

## **ABSTRACT**

*Sheep are one of the livestock that are cultivated to be used as materials for food and textiles. Therefore, sheep health care on sheep farms really needs to be considered to ensure that all sheep are maintained in good health so that the productivity of the farm increases. Generally, sheep health can be monitored through body temperature and heart rate to determine whether the sheep is in normal condition or is in abnormal condition.*

*To make it easier to monitor the health of sheep which is currently still done manually and has to wait for people who have the ability to take temperature and sheep pulse measurements can cause some farmers to not realize that there are sheep who have health problems, this study aims to design and implement a tool that can monitor sheep health using a temperature sensor module and a pulse sensor which is then connected to NodeMCU ESP8266 which functions as a microcontroller that will process and then send the data to the server to be displayed to users through a web application.*

*This research successfully monitored sheep health based on body temperature and heart rate with a temperature sensor error rate of 0.2% and a pulse sensor error of 3.2%. The results of this monitoring can be a reference for farmers to provide appropriate treatment to their livestock so that the health of their sheep is always in good condition.*

**Keywords:** *Sheep, IoT, Temperature, Heart Rate, Livestock, Monitoring*