**Abstract**

Insects are major trouble makers for Farmers as it affects quality of crops. Most of the Farmers are not aware of standard insecticides suitable for each type of Insect. That’s why insecticides or pesticides are not working effectively every time. This study aims to classify and detect the insects in cotton and chilli crops using machine learning and insect detection algorithm at the early stage of crop growth. This project uses local dataset of three classes of insects called ‘Ladha’, ‘Black pest’ and ‘leaf’ in local language Telugu. This project suggests a mobile application which uses a camera installed in the field, which will capture random images from the crop field every day in the morning, and will process those images using computer vision algorithms and modern machine learning techniques to detect the insects for suggesting suitable insecticide to the farmer.