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Abstract

One of the most important aspects of responding to a medical case is the response time. In general, most fatalities are due to the patient not being able to reach the hands of the doctor in time. This also includes the arrival of medical equipment to the scene. The human brain will start to degrade in function after 3 minutes of oxygen starvation which conventional road transportation method first responders presently use is usually unable to reach the site in this golden 3 minutes, resulting in fatalities during transport or before the arrival of first responders at the scene. Therefore, medical equipment transport by fully autonomous aircraft is explored. This is done through drone deliveries which is much quicker than road methods as the equipment could be flown straight to the site as it is not affected by traffic, road conditions, and navigation. In this project, we will explore an aerial delivery system for medical equipment such as Automatic External Defibrillators (AEDs), First aid equipment, and other small requested medical devices. This will be done through a DJI drone platform and their SDK application. The main goal for this project is to decrease the response time by using an autonomous aerial drone to deliver medical equipment.
