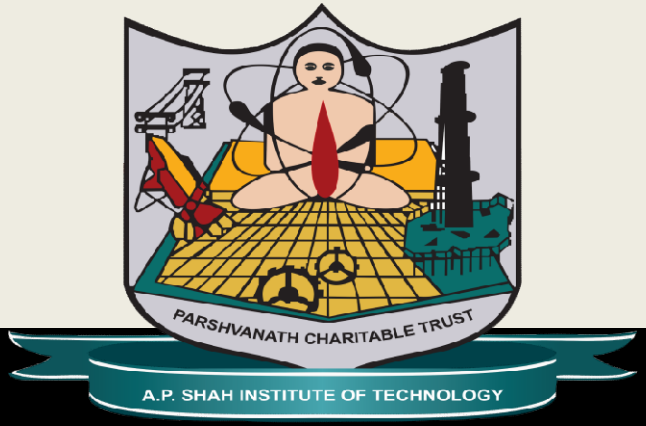

Department of Information Technology
NBA Accredited

A.P. Shah Institute of Technology

G.B.Road,Kasarvadavli, Thane(W), Mumbai-400615

UNIVERSITY OF MUMBAI

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A Project Presentation on

Real Time Crop Recommendation

Submitted in partial fulfillment of the degree of
Bachelor of Engineering(Sem-6) in
INFORMATION TECHNOLOGY

By
Ishika Sharma(19104061)
Ruta Mhaskar(19104013)
Anagha Rai(19104030)
Under the Guidance of
Prof. Kiran Deshpande
Name of Guide:
Prof. Charul Singh
Prof. Sonal Jain

1.Project Conception and Initiation

1 Introduction:

1. Farming is one of the major sectors that influences a country's economic growth.
2. In country like India, majority of the population is dependent on agriculture for their livelihood. Many new technologies, such as Machine Learning ,are being implemented into agriculture so that it is easier for farmers to grow and maximize their yield.
3. In our project, we are implementing Crop Recommendation System.
4. In this application, the user can provide the soil data from their side and the application will predict which crop should the user grow.

1.1 Objectives

1. To give right knowledge to the users about which crop to sow in their field based on the soil data.
2. To recommend optimum crops to be cultivated by farmers based on several parameters and help them make an informed decision before cultivation.
3. To develop a user-friendly website.

1.2 Literature Review

- In this literature survey of the project, the team studied various sites mentioned in the reference section.
- The dataset entries required for this project were referred from [1].
- Flask is a Python-based microframework used for developing small scale websites. Reference [2] talks about it's usage. The prerequisites for this include installing required libraries, fetching dataset, pre-processing it, using appropriate ML algorithm and training and testing the accuracy of the model.
- The overall study of the problem statement and existing solution to it was studied from [3]

1.3 Problem Definition

- India is known as the land of farmers and agriculture is carried out over acres.
- Most of the farmers lack information about the crops to be cultivated in different regions.
- Hence they end up growing the wrong crop.
- This results in mass deduction of food produce.

Solution:

- As a solution to this problem, this project focuses on studying the soil type and suggesting the right crop for it.
- The ML algorithm used takes input from the user and displays the best crop match.

1.4 Scope

- Can be used by farmers to know the right type of crops to grow in their fields.
- Can become the go-to assistant that recommends the optimum crop for a soil type.

