

ABSTRACT

DESIGN OF MONITORING SYSTEM GRYLLUS MITRATUS CRICKET CULTIVATION BASED INTERNET OF THINGS(CASE STUDY OF CRICKET CULTIVATION IN PENOLIH VILLAGE, SUBDISTRICT KALIGONDANG, PURBALINGGA DISTRICT)

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Cricket are insects that live in the ground. Crickets have various types, one of which is Gryllus Mitratus. Gryllus Mitratus crickets in penolih village are cultivated by 16 cricket breeders with individuals having at least 6 boxes with a size of 200 x 120 x 65 cm and a cage foot height of 25 cm. In fact, cricket cultivation in Penolih village, Kaligondang sub-district, Purbalingga district is still not optimal due to several factors such as temperature, humidity, and light intensity which are not suitable for crickets, causing stress and death. The temperature that can be accepted by crickets is 24°C to 28°C, humidity is 60% to 80% and light intensity is 2 lux to 5 lux. A tool is needed to monitor temperature conditions using DHT11, humidity using BME280, and light intensity using BH1750 which is installed in the cricket cage to determine its value and be followed up by cricket breeders. These sensors will send the input data into NodeMCU to be sent to the cloud so that it can be displayed in the Android application. The research method used is waterfall, namely the development of a systematic and sequential information system. Based on testing for 7 days, the average temperature of the cricket cage was 28.26°C, the humidity of the cricket cage was 74.72%, and the light intensity of the cricket cage was 5.1 lux.

Keywords : Monitoring System, IOT, Arduino, Sensors, Crickets, Microcontroller.