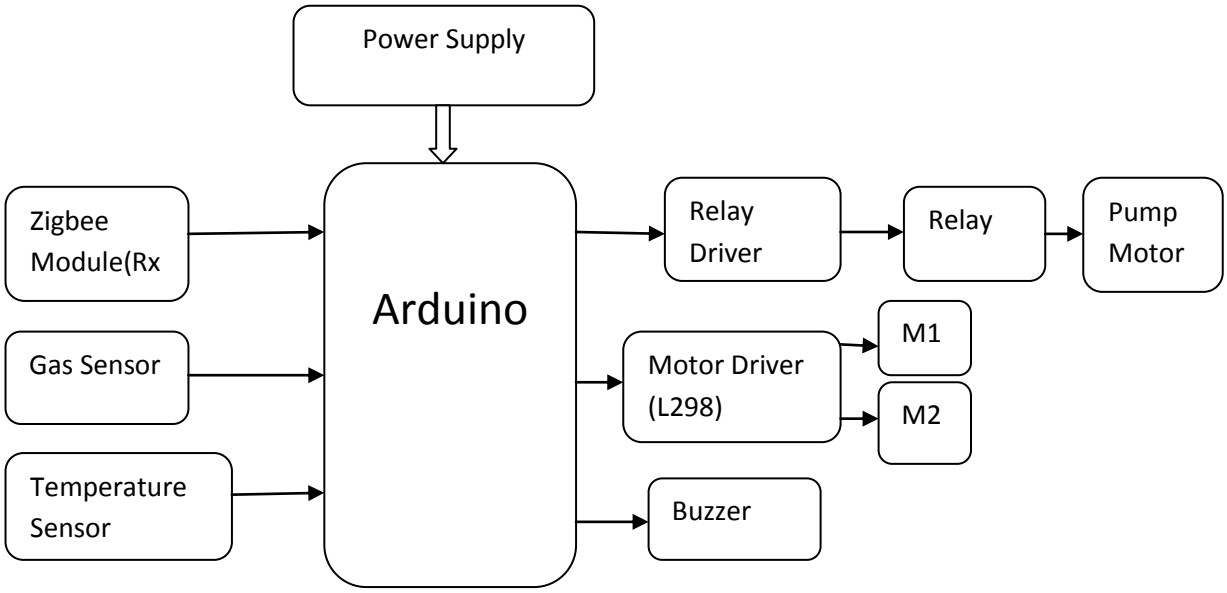
Fire Fighting Robot

Abstract

Robot is defined as a mechanical design that is capable of performing human tasks or behaving in a human-like manner. It's about building systems and putting together motors, sensors and wires, among other important components. A fire fighter robot is one that has a small fire extinguisher facility added to it. Fire fighters face risky situation when extinguishing fires and rescuing victims, it is an inevitable part of being a fire fighter. In contrast, a robot can function by itself or be controlled from a distance, which means that fire fighting and rescue activities could be executed without putting fire fighters at risk by using robot technology instead. In other words, robots decrease the need for fire fighters to get into dangerous situations. By attaching a small pump motor to the robot, the automation put out the fire by human controlling. This robot is able to sense and extinguish fire. This robot implements the Environmental sensing and proportional motor control. This robot processes information from its various sensors and key hardware elements via microcontroller. It uses camera and sensors to detect the fire accident. This robot provides fire protection when there is a fire in a tunnel or in an industry by using automatic control of robot by the use of microcontroller in order to reduced loss of life and property damage. This robot uses motors, microcontroller, wireless camera, Zigbee (Tx & Rx) sensors, pump and sprinkler. A robot capable of extinguish a simulated tunnel fire, industry fire and in military applications. Gas and temperature sensors will be used for initial detection of the flame. Once the fame is detected, the robot sounds the alarm with the help of buzzer provided to the robot actuates an electronic relay releasing sprinkles of water on the flam. For robot controlling, Matlab GUI along with Zigbee module is used to control it from distance. There will be 2 controllers, one at robot and another to the person controlling robot through GUI.

Receiver:



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