1.5 Technology stack

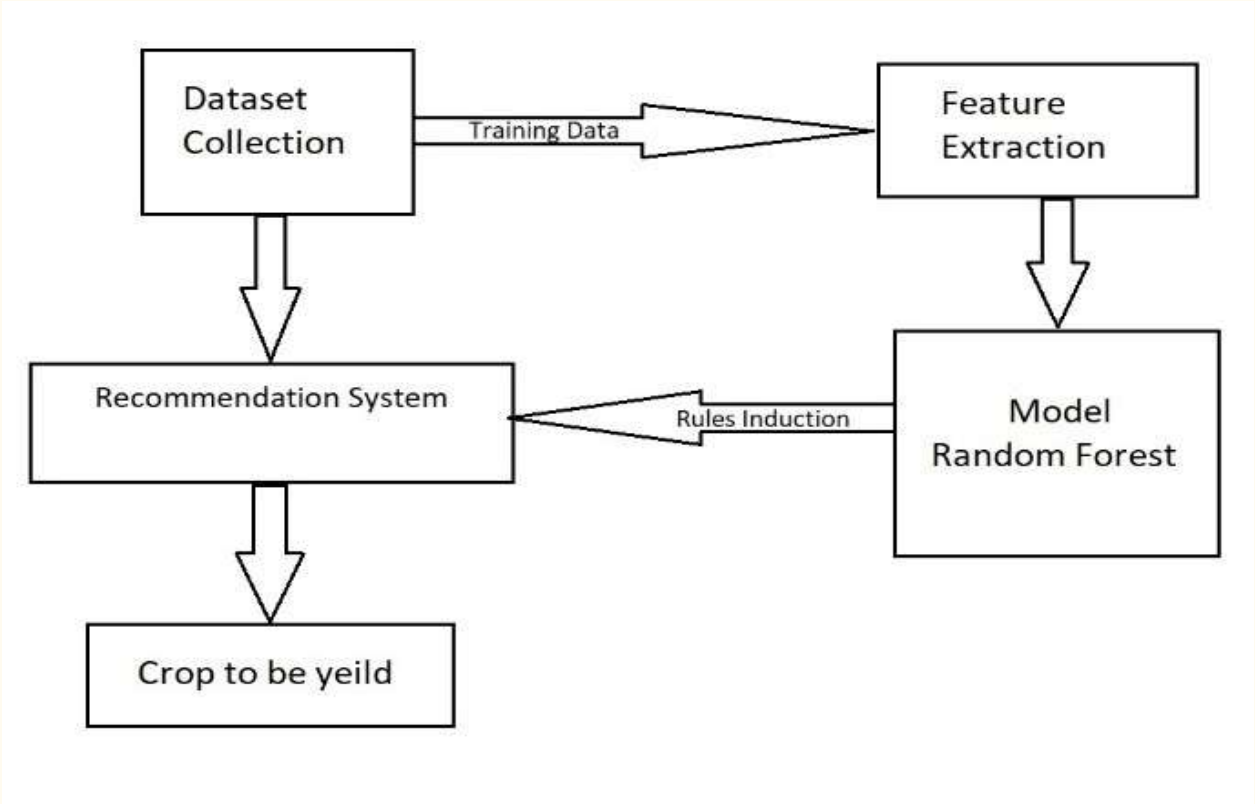
- Frontend - HTML, CSS.
- Framework - Flask
- ML using python.

2. Project Design

2.1 Proposed System

- The website is designed to help the farmers to decide the crops to be cultivated in a particular region by using soil data.
- Thus our work will help the farmers in sowing right seed based on soil requirements to increase productivity and acquire profit.
- The model which is trained with the training data set is tested with inputs from the user in our application.
- The scripting done will respond to any test case predicting a crop. If the test case doesn’t match any of the predictions then a try again output is generated.

