

ABSTRACT

Along with the development of time in the current era, a lot of land and vacant land has been converted into housing, urban areas and others. So that the actual function of land for farming becomes less and less. Therefore, many of the people began to plant types of hydroponic plants that are able to survive without the need for vacant land as a place. In order for plants to thrive and maximize, a monitoring platform in the form of Android and tools in the form of IoT is needed. Internet of things is a concept or program where an object has the ability to transmit or transmit data over a network without using the help of computers and humans. Briefly, the method used is IoT with four sensors placed around hydroponic plants and connected to Arduino as a microcontroller, after which the data is stored on the Raspberry Pi. To connect with the Hystorms application on Android, the data on the Raspberry Pi is entered into the Firebase Firestore and the data can be displayed in the application. Hystorms has several interesting features, namely GPS for the user's Smartphone location and Iot location, Encyclopedia for information on hydroponic plants with good content and nutrients needed, History to view sensor data obtained in previous days, nutrition schedule for reminders users in providing nutrition or liquid fertilizer for hydroponic plants. So the Hystorms application is indispensable to support the needs of farmers or beginners who grow crops with a hydroponic system.

Key Words: hydroponic, IoT