

## **ABSTRACT**

Electricity has an important role in life today, and nowadays a lot of energy is used as a source of electricity. One of them is solar energy, which we know is very abundant and can be used indefinitely. Many electricity sources begin to try to use solar energy.

With the abundance of solar energy sources, the application of photovoltaic technology (PV) has great potential. But the use of sun energy will depend on the intensity of light, temperature, and geographical location. Therefore a control system is needed that can track the maximum power point of PV, or what is called MPPT.

In this final project, a prototype solar panel will be designed with the MPPT system (Maximum Power Point Tracking) using the P&O algorithm. And it is expected that the output produced by the solar panel has high efficiency and the output voltage can be as expected.

**Keywords:** electricity, photovoltaics, solar panels, MPPT