2.2 Design(Flow Of Modules)



3. Implementation

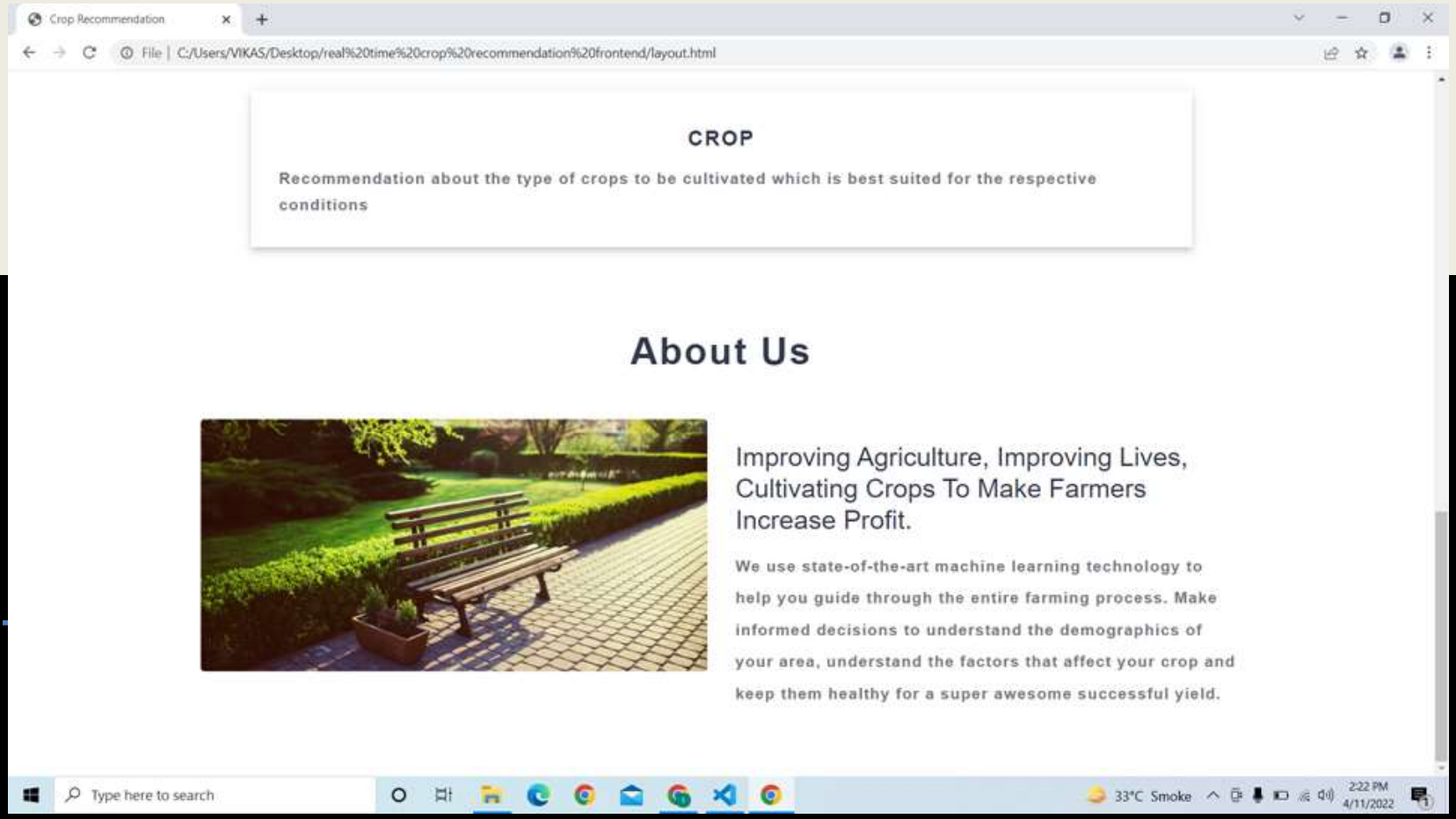
Home Page

Aim Of The Project

Our aim is to recommend you crops to be cultivated in that region.

CROP

Recommendation about the type of crops to be cultivated which is best suited for the respective conditions


