## PROTOTYPE OF PEST MONITORING SYSTEM IN RICE PLANT BASED ON INTERNET OF THINGS (IOT)

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## ABSTRACT

Indonesia is an agrarian country where most of the population live in agriculture, one of which is rice farmers. Every year rice farmers are expected to be able to produce high and quality production, but this has not been realized due to several factors, one of which is caused by pests. Pests greatly affect the quality and yield of farmers' crops, especially when they are about to enter the harvest season. In an effort to deal with these pests, various methods have been carried out but are still said to be unsatisfactory, especially bird and rat pests which are the main enemies of farmers because their arrival is unpredictable and makes farmers difficult both in terms of time and material. With the development of technology in the agricultural sector, farmers are given the convenience of monitoring and controlling their agricultural land. This pest monitoring system can facilitate the work of farmers in reducing the impact of these pests. This system utilizes the ESP32-CAM module as a monitoring camera and controls the output in the form of a frequency speaker from the XY-LPWM module with an accuracy rate of 99.91% and a precision of 99.87%. The entire system, both monitoring and control, is connected to the Internet-connected (IoT) Blynk application. As for the power source in this tool using a battery that utilizes solar energy using solar panels.

Keywords: Agriculture, Pests, Monitoring, IoT, Solar Panels.