

# RANCANG BANGUN KEAMANAN KOTAK AMAL MASJID DENGAN SMART HEATING BOX UNTUK MEMINIMALISIR PENYEBARAN COVID-19 BERBASIS IOT

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## **ABSTRACT**

*Covid-19 in Indonesia is increasing every day. As a result, many people are now wary of the Coronavirus pandemic that is currently hitting. One of the things that can be trusted is the transmission of the coronavirus, namely through the media of banknotes that change hands during transactions. The money of any type, be it banknotes or coins, can move from one hand to the other at any time. The saliva splashes can also fall on the surface of objects around people, including banknotes or coins. Many Muslims who want boxes in mosques or prayer rooms want more by giving charity by putting money into charity. Later on, with this charity box, some crimes can occur at worship places, namely in the charity box. So in this study, a charity box and heater were designed to minimize IoT-based Covid-19 with nodeMCU8266. With this, it can implement the charity box state using a smartphone connected to the home via the internet network. This charity box security system uses a servo to open with an application. An ultrasonic sensor gives the signal that signs robbery. The LM35 sensor can tell room temperature. If the temperature was  $\leq 33$  C, it will turn on the heater and fan repeatedly until it reaches 38 degree. This system was created utilizing the internet network connecting the system with a smartphone. An application installation is used by user to receive information from home about the state of the charity box at any time. From the results of ultrasonic sensor testing and LM 35, the calculation result is 100%. However, for the LM35 sensor test, the calculation result is 99.17% because there may be differences in the distance between sensor and thermometer. From the total system test results from the calculation of the accuracy value, this tool is feasible to use.*

**Keywords:** Covid-19, Money, NodeMU8266, LM35, Ultrasonic, Blynk