Crop Recommendation
File | C:/Users/VIKAS/Desktop/real%20time%20crop%20recommendation%20frontend/layout.html
CROP
Recommendation about the type of crops to be cultivated which is best suited for the respective conditions
About Us
Improving Agriculture, Improving Lives, Cultivating Crops To Make Farmers Increase Profit.
We use state-of-the-art machine learning technology to help you guide through the entire farming process. Make informed decisions to understand the demographics of your area, understand the factors that affect your crop and keep them healthy for a super awesome successful yield.
Type here to search
33°C Smoke
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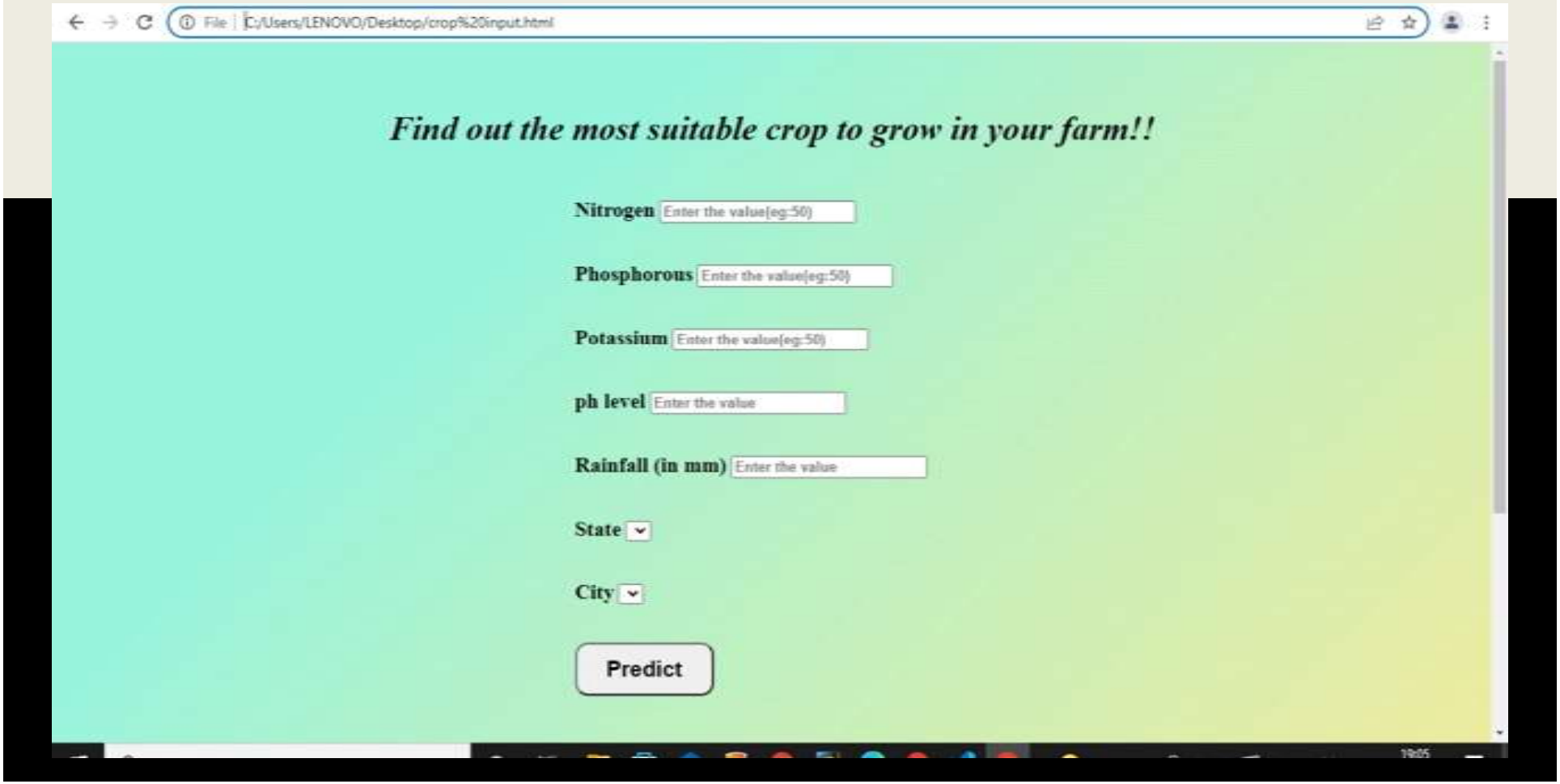
4/11/2022

Crop Prediction Page



5. Result

The prediction accuracy of the model accounts to 99%.

6. Conclusion and Future Scope

- In modern environment with less knowledge of agriculture, it is important to have knowledge and an understanding of the factors that affect the cultivation before selecting any crop. From this system, the above mentioned factors are processed.

References

1. https://www.kaggle.com/
2. https://www.geeksforgeeks.org/deploy-machine-learning-model-using-flask/
3. https://www.researchgate.net/publication/346627389_Crop_Recommendation_System

Thank You