

## ABSTRACT

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*Solar cell is a device that can convert solar energy into electricity. One of the renewable energies that is currently being researched is solar cell-based energy. The potential of renewable energy sources in Indonesia that must be optimized is solar energy. Solar cells are very effective for use in areas where there are many sources of sunlight, especially in the area around the equator. Therefore, this final project aims to design a monitoring tool for current, voltage, temperature and sunlight intensity on a solar cell. Monitoring data is stored and displayed on Thingspeak. The results of this study are in the form of current and voltage sensor data values using ACS712 sensors, DHT11 sensors, LDR sensors using ESP32 as a microcontroller. That way monitoring can be done remotely, not manually and requires a lot of time.*

*Keywords: Monitoring solar cell, mikrokontroler ESP32, monitoring PJU.*