

Review Form 3

Journal Name:	Journal of Engineering Research and Reports
Manuscript Number:	Ms_JERR_124341
Title of the Manuscript:	Protecting Autonomous UAVs from GPS Spoofing and Jamming: A comparative analysis of detection and mitigation techniques
Type of the Article	

General guidelines for the Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guidelines for the Peer Review process, reviewers are requested to visit this link:

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PART 1: Review Comments

Compulsory REVISION comments	Reviewer's comment	Author's Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
<p>Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.</p>	<p>This manuscript is valuable to the scientific field as it addresses critical challenges in protecting UAVs from GPS spoofing and jamming, providing insights into effective detection and mitigation techniques. The mixed-method approach and evaluation of machine learning models add depth and practical relevance to the findings. Overall, it contributes significantly to advancing UAV security and resilience in GPS-compromised environments.</p>	
<p>Is the title of the article suitable? (If not please suggest an alternative title)</p>	<p>Yes, the title of the article is suitable and appropriately reflects the content of the manuscript. It clearly identifies the focus on protecting UAVs from GPS-related threats and indicates the scope of the study, which includes a comparative analysis of various detection and mitigation strategies</p>	
<p>Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.</p>	<p>The abstract of the article is generally comprehensive and provides a clear overview of the research objectives, methods, key findings, and implications. It effectively highlights the vulnerabilities of UAVs to GPS spoofing and jamming, the methods used for detection and mitigation, and the overall impact on UAV performance.</p>	
<p>Are subsections and structure of the manuscript appropriate?</p>	<p>The overall structure and organization of the manuscript are generally appropriate for its content. However, the document would benefit from a more detailed subdivision of sections using a numbered system to improve clarity and navigability. For example, the section titled "Techniques for GPS Spoofing and Jamming" could be labeled as subsection 2.1 under the broader "Literature Review" section, making it easier for readers to follow the progression of ideas. Adopting a formal numbering system for subsections would improve its overall structure and make it more user-friendly for the academic audience.</p>	
<p>Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.</p>	<p>The manuscript demonstrates scientific robustness and technical soundness through its comprehensive mixed-method approach to evaluating GPS spoofing and jamming threats to UAVs. Using both qualitative literature review and quantitative data analysis provides a well-rounded understanding of the vulnerabilities and mitigation strategies. Applying machine learning models to detect interference and the comparative analysis of various mitigation techniques, such as INS and visual odometry, are methodologically sound and appropriate for the research objectives. Additionally, including statistical metrics like positioning error and mission completion rates adds empirical rigor to the findings, making the study's conclusions both reliable and impactful for the field of UAV security.</p>	
<p>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. =</p>	<p>The references included in the manuscript are both sufficient and up-to-date. The manuscript effectively integrates recent publications from 2020 to 2024, which is essential for ensuring the relevance of the research findings. The current citations adequately cover the critical areas related to the topic, ensuring that the manuscript is well-supported by contemporary literature.</p>	

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Minor REVISION comments Is the language/English quality of the article suitable for scholarly communications?	The language quality of the article is generally suitable for scholarly communication. The manuscript is well-structured, with clear and concise academic language that effectively communicates the research objectives, methodology, and findings.	
Optional/General comments		

PART 2:

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Are there ethical issues in this manuscript?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

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