SMART FARMING(O MY NATURAL)

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PROBLEM STATEMENT

- The mission of our project is to safeguard the soil from losing its fertility owing to poor farming techniques.
- Treating crop disease organically rather than using heavy fertilizers during plant growth can also help in protecting the soil properties.
- Cultivating the right crop in the right soil to reduce the risk of soil property degradation.

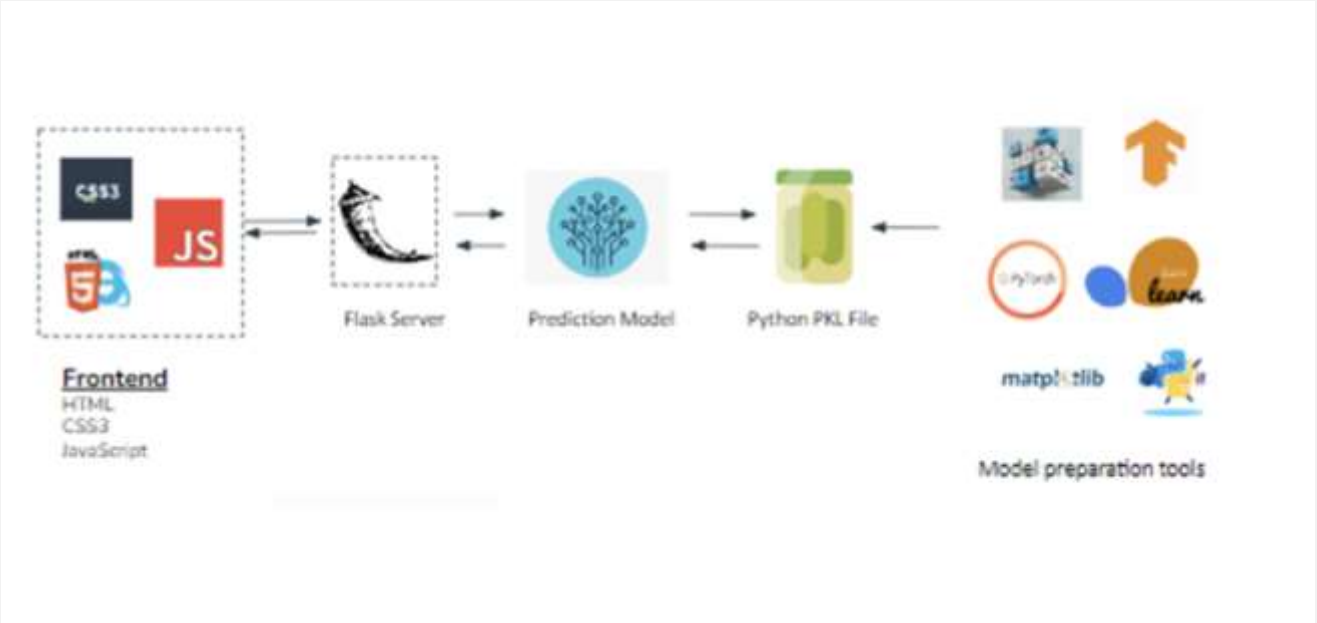
INTRODUCTION

- Farming is one of the major sectors that influences a country's economic growth.
- In country like India, majority of the population is dependent on agriculture for their livelihood.
- Many new technologies, such as Machine Learning and Deep Learning, are being implemented into agriculture so that it is easier for farmers to grow and maximize their yield.
- In our project we would like to develop a nature friendly web application in which the following applications are implemented; Crop recommendation, Fertilizer recommendation and Plant disease prediction, respectively.

DATA SET

- This dataset consists of about 87K rgb images of healthy and diseased crop leaves which is categorized into 38 different classes. .
- Data is gathered from various trustworthy sources, including data.gov.in and kaggle.com.
- The data sets are for the states of Maharashtra and Karnataka. State, district, year, season, type of crop, the area under cultivation, production, and so on are all included in the data.

ARCHITECTURE



PLANT DISEASE PREDICTION SYSTEM

In the plant disease prediction application, the user may upload a photograph of a sick plant leaf, and the program will identify the condition, as well as provide some background information and treatment options.

