

## ABSTRACT

Heart rate and oxygen saturation are very important information in health checks, this study aims to monitor heart rate and oxygen saturation in the human body. The benefit of this research is that it can increase public awareness in maintaining health. This tool uses the NodeMCU ESP8266 as the microcontroller and the MAX30100 sensor as the main sensor. How to use this tool is by placing one finger on the MAX30100 sensor which contains infrared light and red light that can detect changes in blood volume and can determine the value of heart rate (BPM) and oxygen saturation (%) which can be seen on the OLED. 0.96 and the data will be sent on the Blynk application via the internet. This tool can read heart rate from 70(Bpm) to 111 (Bpm) with an age range of 16 years to 30 years, for oxygen saturation this tool can read oxygen saturation from 80% to 102%. The responsiveness of this tool is 3.5 seconds

**Keywords** : *Internet Of Things , Blynk , ESP8266 , microcontroller.*