

FOOD DELIVERY ROBOT PROTOTYPE IN RESTAURANT

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ABSTRACT

The restaurant is a place to provide food for human food needs. Restaurants also have waiters as food deliverymen but humans cannot work continuously because they are tired and need to rest. Restaurant owners who always try to optimize their restaurant so that the restaurant is more attractive to customers, it is necessary to have advanced technology that can change the uniqueness of serving food as a waiter. Restaurant waiters who cannot work continuously will be replaced with automated food delivery robot systems. So in this study the authors developed a food delivery device in the form of a line follower and food delivery in the form of a driving tray equipped with a safety object when the robot was walking. The kitchen chef as a user of this robot can command the robot with an input button and the robot will go to the intended table automatically and return to its original position (kitchen). The results of the study are expected to simplify the service process by replacing a robot servant because humans cannot work continuously. Based on the tests that have been carried out, the server robot has been successfully executed according to the scenario with a success rate of 100%, then the accuracy and precision values of ultrasonic sensor 1 are 96.67% and 100%, then the accuracy and precision values of ultrasonic sensor 2 are 93.9 % and 100%, then the accuracy and precision values of ultrasonic sensor 3 are 94.92% and 100%, and the accuracy and precision values of ultrasonic sensor 4 are 95.01% and 100%, respectively. In other words, this tool can work well and optimally because it has an average accuracy of 95.12% and a precision of 100%.

Keywords: *Restaurant, Robot, Line Follower, Ultrasonic Sensor.*