## *ABSTRACT*

Electric car is four wheels vehicle that moved by kinetic energy converted from electrical energy. This final task implemented on electric car that is the object of the research. The electric car that used is electric car with 150 kg up to 300 kg weight. The testing site is an asphalt track, and the motor that used is a BLDC motor.

The purpose of this final task is to design and implement road detection image processing system for autonomous electric car. Design the road detection image processing system interface with electric car control system.

The system is fitted at an electric car to pass through asphalt track. When the electric car move forward, the camera will detect the road edge line that will be processed in a single-board computer (SBC). Then the image processing result will included as input to the neural network.

This results of this system are expected to create a road detection image processing system that can be applied in four-wheels vehicles.



**Keywords: OpenCV, Image Processing, Python, Neural Network, Odroid, LCD, Electric Car**