

REVIEWER'S REPORT

Manuscript No.: IJAR-55062

Title: Artificial Intelligence and Deep Learning in Public Health Surveillance A Review with Emphasis on Saudi Arabia

Recommendation:

Accept as it is

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: **Sudhanshu Sekhar Tripathy**

Reviewer's Comment for Publication.

(To be published with the manuscript in the journal)

The reviewer is requested to provide a brief comment (3-4 lines) highlighting the significance, strengths, or key insights of the manuscript. This comment will be Displayed in the journal publication alongside with the reviewer's name.

Reviewer's Comment for Publication

Reviewer's Comment for Publication

The manuscript provides a broad narrative review of artificial intelligence and deep learning applications in infectious disease surveillance, with emphasis on the Saudi Arabian context. The topic is timely, relevant, and aligned with global digital public health priorities. However, the manuscript requires **major revisions** before it can be considered for publication. The issues primarily concern structural imbalance, insufficient methodological clarity for the proposed model framework, missing critical sections for a review article, overdependence on descriptive summaries, and formatting inconsistencies across multiple sections.

Detailed Reviewer's Report

REVIEWER'S REPORT

1. Scope & Relevance

Strengths

- Topic is highly relevant to public health surveillance, outbreak forecasting, and digital epidemiology.
- Saudi Arabia-focused perspective aligns with health system modernization under Vision 2030.

Concerns

- The review lacks a clear boundary and inclusion logic for selected studies; scope feels overly broad.
- No explicit research questions or conceptual framework to guide synthesis.
- The focus on Saudi Arabia is not sufficiently integrated throughout—sections alternate between global and regional perspectives without coherence.

2. Structure & Technical Presentation

Strengths

- Sections (Introduction, Methods, Results, Discussion, Conclusion) follow academic convention.
- Tables and model summaries are useful.

Major Issues

- Section transitions are not smooth; abrupt shifts between topics reduce readability.
- Formatting inconsistencies:
 - Spacing issues
 - Numbering errors
 - Overlong paragraphs
 - Irregular indentation in references
- Figures (if any in the original PDF) are referenced but not clearly tied to the main discussion.

REVIEWER'S REPORT

- Literature review section reads like a collection of summaries rather than a synthesized analysis.

Revision Needed:

Reorganize the manuscript with clearer subheadings, structured comparisons, and consistent formatting.

3. Methodological / Analytical Details

Major Issues

- The narrative review methodology is insufficiently detailed. Missing elements:
 - Search strings
 - Screening process
 - Quality assessment of included studies
 - PRISMA-style overview
- The proposed LSTM methodological framework is described only conceptually; no validation steps, limitations, or reproducibility considerations are provided.
- Results primarily list findings from various papers rather than present analytical synthesis.

Revision Needed:

Strengthen methodological transparency, include a structured review protocol, and provide synthesized thematic insights.

4. References & Citations

Strengths

- References are recent (2022–2025) and relevant to AI, public health, and digital epidemiology.

Issues

- Inconsistent formatting (spacing, alignment, missing numbering punctuations).
- Some citations appear redundant or insufficiently tied to main arguments.

REVIEWER'S REPORT

- A few references appear misplaced or irrelevant to the Saudi focus.

Revision Needed:

Standardize citation style and ensure references directly support claims.

5. Language & Style

Strengths

- Academic tone is maintained throughout.
- Technical terminology is used appropriately.

Issues

- Several long, dense paragraphs reduce readability.
- Minor grammatical issues and syntactic inconsistencies.
- Text contains embedded placeholder artifacts (e.g., numbers misaligned with sentences).

Revision Needed:

Improve sentence clarity, smooth transitions, and correct spacing problems.

6. Key Strengths

- Strong and up-to-date coverage of AI applications across disease forecasting and surveillance.
- Valuable focus on explainable AI and hybrid modeling.
- Relevant contextualization within Saudi Arabia's digital health strategy.
- Well-supported tables summarizing deep learning model categories.

7. Areas for Improvement (Major Revision Needed)

1. **Clarify and narrow the scope**—define research questions and ensure consistent Saudi Arabia emphasis.
2. **Improve review methodology**—add explicit criteria, a structured process, and possibly a PRISMA diagram.
3. **Enhance analytical synthesis**—compare and contrast studies, identify gaps, and avoid only descriptive summaries.
4. **Substantially revise structure and flow**—add subheadings, improve transitions, and reduce content redundancy.

REVIEWER'S REPORT

5. **Fix formatting inconsistencies**—spacing, numbering, indentation, and paragraph alignment.
6. **Strengthen the proposed model framework**—expand explainability, validation strategy, and limitations.
7. **Improve language clarity**—shorter sentences, better paragraph structure, and improved readability.
8. **Refine references**—uniform formatting, improved citation relevance, and removal of redundant sources.

8. Final Feedback to Author

The manuscript addresses an important and timely area at the intersection of AI, deep learning, and public health surveillance. It has strong potential to contribute meaningfully to the field, especially with its focus on Saudi Arabia's evolving digital health landscape. However, substantial revisions are required to improve the structural organization, methodological rigor, analytical depth, and presentation quality. By strengthening the review protocol, enhancing synthesis, correcting formatting issues, and tightening the narrative flow, the paper will become significantly more impactful and publication-ready.