Introduction

Emergent medical situations happen everyday and everywhere and require proper treatment. However, the current ambulance distribution system is far from effective on providing emergent medical service due to the restriction of time, location, traffic situation, etc. In this case, many people who encounter emergent medical situations do not receive proper treatment and may face threats to their lives. A more effective way to provide urgent medical service is required.

As drones is more widely used nowadays, it has become a very useful tool for entertainment, photographing, and monitoring. However, it has never been used in providing immediate medical service. Drones have great flexibility and can travel a distance of half a kilometer in a few minutes. When an urgent medical situation occurs, a drone can reach the scene and carry a moderate amount of medical supplies in a few minutes. Meanwhile, an ambulance may take 15-20 minutes to reach the scene and provide help. There is a huge potential for drones to help dealing with simple but urgent medical situation like heart attack, asthma, epilepsy. When facing a complex medical situation, drones are not capable of delivering better help than ambulances do, but in other cases, drones can provide more instant service than ambulances do, which may be crucial in saving peoples life. Instead of replacing the current ambulances distribution system, we plan to build a medical drone system that aims to be a supplement to the ambulances distribution system, which can remarkably reduce the workload of system and provide more effective service. The system is great for places like schools, park, shops malls and can provide medical supply (mainly medicines) for medical situations including heart attack, asthma, epilepsy, etc.

Purpose

The purpose of the project is to design a medical drone system that allows its users to acquire medical support delivered by an AI-controlled drone under emergencies.

Objective

The objectives of the project are to establish a system, which includes user application, network server, automatic drone controller, and a drone. Users are supposed to be able to require medical support on their smartphones with the application installed. The server should receive request from users and send the request to the drone controller. After processing the request, the drone controller should be able to fly the drone automatically to users and deliver the medical support they have required.