HACK STACK 1.0

A2Z Techvalley
(Team)

Abstract of our Project:

We have developed a solution where no prerequisite knowledge is needed for the farmers/young individuals to do agriculture. Our solution contains a Robot & an App that will collaborate to provide a seamless solution to solve the labour issues faced by farmers. Our robot will be equipped to work in the field from planting the seeds and removing weeds to maintaining the required soil nutrients for the crop. The inbuilt technology will make use of water resources efficiently. The app will provide a marketplace that will enable farmers to directly contact the industries and sell their yield without having to be exploited by the dealers/agents.

Features:

User Friendly - To do agriculture with our robot there is no need for any prior knowledge about it. Our robot will autonomously plant and maintain crops in an agricultural field. It will navigate through the agriculture field with the help of Computer Vision & AI/ML. We also have native/regional language voice integration features which will help the farmers operate with ease.

Easy Identification - Our app can find suitable crops for growth that will provide the most yield to the farmers by analysing certain factors like location, soil type, climate and market trend.

Fully Customizable - Our robot is completely customizable based on the crops it will grow.

Crop Disease Identification - With the help of Thermal imaging & Computer Vision, we are going to extract the plant features from the picture & feed it to our AI/ML model to accurately predict what disease might have affected that crop & suggest medications.

Prevention - Multiple scanning of the same disease in their area will trigger an alert to the nearby farmers to let them know about the spreading of that particular disease & suggest preventive measures.
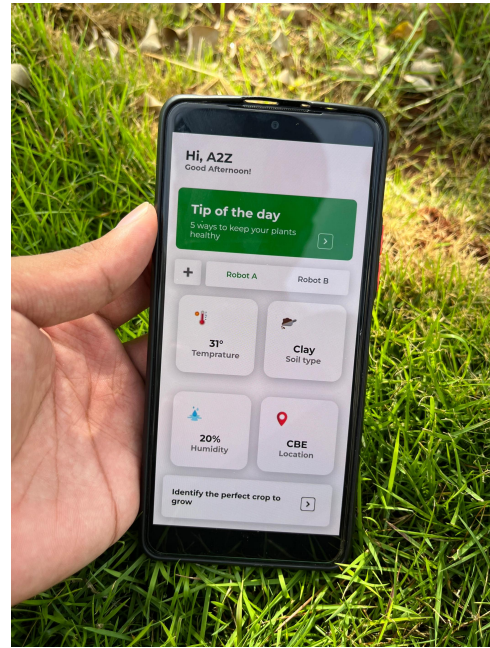
Market Place - Farmers can directly contact the industries and sell their yield without being exploited by the dealers/agents.

(Pictures of us surveying the farmers faced by the farmers and

A2Z TECHVALLEY SURVEY ABOUT PROBLEMS FACED BY FARMERS

about how our solution will make a change in their lives.)

(Few images of the prototype we have developed during our previous competitions)