ENEL 351 Project Proposal - 25 Jan 2023

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Title : Fire Fighter Robot

Introduction:
The increasing frequency of fire outbreaks in various locations has made it necessary to develop new and innovative solutions to combat them. In this project, I propose to build a fire fighter robot that can be used to detect and extinguish fires in hazardous locations.

Objective:
The main objective of this project is to design and build a fire fighter robot that can detect and extinguish fires using a combination of sensors and a microcontroller. The robot should be able to navigate through a hazardous environment and locate the source of the fire.

Methodology:
- The robot will be built using the STM32F103 microcontroller, which will be used to control the movement of the robot and process sensor data.
- Fire sensors will be used to detect the presence of fire and its location. Ultrasonic Sensor s will be used to change the path if there is an obstacle. These sensors will be connected to the microcontroller to provide input data.
- The robot will be equipped with a fire extinguisher system, which will be activated when a fire is detected.

Expected outcome:
- A functional fire fighter robot that can detect and extinguish fires using a combination of sensors and a microcontroller.
- The robot should be able to navigate through a hazardous environment and locate the source of the fire.
- The robot should be able to operate autonomously, without the need for human intervention.

Conclusion:
This project aims to address the problem of fire outbreaks in hazardous locations by developing a fire fighter robot that can detect and extinguish fires using a combination of sensors and a microcontroller. The proposed design is expected to provide a reliable and efficient solution to combat fires in hazardous locations.

Block Diagram: