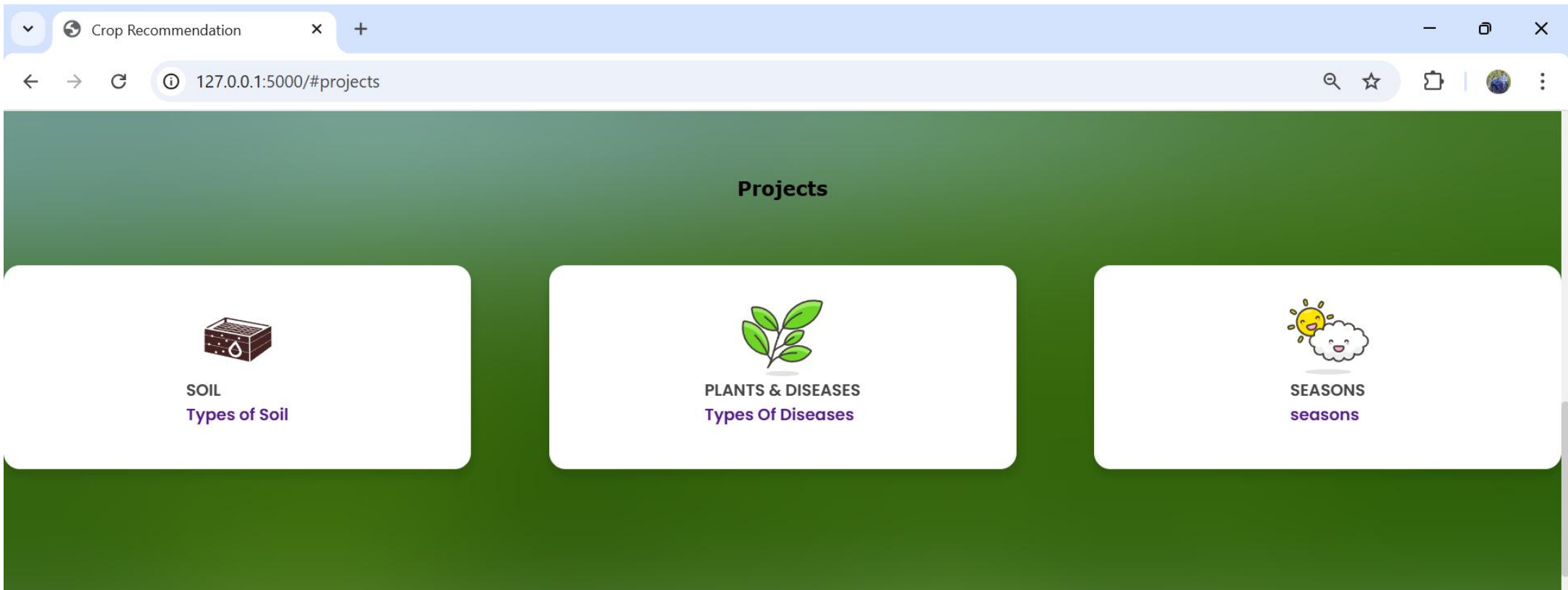
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