Problem Statement

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The Possible Problem Statements are:

1. Develop affordable app-based solution for Soil health monitoring and suggest which crop to be sown based on it.

2. Develop app-based solution for Cotton Crop health monitoring and suggest remedial actions. To create affordable IoT based smart hydroponic vertical farming system.

3. Develop smart & affordable solution to protect crops from wild animals. Develop system for predicting potential pest, disease, insect attacks (before at least 15-day & more) on Cotton crop and yield prediction of cotton.

4. Due to the weather condition, water level increasing Farmers get lot of distractions which is not good for Agriculture. Water level is managed by farmers in both Automatic/Manual using that mobile application. It will make more comfortable to farmers. Performing agriculture is very much time consuming.

Problem Description:

It should utilize minimum resources in terms of hardware and cost. This overcomes the manual operations required to monitor and maintain the agricultural farms in both automatic and manual modes. It should be able to measure the increase or decrease in level of water as well as moisture in the soil.

Problem Descriptor Table:

Who does the problem affect?	One huge disadvantage of smart farming is that it requires an unlimited or continuous internet connection to be successful. This means that in rural communities, especially in the developing countries where we have mass crop production, it is completely impossible to operate this farming method.
What are the boundaries of the problem?	Two of the most major problems in agriculture are the loss of agricultural land and the decrease in the varieties of crops and livestock produced.
What is the issue?	The extensive use of artificial fertilizers, pesticides and insecticides has caused considerable deterioration of the soil fertility. The quality of the soil has decreased, which leads to decreased growth rates for all crops. This triggers the need for more and more artificial fertilizers, pesticides and insecticides.
When does the issue occur?	Although there are several security issues related to the smart farming, such as compatibility, heterogeneity, constrained devices, processing, and protection of massive data, few resources have been incorporated in Agriculture several use occurs.
Where is the issue occurring?	Increasing control over production leads to better cost management and waste reduction. The ability to trace anomalies in crop growth or livestock health, for instance, helps eliminate the risk of losing yields. Additionally, automation boosts efficiency.
Why is it important that we fix the problem?	Increasing incomes. Agricultural transformation is very slow in India.Generating employment opportunities.Reducing risks in agriculture. Developing agri-infrastructure. Improving quality of rural life.