

A Review on Fire Extinguishing Robot

Abstract:

Fire is an unavoidable disaster that occurs suddenly or unintentionally in place or mostly in household residence. To observe continuously for accidental fire is not possible to appoint a person that's why one takes the help of robot. So in such cases these robots come in picture and will detect fire remotely. These kind of robots are mostly useful in industries where probability of occurrence of fire accidents is more. These robotic vehicles are able to detect the fire and extinguishing the fire automatically with the help of temperature and gas sensor. To control the movement of robot, it contains motor driver and gear motors. Normally, the relay detects the fire and also exchanges or shares information with microcontroller through Bluetooth module. Since, the robot contains a jet water spray to extinguish the fire. If robot comes across some obstacle then it will not collapse and prevent itself automatically because it detects obstacle with the help of ultrasonic sensors with limited range. The communication between mobile phone and robot will take place through Bluetooth which have graphical user interface to control the robotic movement. Some work has already been done by the past researchers in this field but significant scope is still left. Earlier, it has been observed that the robots operate with the limited range and also with microcontrollers with limited features. Now, we have planned to make our project in this field with improvements interms of range and performance therefore we have done review in this topic and findout problems. In our undergraduate project, we are going to make a performance improved robot and want to present or discuss this paper in the conference for getting more inputs from the experts or participants if any.

Keywords: Fire, Fire Sensor, Mini Pump, Arduino, Robot, Programming & Prototype