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Drone Safety System

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Abstract: *The Use of Unmanned Aerial Vehicles is becoming increasingly popular and their safety is a major concern. Due to the high cost of advanced drones and the requirements for safe arrival, the development of reliable drone recovery systems is a hot topic right now. In this paper, we describe the development of a parachute system with accelerometer-gyroscope MPU - 6050 crash detection and a Kalman filter based algorithm to reduce acceleration errors while drone flying. We have developed an accelerometer error-related compensation algorithm. Parachute system testing is performed from a small elevation in a soft surface. Later, the system was tested under real-world conditions. the system worked successfully, resulting in parachute opening times of less than 0.5s. We also discuss citizen and military applications for an improved rescue system in a difficult environment (high temperature).*

Keywords: Drone

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