

ABSTRACT

This drone or Unmanned Aerial Vehicle (UAV) is an unmanned aircraft controlled by remote control. The drone in this system uses a quadcopter drone that uses 4 propellers. Drones are also very useful in everyday life such as in terms of agriculture and others. However, some people are still unable to control the drone properly and correctly, so collisions can occur such as hitting walls, trees, and others. In addition, it can also reduce the cost of damage to drones. So a collision avoidance system was created on an automatic drone.

In collision avoidance systems made using the fuzzy logic method. This avoidance system uses ultrasonic sensors used for obstacle range readings. The distance of the obstacle will be processed using fuzzy logic. After that, the data generated on the fuzzy logic is sent to the flight controller to change the speed value of the drone's propeller.

The result of designing this system is that it can avoid a collision system by using 4 ultrasocial sensors placed on 4 sides of the drone, namely right, left, front, rear. For the reading distance on the sensor a maximum of 80 cm.

Keywords: *Drones, Obstacles, Ultrasonik Sensors*