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Title of project

Tech on the field of Agriculture

Aims - The goal is to improve farming using new technology. This includes a sensor to detect diseases and insects, a system for using water more efficiently, sustainable farming methods, a tracking system for food safety, a tool to monitor soil in real-time, a computer program that's easy for farmers to use, and a special drone for keeping an eye on crops and helping with pollination.

Objectives –

- Make a sensor for agriculture that is reliable, simple to use, flexible, and affordable.
- Create a water-efficient, easy-to-install, and affordable irrigation system.
- Create environmentally friendly agricultural methods by reducing emissions, saving water and soil, and boosting biodiversity.
- Create a secure, affordable farm-to-fork**(directly farm to home)** food tracking system.
- Create an affordable, user-friendly, versatile agricultural sensor.
- Create an easy-to-use, affordable program for real-time crop and financial data.
- Create a low-cost, adaptable, and durable drone.

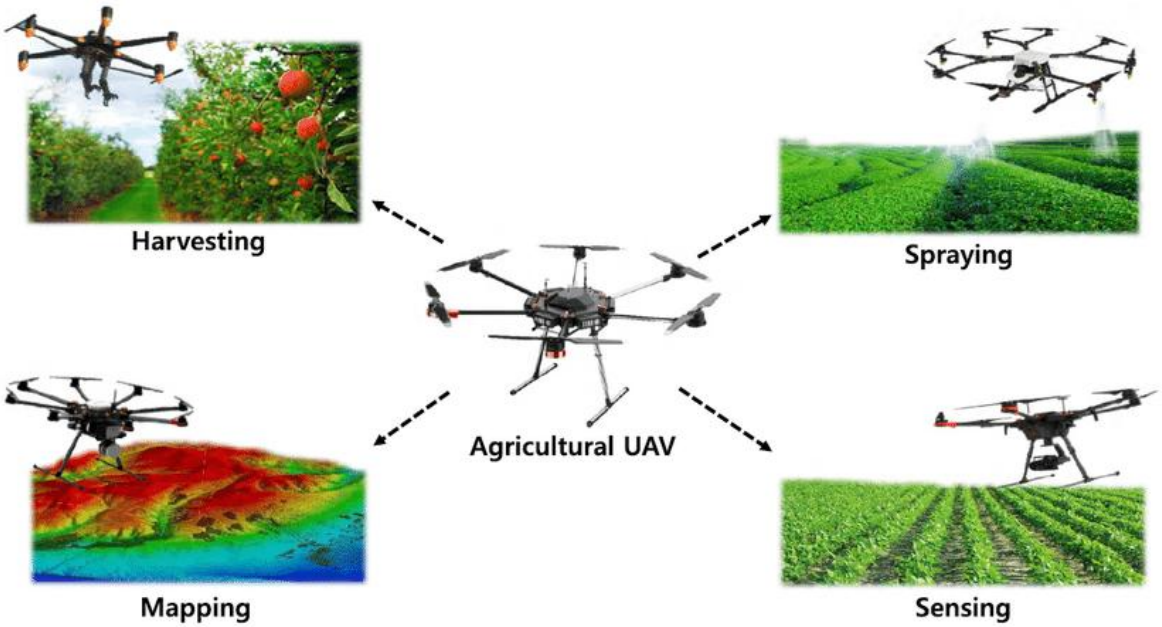
Project Deliverables

This project aims to revolutionise agriculture through the development of innovative technologies. We will deliver a reliable and affordable agricultural sensor capable of detecting diseases and insects. The irrigation system will be designed to be easy to install and cost-effective, promoting water efficiency in farming. Emphasising sustainability, our goal is to implement environmentally friendly farming methods that reduce emissions, conserve water, and enhance biodiversity. The project also includes the creation of a secure and affordable farm-to-fork tracking system, with a direct farm-to-home option for efficient food distribution. Real-time monitoring of soil conditions will be facilitated by a versatile and user-friendly agricultural sensor. Furthermore, an easy-to-use computer program for real-time crop and financial data will be developed, ensuring accessibility for farmers. The project will culminate in a low-cost and adaptable drone designed to monitor crops and assist in pollination, contributing to the overall modernization and efficiency of agriculture.

Description of the project

The project is all about using technology in farming to make it better. We want to change the old ways of farming and make it more efficient, productive, and better for the environment. The project has different parts, and each part helps improve the farming industry.

First, we're making a sensor that finds diseases and bugs on plants. It's not expensive, and farmers can use it easily. We're also making a watering system that saves water and is simple and cheap to set up.



We care about the environment, so we're using methods that don't harm the Earth. We want to reduce pollution, save water and soil, and support different plants and animals. This not only benefits the environment but also ensures that farming can continue for a long time.

We're also using technology to track where food comes from. This helps make sure the food we eat is safe and gets to us quickly. We're checking the soil in real-time to help farmers know more about their crops. And we're making a computer program that's easy to use and not expensive. It helps farmers make good decisions about their crops and money.

Lastly, we're making a drone that doesn't cost a lot. It helps farmers watch their crops and helps with pollination. This means it can do different jobs on the farm using cool technology.

Methodology

In our project, we're using numbers and measurements to learn more about how our farming technology is working. We're doing surveys and asking farmers questions to find out if they want to use the new tech. We're also keeping track of how much people are using our technology and checking if it's helping them on the farm. To figure out if it's worth it, we're looking at the costs and benefits using numbers. We're using sensors to measure things like diseases in plants, water use, and soil health. This helps us get real-time data to see how well our technology is doing. During our testing phase, we'll use numbers to see how successful our tech is and find ways to make it even better.

