

PROTOTYPE OF AUTOMATIC FIRE EXTINGUISHING SYSTEM USING OBJECT DETECTION METHOD

Alvaldo Frisaldi Adiswara

*Electrical Engineering Study Program, Faculty of Science & Technology
University of Technology Yogyakarta
Jl. Ringroad Utara Jombor Sleman Yogyakarta
E-mail : alvaldo123@gmail.com*

ABSTRACT

Fire is an event that spreads uncontrollably causing damage to objects, structures, and the surrounding environment. To prevent this, various kinds of extinguishing systems have been developed that aim to prevent and overcome fires. From these problems, the author wants to create an automatic fire extinguishing system using the object detection method. This system uses a webcam to detect fire which will then be processed by a Raspberry Pi to give orders to 2 servos that can move vertically and horizontally to direct the nozzle to the fire point. Water will be sprayed through the nozzle by being pumped by a 12V DC water pump. Based on the tests carried out, the success of the system in detecting the presence of fire is 80% and the success of the system in extinguishing the fire is 100% with the average time required to extinguish the fire for 17,546 seconds.

Keywords: *Fire, Fire Extinguisher, Raspberry Pi.*