

REVIEWER'S REPORT

Manuscript No.: IJAR-52842

Date: 17-07-2025

Title: Unveiling the Fallen: Revolutionizing Disaster Victim Identification Through Advanced Forensic Synergy

Recommendation:

Accept as it isYES.....

Accept after minor revision.....

Accept after major revision

Do not accept (*Reasons below*)

Rating	Excel.	Good	Fair	Poor
Originality		✓		
Techn. Quality			✓	
Clarity		✓		
Significance			✓	

Reviewer Name: Mir Tanveer

Reviewer's Comment for Publication.

Overall Evaluation:

This paper presents a cutting-edge and interdisciplinary approach to Disaster Victim Identification (DVI) by integrating advanced forensic technologies within a cohesive and scalable framework. It offers a forward-thinking and practically grounded contribution to the evolving field of forensic science, particularly in the context of mass casualty events.

Abstract Evaluation:

The abstract is comprehensive and well-structured, clearly presenting the research objective, identified gaps, methodology, and key findings. It successfully communicates the novelty and impact of the proposed framework, supported by quantitative data and technological innovation. The emphasis on multi-modal integration—AI, DNA, and drones—sets the study apart from conventional DVI literature.

Relevance and Timeliness:

Given the increasing frequency and severity of disasters worldwide, this study addresses a

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globally pertinent issue. The focus on improving identification processes in mass casualty events aligns with pressing humanitarian, legal, and operational needs. The incorporation of modern technologies enhances the relevance of this work for current and future disaster management strategies.

Methodological Strength:

The mixed-methods approach, involving both field simulations and laboratory-based forensic analysis, demonstrates methodological rigor and a commitment to applicability. The scale of the simulation—500 cases across various disaster types—adds depth and robustness to the findings. The interdisciplinary collaboration further reinforces the study's credibility and practical relevance.

Innovative Value and Findings:

The reported outcomes highlight the framework's effectiveness: 92% identification accuracy within 48 hours, and significant improvements over traditional DVI timelines. AI-driven biometrics, portable DNA sequencing, and drone-assisted localization each contribute distinct yet complementary strengths, enhancing the overall efficiency and reliability of the system. The integration of machine learning algorithms adds predictive capability and adaptability.

Clarity and Structure:

The introduction is clear and contextually grounded, offering a strong rationale for the research. The narrative transitions smoothly from problem statement to solution proposal. Terminology is appropriately technical for the domain, yet accessible enough for multidisciplinary readership.

Theoretical and Practical Contributions:

This research introduces a conceptually original and operationally feasible model—"Advanced Forensic Synergy"—that has the potential to redefine DVI protocols globally. The proposed system balances scientific innovation with real-world constraints, offering solutions that are both technologically sophisticated and practically implementable.

Originality:

The study's originality lies in its comprehensive integration of existing yet independently used forensic technologies into a single, unified, and scalable DVI framework. Its emphasis on operational synergy and real-time response capabilities sets it apart from previous DVI models.

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Final Recommendation:

This paper represents a significant contribution to forensic science, emergency response, and humanitarian efforts. It is innovative, data-driven, and strategically oriented toward real-world implementation, making it an exemplary model of interdisciplinary applied research.
