* 1. **Problem Statement**

One of the major hazards facing Ghana as nation is the frequent occurrences of fire outbreaks, which claims the lives of thousands every year. Hardly a day passes without news of fire outbreaks in some parts of Ghana, causing fear and panic.

This particular menace is getting out of hand and needs to be addressed with caution.

3rd June, 2015 is a day marked as the day the nation suffered a great depression. Over 150 lives were snuffed out in the most horrifying circumstances when the fire engulfed properties and left behind charred bodies. Some of the people who lost their lives were the fire fighters charged with the task of extinguishing the fire.

Therefore, it is imperative to device a solution to eliminate or avoid fire hazards of cataclysmic nature.

* 1. **Objective**

The ultimate objective is to eliminate or minimize the frequency of the occurrence of fire outbreaks. However, the specific objective to achieve this goal is to design and construct a fire fighting robot remotely operated by mobile applications.

* 1. **Significance of Study**

Fire fighters risk their lives to suppress and extinguish fire so as to protect lives and prevent the destruction of the environment.

The robot will aid fire fighters to carry out their tasks without endangering their lives.

Fire will be extinguished with ease since the robot will be operated remotely.

Also, many fire fighters get cancer or other ailment as result of getting exposed to carcinogens or poisonous gasses and chemicals.

Therefore, the firefighting robot is surely an avenue for reducing firefighter deaths and injuries significantly.

* 1. **Scope of study**

This study focuses on the design and construction of a fire fighting robot remotely operated by mobile phones, due to the span and cost of electrical devices.

Therefore, the Arduino microcontroller system would be employed to achieve the stated objective.