ABSTRACT

Along with the development of the times, robotics and mechatronics technology in the industrial sector has developed a lot. An example of technology that is currently being developed is Self Driving Car, both conventional cars and cars in the industrial sector. The development of this technology is expected to minimize human error that often occurs in the industrial sector. This final project will focus on how Self Driving Cars read roads and determine road angles.

In the final project that the author did, the system that will be designed is a prototype of a wheeled robot that can acquire road data based on cameras and wheel position sensors. The data taken is road data, road angles, and wheel speed. The wheeled robot will be tested on two different tracks and analyze the accuracy of reading the road angle, road direction, and speed.

The expected result is that the wheeled robot is able to drive autonomously and get the desired data in the form of road angles, road directions, and wheel speed. Image Processing will later run on a raspberry pi and use the OpenCV library.

Keywords: *Self Driving Car, Image Processing, OpenCV, Road Angle, Road Direction, Speed.*