

ABSTRACT

Current era has significant leap in technology. Technology has been implemented in all areas of human daily routines. The problem that will be investigated in this research is blind spot area in motorcycle. Blind spot area will be led to problem if riders took a maneuver without considering condition in area that not visible to the eye. Fuzzy logic will be implemented in development of this system. The purpose of using this method is to determine danger level in rider surroundings based on distance measured by ultrasonic sensor and speed obtained from GPS. The distance and speed inputs are processed by fuzzy logic on Arduino Mega 2560. In the testing of ultrasonic sensors, GPS, and fuzzy logic, these units functioned well and were validated according to the design. During integrated testing, there was a decrease in accuracy of 10% due to environmental conditions. According to the testing subjects, the system works quite well although some indicators need to be improved.

Keywords: Fuzzy logic, Arduino Mega 2560, Ultrasonic Sensor, GPS, Blind Spot