CMPE195A

Summer 2017

Team A1

Abstract

The project is designed to help people who are on the verge of being in a harmful situation. There are security pillars located throughout the San Jose State University Campus which have a panic button on them which is to be used in case of an emergency. This is where our project comes in, we are going to design and build a drone that would launch and go to the security pillar that has been triggered. The drone will be equipped with a video camera, sirens and lights to cause as much attention as possible. The drones will be stationed around campus on charging stations while it is idle and will use a GPS module to locate the pillar it needs to go to. With advanced quadcopters reaching speeds if 50mph we can cut the response time significantly by releasing a drone to the location before the authorities arrive.

The drone itself will be built using the Raspberry Pi Zero W Microcontroller with a skeleton case for the quadcopter(drone). There will be four motors that we will need for the four propellers. More importantly we need the quadcopter to communicate with the panic buttons on the security pillars so it knows which location to go to. The communication will be done using a back-end server that would then alert the closest drone stationed near the panic button that was triggered.