

# ***TOUCHLESS SWITCH PROTOTYPE DESIGN BASED ON NODEMCU ESP8266 USING IOT***

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## ***ABSTRACT***

*The end of 2019 was a very bleak start for the world of health, not only in several countries but almost all countries felt the direct impact of the emergence of a deadly virus variant that even became a mass murder weapon. In Indonesia alone, the total number of cases exposed to this virus reached 4.26 million, based on the official JSU CSSE website. One of the biggest triggers is physical contact between humans directly or through intermediaries, this has later become the basis for various countries to carry out lockdown procedures. However, this is not the most effective way because apart from physical contact, COVID-19 is also able to spread through intermediary objects. One of the most frequently intermediary objects for the spread of COVID-19 includes doorknobs, stair handles, tables, chairs and light switches. Based on these conditions, an innovation is needed to minimize the spread of covid-19 through the design of a touchless switch with light and door output using the NodeMCU ESP8266 and IoT for hospital implementation. In addition to having a touchless switch function that is able to control the output of lights and doors with just hand gestures, this switch is also equipped with features for monitoring via an android application (IoT). Based on the results of the sensor distance test, the success rate is 60% and the overall system success rate is 100%.*

***Keywords:*** *motion sensor, light switch, IoT*