Basic Details of the Team and Problem Statement

Ministry/Organization Name/Student Innovation: **Ministry Of Micro, Small and Medium Enterprises**

PS Code: **SIH1401**

Problem Statement Title: **APP Based solution To Identify and Solve disease in Plants / Crops**

Team Name: **The Elite Tech**

Team Leader Name: **MR.JEFFERSEN GODFREY A M**

Institute Code (AISHE): **C-50665**

Institute Name: **St Joseph’s Institute of Technology**

Theme Name: Agriculture , **Food Tech and Rural Development**

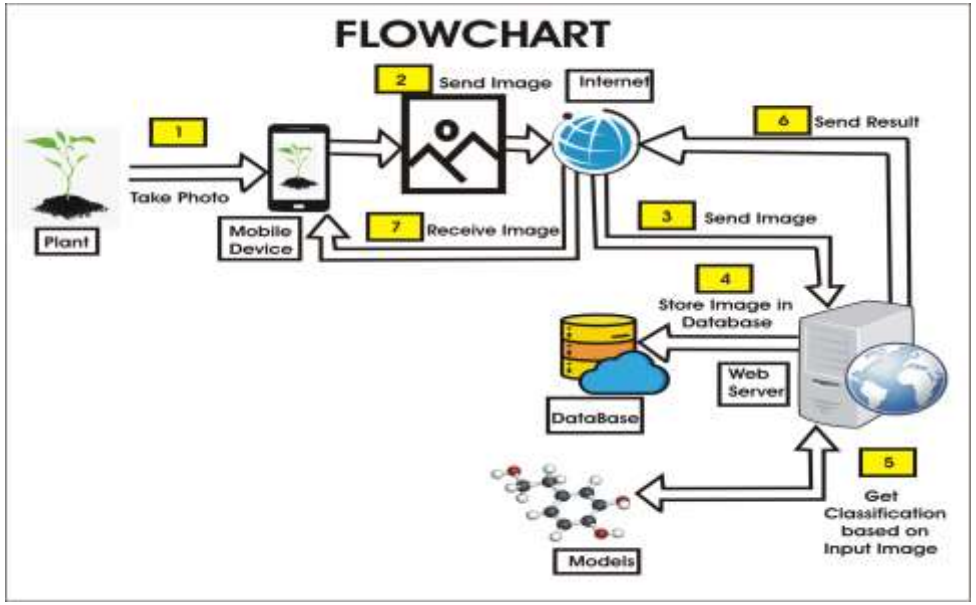
App Based Solution To Identify & Solve the Disease In Plants & Crops

Describe your idea/Solution/Prototype here:

1. An app-based solution for plant disease diagnosis and treatment is a powerful tool for farmers.
- 2. By providing easier and quicker disease identification, reducing the use of harmful chemicals, and improving crop yields, an app-based solution can help farmers be more productive and profitable.
- 3.The proposed mobile application can serve as an aid to farmers and crop growers who have little or no knowledge about plant diseases for early disease detection and control.
- 4. This therefore can reduce losses and prevent further spreading of the disease.
- 5.Even in offline mode, farmers can upload images and receive guidance, with data synchronization occurring once an internet connection becomes accessible.

Describe your Technology stack here:

- 1.Here's a method called CNN which takes a picture of the plant leaves and feeds it to a model to know the results. Using CNN the disease in the plants is identified and has proven the results are 86% correct.
- 2.For the portion where the infection spread, it would be detected by EOS data analysis. So CNN will find the disease and EOS data analysis the area to apply the pesticides.
- 3. Deep learning algorithms optimize pesticide recommendations by analysing weather, soil and crop factors.



Idea/Approach Details

Describe your Use Cases here

- EARLY DETECTION: Apps can identify diseases in their early stages, allowing for prompt interventions and reducing the spread of diseases.
- CONVENIENCE: Users can quickly identify plant issues by simply taking photo, eliminating need for manual research.
- CROP PROTECTION: By identifying diseases early , we can protect our crops leading to higher yields and healthier plants..
- COST SAVINGS: Timely disease management can reduce the need for costly interventions or loss of entire crops.
- ACCESSIBILITY: Apps are accessible to wide range of users, including those without extensive horticultural knowledge ..

Describe your Dependencies / Show stopper here

Dependencies

- 1.The app requires reasonable quality cameras for taking Good quality photos.
- 2. Cloud Server Dependencies
- 3. The quality of the training data that determines the accuracy of the app.
- 4. plant experts support

Show stopper

- 1.Real time diagnosis
- 2.Localization and weather integration.
- 3.Community and Expert interaction.
- 4.Offline functionality.
- 5.Regular updates

Team Member Details

Team Leader Name: Mr Jeffersen Godfrey A.M

Branch : B.E | Stream : Computer Science (I) | Year (I,II,III,IV): I

Team Member 1 Name: Mr Jason Peniel Raj S

Branch : B.E | Stream : Computer Science (I) | Year (I,II,III,IV): I

Team Member 2 Name: Ms Joyslin Jenifer M

Branch : B.E | Stream : Computer Science (I) | Year (I,II,III,IV): I

Team Member 3 Name: Ms Harshini P

Branch : B.E | Stream : Computer Science (I) | Year (I,II,III,IV): I

Team Member 4 Name: Ms Kowshika V

Branch B.E | Stream : Computer Science (I) | Year (I,II,III,IV): I

Team Member 5 Name: Ms Mahalakshmi M

Branch : B.E | Stream : Computer Science (I) | Year (I,II,III,IV): I

Team Mentor 1 Name: Mr Sabaresan V

Category : Academic | Expertise : Big Data Analytics, IOT, Cyber Forensic and ML | Domain Experience (in years): 11