

DESIGN AND DEVELOPMENT OF HEALTH DETECTION TOOLS AND LOCATIONS OF HIGHERS USING THE INTERNET OF THINGS (IOT)

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ABSTRACT

Nowadays, there are many people who like the sport of mountain climbing, whether they want to enjoy the beautiful scenery on the mountain or seek peace of mind, although climbing a mountain is not an easy thing to do and full of risks because we are in the wild far from settlements. Therefore, before climbing it would be nice if we had enough knowledge about climbing. Seeing the many risks, this study designed a tool to detect the health of climbers through heart rate (bpm) and oxygen in the body (spo2) and look at the location in the form of latitude and longitude. In making this tool using the MAX30100 sensor as bpm and spo2 readings, the Neo6M GPS module as latitude and longitude readings, besides that there is an LCD as a display of sensor readings, all data obtained is combined in Arduino mega which is then sent using the LoRa sx1278 module. The results in this study achieved good success with the accuracy of the heart rate sensor reading reaching 98.78% while the gps reading was quite accurate because it only differed slightly from google maps.

Keywords: *BPM, SpO2, MAX30100, GPSNeo6M, LoRa.*