Hardware and software requirement

We need small sensors that find bugs and diseases, smart watering systems, and lightweight drones with cameras for checking crops. We also use barcode scanners to track food from the farm. All these things use special computer programs. We have to make sure everything works together, keeps information safe, and gets updated regularly to work well.

Project Management plan

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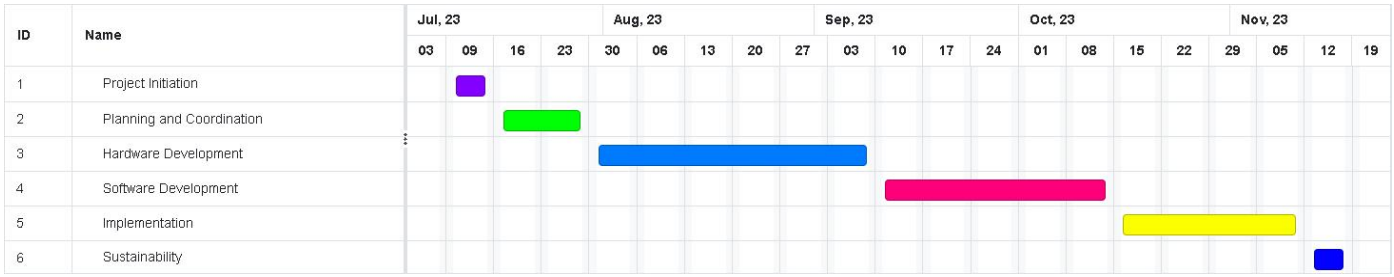

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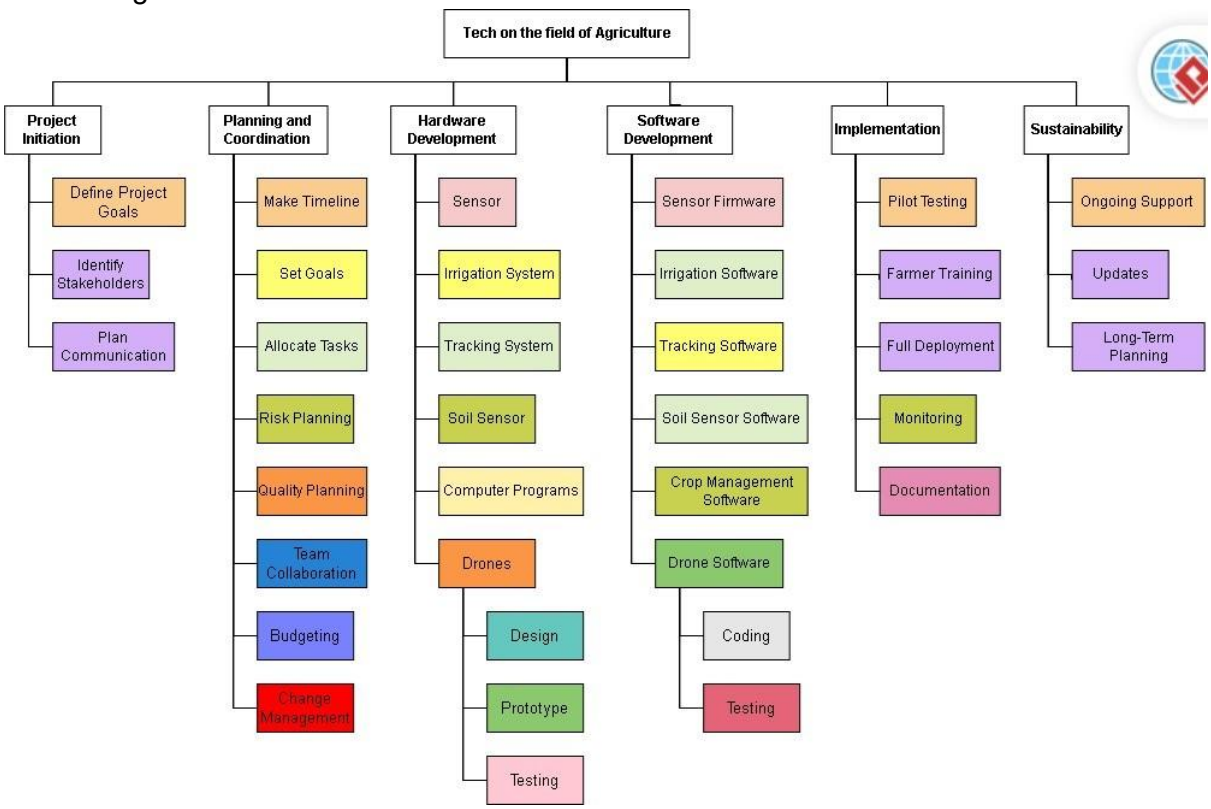

Challenges of your project

Our project has some tricky parts we're figuring out. It might be hard to get farmers to use our new tech because some don't know about it or think it costs too much. Making sure all our tech works well together is a puzzle. We also need to keep farmers' info safe and follow the rules about data. Our tools should be easy for farmers to use, and we need to make sure they fit with the laws. Keeping the tech working for a long time and dealing with changes in how farmers work are other challenges. We want our tools to be affordable, but we also want them to do cool things. The weather can be unpredictable, and we need to check if our tech is good for the environment. It's a lot, but we're working with different people to figure it out together.

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