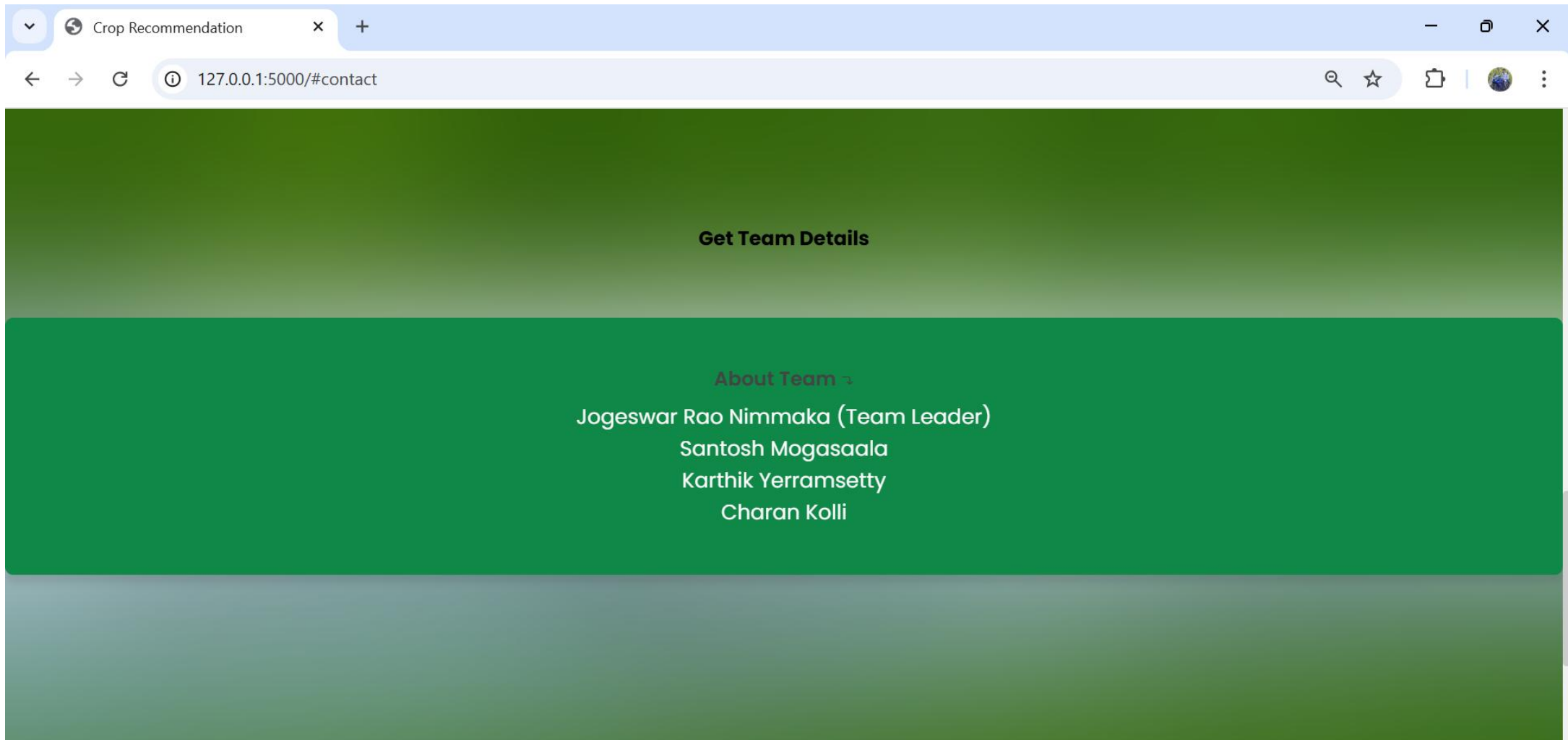
### Tools and Technologies