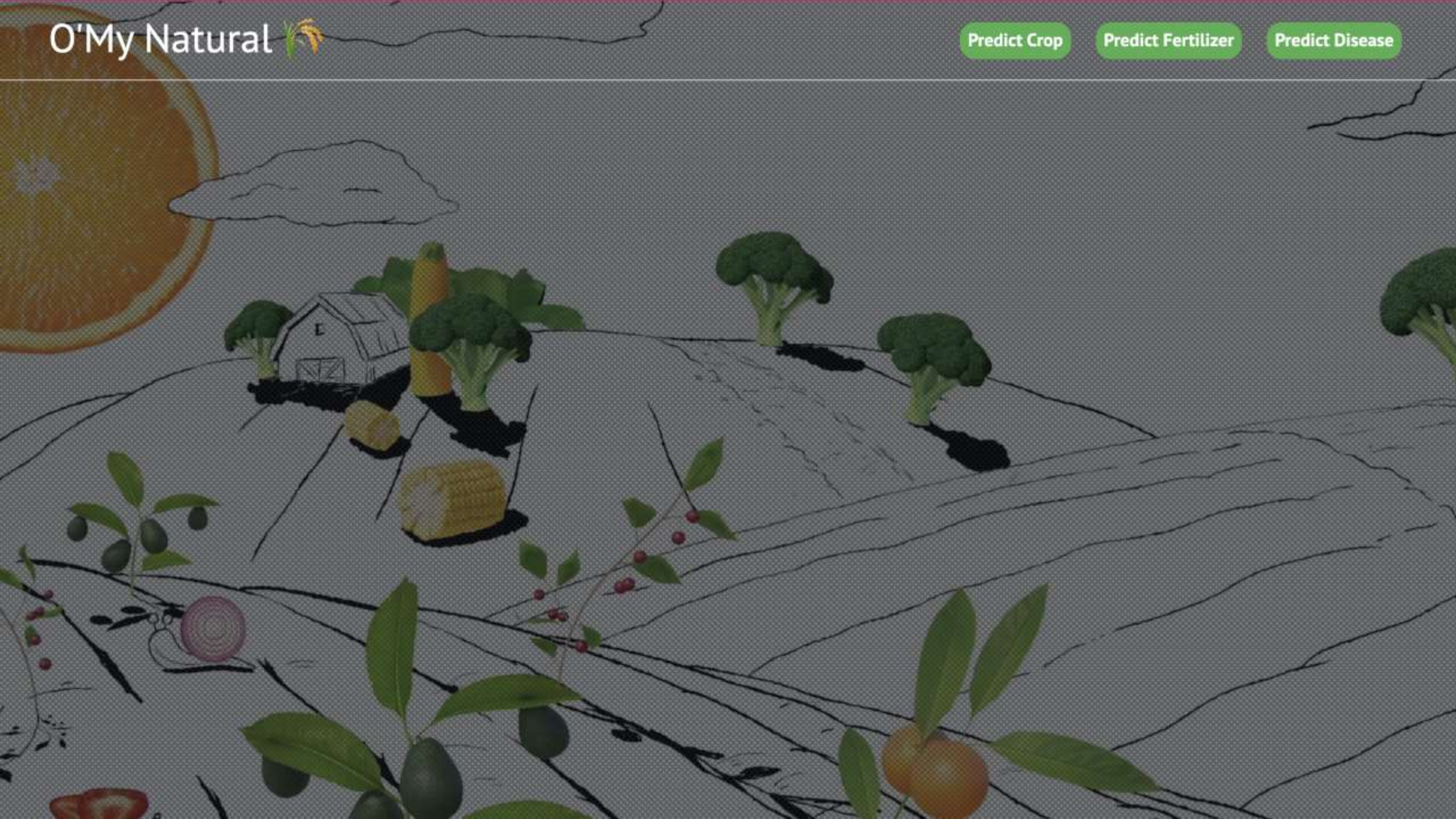
CROP RECOMMENDATION SYSTEM

- The proposed system assists farmers in crop selection by considering all the factors such as sowing season, soil condition, and geographic location.
- Proper Crop Selection is a Factor in successful crop farming.

FERTILIZER RECOMMENDATION SYSTEM

- For the fertilizer recommendation application, the user can input the soil data and the type of crop they are growing, and the application will predict what the soil lacks or has excess of and will recommend improvements.

PRODUCT DEMO



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CONCLUSION

- The proposed system assists farmers in selecting the appropriate crop by delivering information that regular farmers are unaware of, reducing crop failure and improving output.
- It also helps them avoid losing money. We developed a model to identify many plant diseases from 38 distinct classes encompassing 14 different plants as part of our research.
- This approach aids in detecting and classifying plant leaf diseases based on their physical characteristics.
- Our suggested model can reach a recognition rate of 97.33 percent, demonstrating its successful performance.

THANK YOU