

PROBLEM

Visually identifying plant diseases is extremely inefficient, expensive, difficult and time consuming. Large scale manual observation with a very high accuracy and precision is close to impossible.

SOLUTION

We propose to develop a software solution for automatic detection and classification of plant leaf diseases using Deep Learning in an extremely accurate, efficient and cost effective fashion.

ANALYSIS MODES

Our solution would consist of the following two modes of analysis:

- **Nearby Analysis :** It refers to analysing the farm at the individual plant level using drone/mobile captured images.
- **Farby Analysis :** It refers to analysing the images of the complete farm taken from a height using satellite/drone imagery.

DISEASES TO BE DETECTED

- Tomato Late Blight
- Pepper Early Blight
- Grape Leaf Blight
- Potato Late Blight



Dr.FarmAI

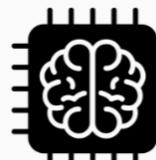
Predictive & Prescriptive Analysis Of Plant Diseases



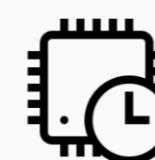
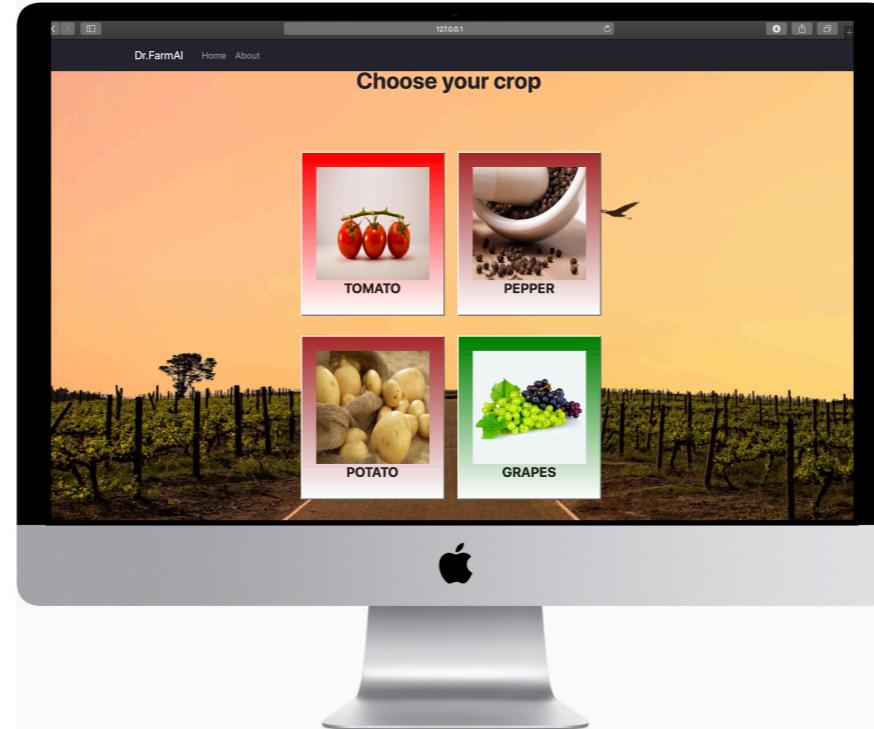
Drone



Website



AI



Real Time



Python



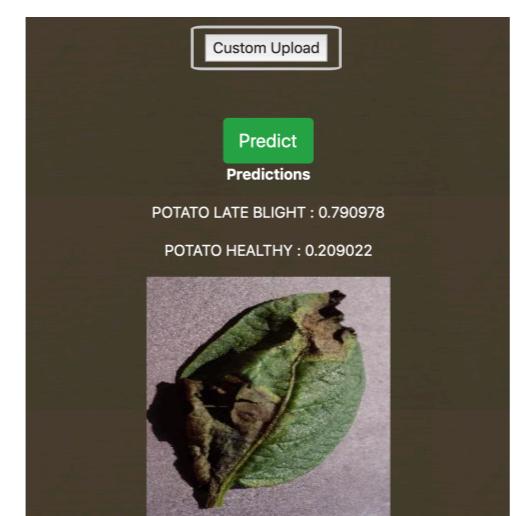
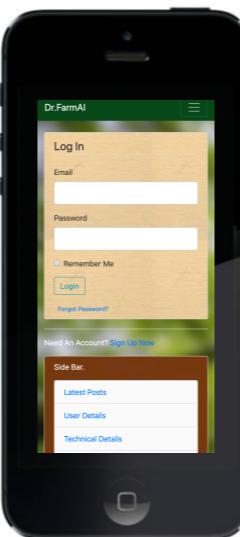
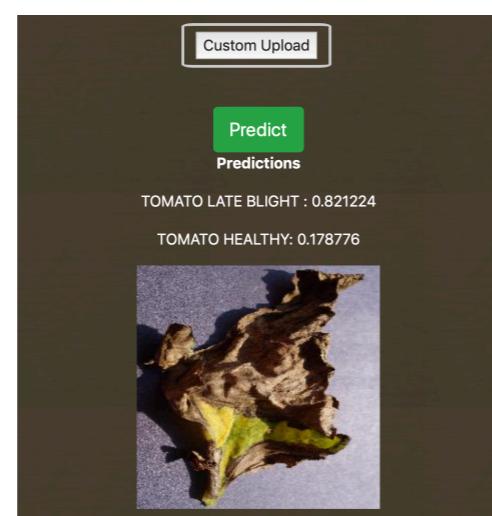
Satellite



App



Cloud



CONVOLUTIONAL NEURAL NETWORK

Our Disease Detection Methodology would consist of a 25-layer Sequential CNN Model implemented in Python and trained on Kaggle dataset.

OUR APP

Our application will be developed using the Flask framework in Python Language and will be responsive both on desktop and mobile devices. Also, our application will have the ability to be used in any regional language with the help of Google Translate API.

INNOVATION

- A very fast solution (real time) to plant disease detection.
- The diseases can be detected in a predictive fashion even at the preliminary stages at which the disease symptoms are not visible to the naked eye.
- The farmers can post the analysis results on the app thereby alerting other farmers in the region.

TEAM MEMBERS

- Shreyas Labhsetwar
- Soumya Haridas
- Riyali Panmand
- Rutuja Deshpande
- Piyush Kolte