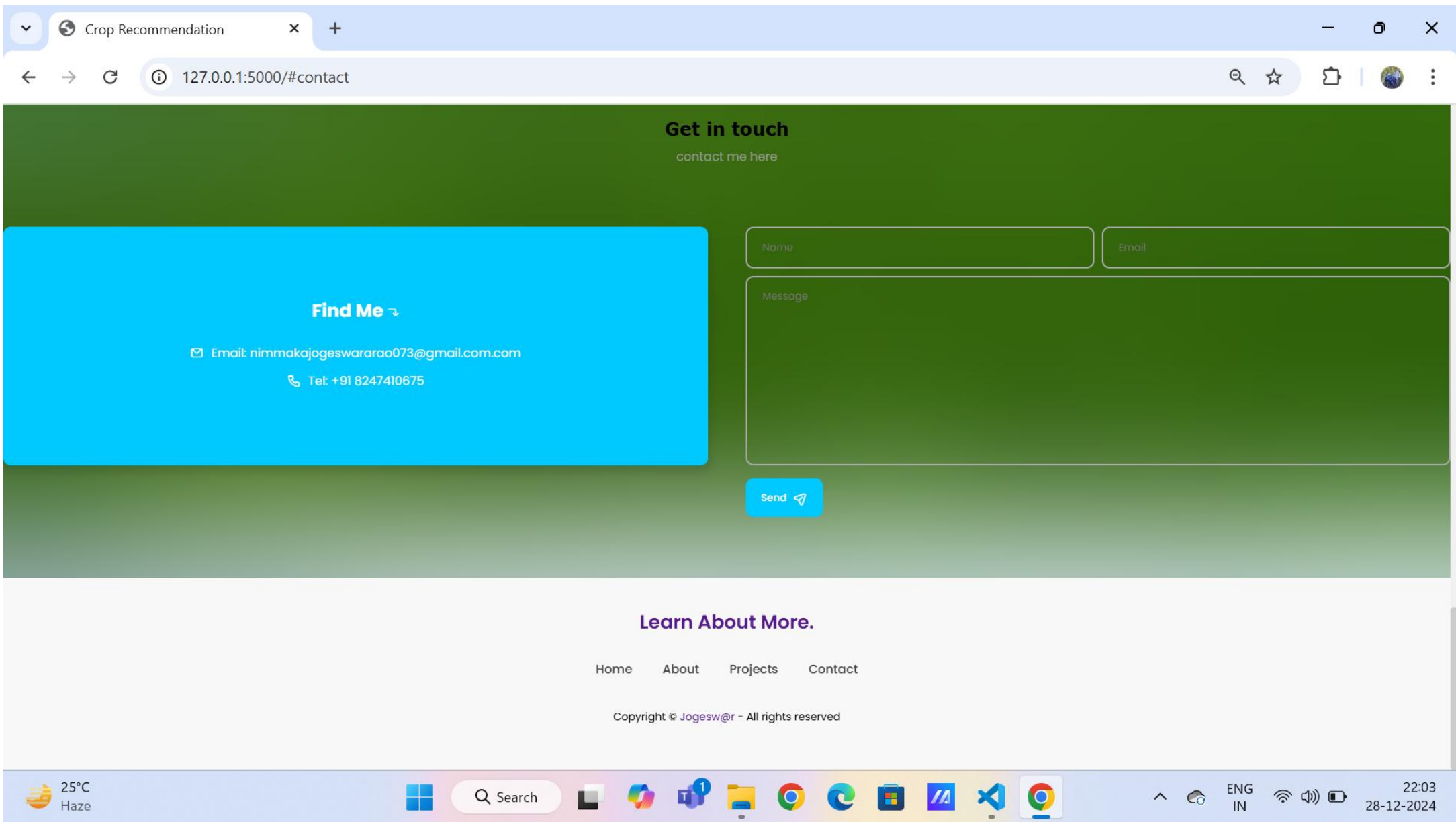
Flask Machine Learning  
Kaggle Datasets [Link](#)  
Python

