

## Abstract

In a world where fire accidents are increasingly common and the brave first responders always risk their lives to save others' lives. Unfortunately, history tells that these brave first responders do not survive most of the time.

To save as many lives as possible, it is important to leave dangerous tasks to machines. One such device is a drone; it provides great maneuverability and doesn't risk any personnel. Drones can also gather information at greater speed, reliability and are also able to drop items OR fling it. Thus, the solution mentioned below will help us solve this problem along with the functionalities mentioned below.

The capstone project, "Fire Extinguisher & Fire Fighting Drone" is designed to assist the bureau of fire protection to correspond during fire outbreaks.

Drones can be a solution for the fire fighters to take decisions about where to concentrate resources and how to approach and enter the scene. A drone mounted extinguisher balls, thermal camera, can be employed in an emergency situation where human intervention is not possible.

The fire balls shoot into the flame, where it activates and spread a dry powder fire extinguisher agent. These fire extinguisher puts off A, B or C class fires.

Thermal imaging camera can be used to sense the presence of fire and detects the presence of people who were trapped in the buildings in fire situations even in the presence of smoke. Thermal cameras can detect the presence of trapped capsulitis which be seen through naked eyes of fire fighters.