An Autonomous Unmanned Aerial Security Surveillance System to Enhance Security in Remote Territories

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Abstract

The current state of security in Kenya is marred by security breaches, expensive and inefficient. Criminal activities go undetected and unnoticed despite the use of sophisticated equipment and trained workforce like surveillance helicopters and manned soldiers hence leading to loss of lives and destruction of equipment and property. This research presents the background information, problem statement, research questions and objectives, justification of the problem, scope and limitations of the developed prototype. It presents an IT software development and research approach that will be applied to study the various types and ways of automating UAV using relevant or any related literature. Further, the project presents how the design, development, and evaluation of autonomous aerial security surveillance UAV are accomplished. With the use of Unmanned Automated Aerial surveillance vehicles, we can be able to curb the criminals by surveying the security prone territories where it is not safe for a human to go and report in advance. A construction research method and a simple prototype developed and presented that will be used to obtain, analyze, interpret and present the findings. The implication
of the study is that it will provide a basis for further development, automation and adoption of UAV in aerial security surveillance and reporting to authorities the information that will be used to raise alarms and enhance security.

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Index Terms
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UAV, API, APM, DRONE, REST.