### Using Package Files

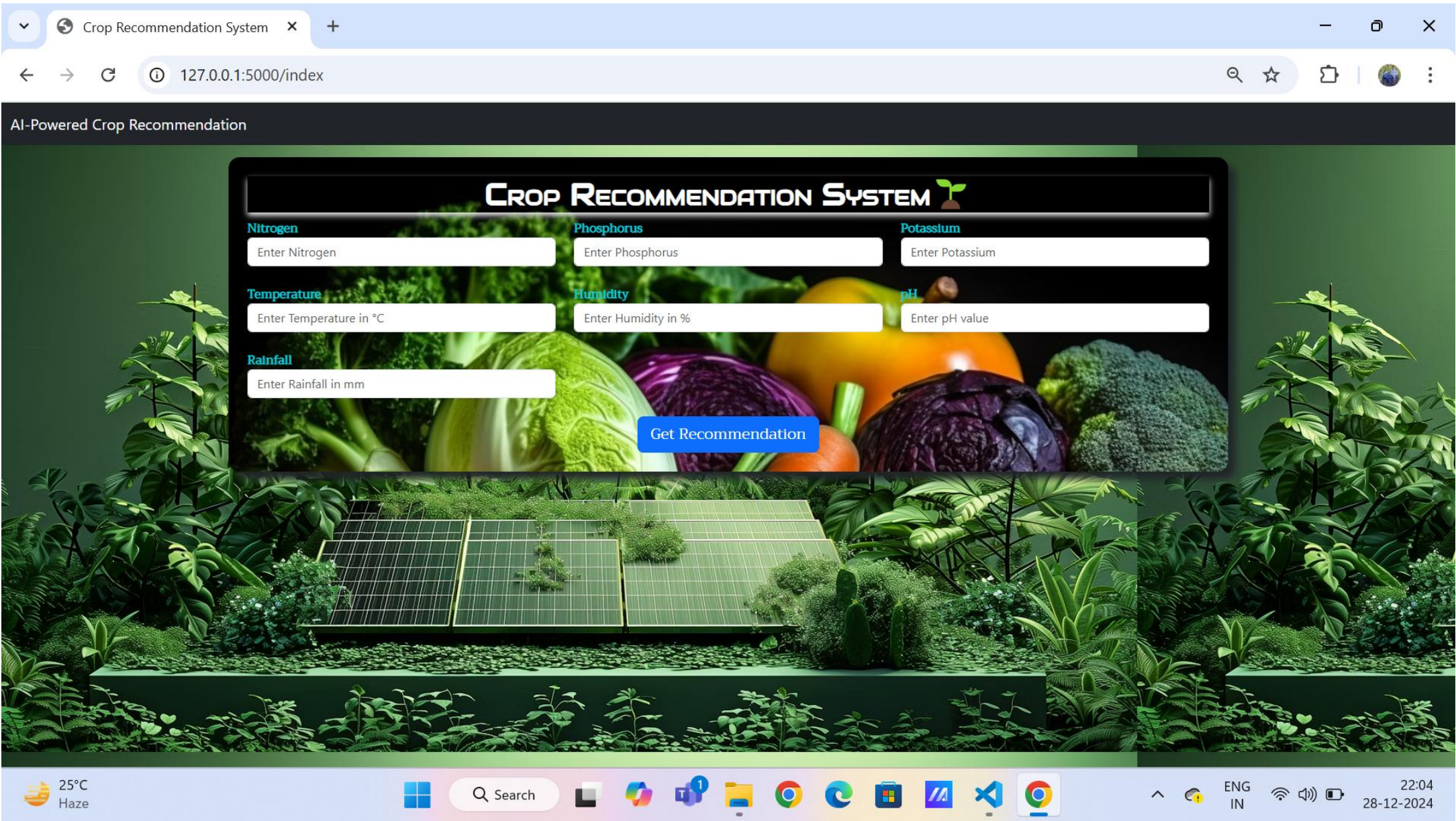
Pandas Matplotlib sklearn Pickle Numpy Streamlit  
Flask Seaborn Distplot MinMaxScaler StandardScaler













# CROP RECOMMENDATION SYSTEM

12

12

22

2

2

[Get Recommendation](#)



Crop Recommendation System

127.0.0.1:5000/predict

AI-Powered Crop Recommendation

CROP RECOMMENDATION SYSTEM

Nitrogen

Enter Nitrogen

Phosphorus

Enter Phosphorus

Potassium

Enter Potassium

Temperature

Enter Temperature in °C

Humidity

Enter Humidity in %


pH

Enter pH value

Rainfall

Enter Rainfall in mm

Get Recommendation




Recommend Crop  
for Cultivation is:

Kidneybeans is the best  
crop to be cultivated  
right there

25°C  
Haze

Search



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## Types of Soils and Suitable Crops

### 1. Clay Soil

#### Characteristics:

Heavy, retains water well, and rich in nutrients but can be compacted easily.

#### Crops:

Rice, broccoli, cabbage, brussels sprouts, pumpkins.



### 2. Sandy Soli



## Diseases

## Plant Diseases:

### 1. Powdery Mildew:

**Leaves, stems, and flowers develop a white dusty coating**



## 2. Downy Mildew:

**Upper portion of leaves discolor, while the bottoms develop white or gray mold**





Seasons

127.0.0.1:5000/seasons#about

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Seasons

Summer Season (March - June)

Suitable Crops:

Summer crops, also called warm-season crops, are vegetables that grow best in hot summertime weather. Popular summer crops to grow in your garden include corn, melons, tomatoes, zucchini, cucumbers, beans, sweet potatoes, peppers, and pumpkins.

Crops:

Corn (Maize), Soybeans, Tomatoes, Peppers, Cucumbers, and Melons.

Why:

These crops thrive in warm temperatures and have high sunlight requirements.


Not Suitable Crops:

Crops:

Lettuce, Spinach, Broccoli, Peas.

Losses:

These crops can bolt (go to seed) quickly in hot weather, reducing yield and quality.



Monsoon Season (June - September)

Suitable Crops:

25°C  
Haze

Search

Taskbar icons: File Explorer, Google Chrome, Microsoft Edge, Microsoft Store, Visual Studio Code, Google

System tray: ENG IN, Wi-Fi, Speaker, Battery, 22:06 28-12-2024