

## REVIEWER'S REPORT

**Manuscript No.: IJAR-58646**

**Title: AI-POWERED SMART FOOTBALL PLAYER PERFORMANCE MONITORING USING IOT WEARABLE SENSORS: A SECONDARY RESEARCH STUDY**

### Recommendation:

Accept as it is .....

**Accept after minor revision...yes.....**

Accept after major revision .....

Do not accept (*Reasons below*) .....

| Rating         | Excel. | Good | Fair | Poor |
|----------------|--------|------|------|------|
| Originality    |        |      | Y    |      |
| Techn. Quality |        |      | Y    |      |
| Clarity        |        |      | Y    |      |
| Significance   |        |      | Y    |      |

**Reviewer's ID: JPR-Dr.Shaweta Sachdeva**

## Detailed Reviewer's Report

### Major Comments

1. The manuscript presents a comprehensive review of AI-powered football performance monitoring using IoT wearable sensors. The topic is relevant and timely, given the increasing adoption of intelligent sports analytics.
2. Since this is a **secondary research study**, the methodology should follow established systematic review guidelines (e.g., PRISMA or Kitchenham). The manuscript should include the literature search strategy, search strings, screening process, and study selection flowchart to improve transparency and reproducibility.
3. The review lacks a quality assessment of the selected studies. Including a critical appraisal of the reviewed literature would significantly strengthen the scientific rigor.
4. The manuscript states that literature from 2015–2025 was considered; however, the findings are mainly based on ten studies from 2023–2026. The inclusion criteria and the final selection process should be clarified.
5. The literature review is largely descriptive. It would benefit from deeper critical analysis by comparing methodologies, datasets, AI algorithms, wearable devices, evaluation metrics, and reported performance across studies.
6. Although several AI techniques are introduced, the manuscript does not provide a comparative discussion of their strengths, weaknesses, computational complexity, or suitability for different football performance monitoring tasks.
7. The conceptual framework is useful but should be illustrated with a detailed architecture diagram showing data acquisition, communication, preprocessing, AI processing, visualization, and decision-making modules.
8. Ethical issues such as player privacy, informed consent, cybersecurity, and data governance deserve a more comprehensive discussion because wearable technologies continuously collect sensitive physiological information.

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9. The manuscript should discuss practical deployment challenges including sensor calibration, battery life, communication latency, interoperability among devices, and real-world implementation costs.
10. The conclusion could be strengthened by summarizing the major research gaps identified from the reviewed literature and providing clearer recommendations for future investigations.

## Minor Comments

1. Several sections are written in an informal conversational style (e.g., "really helpful", "really important", "things like"). The manuscript should be revised to maintain a formal academic tone throughout.
2. Numerous grammatical, punctuation, and typographical errors are present (e.g., repeated commas, duplicated letters, spacing issues, and inconsistent capitalization). A thorough language editing is recommended.
3. Expand abbreviations such as BLE, EMG, CNN, RNN, LSTM, and XAI consistently when they first appear.
4. The tables comparing AI techniques and wearable sensors should include additional attributes such as accuracy, computational cost, advantages, limitations, and representative studies.
5. Include more recent publications from leading journals in sports analytics, artificial intelligence, and wearable computing to improve the literature coverage.
6. Some references should be checked carefully for formatting consistency and completeness according to the journal's citation style.
7. The research gap section should clearly distinguish unresolved technical issues from future technological opportunities.
8. Adding summary tables that categorize studies by sensor type, AI algorithm, application, evaluation metrics, and key findings would improve readability and make comparisons easier.
9. A dedicated section discussing limitations of existing AI models in terms of explainability, robustness, fairness, and generalization across different leagues and playing conditions would enhance the review.
10. The manuscript would benefit from a graphical timeline illustrating the evolution of AI-enabled wearable technologies in football performance monitoring.

## Overall Recommendation

The manuscript provides a useful overview of AI-powered IoT wearable sensor technologies for football performance monitoring and highlights important developments in sports analytics. However, it currently reads more as a narrative review than a rigorous systematic review. Strengthening the review methodology, incorporating critical comparative analysis, improving the academic writing style, and expanding discussions on ethical, technical, and deployment challenges would substantially improve the manuscript's quality and scholarly contribution.