Fire Fighting Robot

Submitted in partial fulfillment of the requirements
of the degree of

Bachelor of Engineering

in

Computer Engineering

by

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CERTIFICATE

This is to certify that the project Synopsis entitled ***"Fire Fighting Robot"*** is a bonafide work of ***"Swapnil Vernekar (15102053) Suman Shreya (15102069) Rishabh Jha(14102016) Sandhyarani Thatimapula(1510)*** submitted to the University of Mumbai in partial fulfillment of the requirement for the award of the degree of ***Bachelor of Engineering*** in ***Computer Engineering***

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Abstract

Firefighting robot is designed to be an unnamed ground vehicle, implemented for finding and fighting the fire.

The system can have designed an intelligent multisensor based security that contains a fire-fighting robot

We are designing a firefighting robot with obstacle avoidance and detecting the fire flame and extinguishing the flame.

Introduction

With the advent of technology, humans are replaced with robots in life-threatening situations.

We aim to design a robot capable of detecting and suppressing fires

By designing and implementing an autonomous robot capable of detecting and extinguishing flames, disasters can be avoided with minimal risk to human life.

In this research, we illustrate an autonomous robot capable of detecting flames indoors and maneuvering towards the flame to extinguish it with the help of carbon dioxide

Objectives

To detect the fire using smoke detectors

To recognize the exact area of fire

To move towards the area and stop at the safe distance

To detect the type of Fire

To extinguish it.

Literature Review

The project is all about fire extinguishing robot that is capable of detecting and extinguishing the fire autonomously.

The system is unique because it is capable to detect fire autonomously

It is also capable to distinguish between the fire types and spray the extinguishing chemical accordingly.

Problem Definition

This Project is all about Fire Extinguish which has AI build into it. It has an ability to trigger itself accordingly when it senses fire around it.

Proposed System Architecture/Working

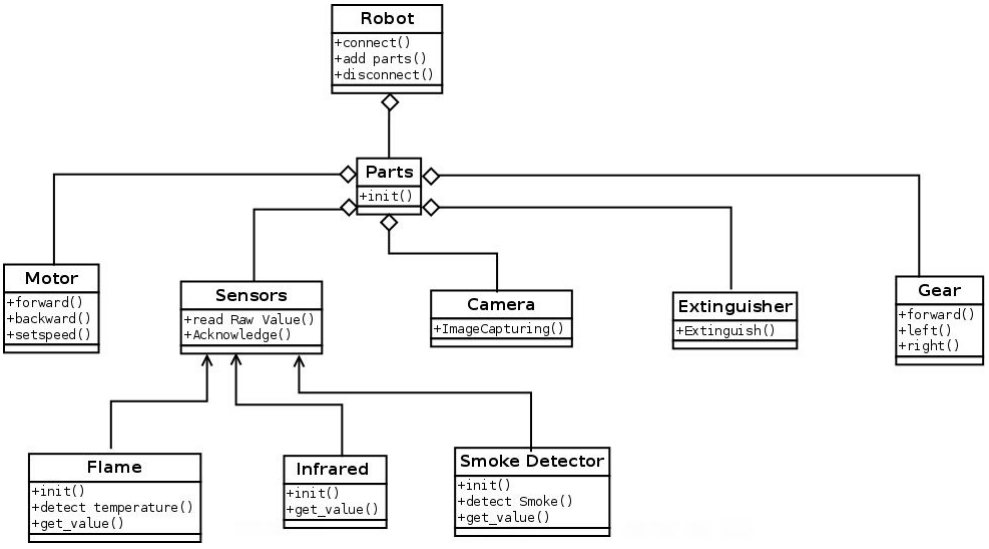

Figure 1: Class Diagram

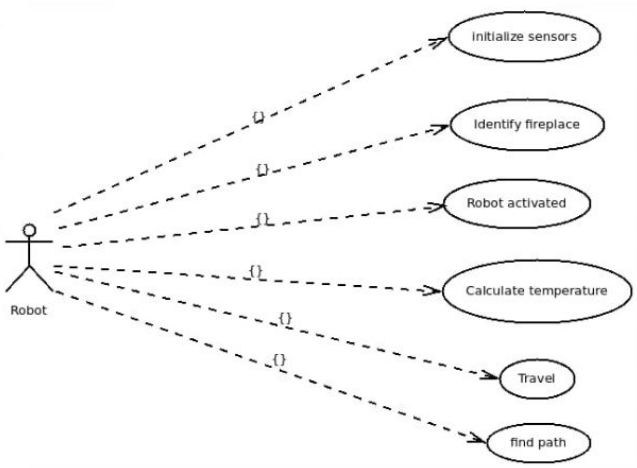

Figure 2: Use Case Diagram

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