Perancangan dan Implementasi Troli Belanja menggunakan *Color Tracking*

Yulian Andyka[1] , Hilal Hudan Nuha[2] , Sidik Prabowo[3]

[1,2,3]Fakultas Informatika, Universitas Telkom, Bandung
[1]yuliandyka@student.telkomuniversity.ac.id, [2]hilalnuha@telkomuniversity.ac.id,
[3]prabowosidik@telkomuniversity.ac.id

Abstract

Until August 2021, the COVID-19 virus outbreak continues, data from the World Health Organization (WHO), there are 209,876,613 positive cases of COVID-19 in the world and 3,930,300 positive cases of Covid-19 in Indonesia. The risk of contracting this virus is during direct contact with other people, not wearing a mask, not washing hands or antiseptic. Transmission is believed to be spread in the form of droplets and aerosols, namely from coughing and sneezing. Most likely the spread of the covid-19 virus where the aerosol settles in other sources such as skin, clothing, or other objects. The risk of contracting the Covid-19 virus is very large when using items that can be held by anyone. This can be prevented by the development of technology that can assist humans in dealing with the risk of contracting this, namely by presenting automatic shopping trolleys. Customers will not hold the trolley, so each customer will feel safe when shopping at the supermarket. By building a trolley with Arduino Uno microcontroller, Bluetooth module HC-05, and enabling Android devices to be assisted to control the automation of the trolley by tracking color objects. Research on the Omnirobot vision system was carried out using two smartphones and experimented with five color samples in a dark, dim and bright room. The results obtained achieved 100% accuracy on the first smartphone and 33% on the second smartphone. Different accuracy, influenced by different fps on each smartphone. The system can work well in bright room conditions or more than 100 lux meters, but has not been able to detect when the room is quite dark or less than 2 lux meters. The brightness of the room and the FPS on the smartphone affect the performance of the shopping trolley.

Keywords : trolley, color tracking, color, touchless