

## Abstract

Smart Farming is a smart farming technique that involves technology internet of things (IOT) and artificial intelligence in the monitoring process plant development. Lately, smart farming has been widely used in food crops, especially corn to improve the quality and quantity of production. However, pest control in plants corn is still a major problem in smart farming because the low accuracy of the detection system in previous studies. Therefore this final project research proposes a solution to the accuracy problem from previous research by developing a smart pest detection system on IOT-based corn plants. he proposed detection system uses machine learning to track pests monitored by cameras. The camera will work based on the trigger given by the PIR sensor. and the machine learning algorithm will classified it is a true pest or not. The Method used in this study is 1. Literature study regarding IOT-based pest detection, 2. Selection of machine learning algorithms that can produce high accuracy, 3. Development of a pest detection system intelligent, and 4. Analysis of system performance in detecting pests in plants corn. It is hoped that the results of this research will be a prototype pest detector smart that has an accuracy of more than 85%

**Keywords:** Pest Detection, Smart Farming, Machine Learning