

## ABSTRACT

Working and doing activities often leaves someone busy with no time to do other work, such as cooking rice. Cooking rice is actually easy, but due to time constraints often make someone not have time to do it. This is because to cook rice in the commonly used rice cooker must be done manually, so to cook rice, users must spend time on the sidelines of work or activities.

Based on these problems, it is necessary to design a new system on rice cookers. A system that combines rice cooker, rice storage, and gallons of water in one device. In addition to the new system that was designed, all preparations for cooking rice which previously had to be done manually, can now be done automatically which is entirely controlled using a smartphone via application.

The result of this final project is the percentage of the average accuracy of the load cell sensor in calculating the mass of rice that enters the rice cooker which is 97,22% with an average percentage error of 1,41%. Then the average energy needed by the automation system when the stand by condition is 0,0053575 KWh, while the energy needed to run all automation devices is 0,008875 KWh. The average time needed for sending data from the application to the automation system is 253 ms.

Keywords – Load Cell Sensor, Rice Cooker, Microcontroller, Rice Baggage, Internet of Things