Iot Based Smart Crop Protection System for Agriculture

Problem statement:

A vast majority of the people are invariably affected by the production of crops. Farmers, for example, rely on them for their survival. The consumers, on the other hand, depend on the crops as it provides them with a multitude of utilities. It therefore, becomes essential to protect and maintain these crops. The project aims at improving the farmers' situation by preventing them from incurring losses due to the damage of crops. Crop failure also deteriorates the quality of the yield thereby decreasing the quality of living.

Solution to be proposed:

One of the biggest problems farmers face in India is the attack on crops by wild animals in their fields. The damage from these attacks significantly and adversely affects the crop yield. In Seetharampuram village of this district, which houses 300 families of farmers, attack by wild boars leads to sleepless nights. Farmers in this village use electrical fencing (though illegal in India) around the fields to keep away wild animals. But due to many accidents, which have caused the death of farmers as well as animals, this approach is not so appreciated by the farmers. As an alternative to electrical fencing, the farmers keep vigil at night to keep the wild animals away. They use flashlights to ward them off. This is a very strenuous task and the lack of sleep adversely affects the farmers' work during the daytime. The damage caused by the animals to the crops affects the total yield of the harvest immensely and the farmers have to suffer a loss in their income because of this. HuT Labs designed a solar-powered, IoT based intelligent system that can be used to prevent crop damage due to wild animals. The system implements IoT technology along with simple sensors.