

ABSTRACT

The delivery of medical data is very important for the success of the patient's treatment. Various attempts have been made in the application of technology both in outpatient services and in hospital care for patients. In the medical world, infusion is the tool most often used, the function of the infusion itself is to provide fluids to patients regularly. When checking existing infusions at this time, they are still used manually, so that if a problem occurs such as blockage or running out of fluids, it will be dangerous for the patient if not treated immediately. Internet of Things (IoT) is a concept that aims to transmit data from physical objects over the internet, therefore enabling recipients on the other hand to monitor, process and ultimately make decisions based on this data. Compared to WiFi Bluetooth has a smaller energy consumption and size, but in terms of coverage it has a short distance. Therefore, technology is needed that can handle the problems of distance and power consumption, one of which is LoRa (Long Range). In this study, a wearable device was designed using a LoRa (Long Range) transceiver, NodeMCU ESP 8266. A load cell sensor to detect residual liquid. The results of this test obtained an average error rate of 0.47%, which means that the loadcell sensor has a small error rate in detecting the volume of the infusion.

Keywords: *Infusion, IoT, NodeMCU ESP 8266, Loadcell Sensor, LoRa (Long Range).*