Participant Information and Consent Form

Study Title: Enhancing the Performance of Cloud-Based Electronic Health Records Using Deep Learning Techniques for Disease Detection and Resource Optimization
Invitation to Participate

You are invited to participate in a research study examining the adoption, performance, and implementation challenges of Electronic Health Record (EHR) systems in healthcare facilities. This study forms part of an academic research project aimed at improving healthcare information systems and supporting data-driven healthcare decision-making.

Your participation is entirely voluntary.

Purpose of the Study
The purpose of this study is to:
- assess the current level of Electronic Health Record (EHR) adoption,
- evaluate infrastructure readiness and system performance,
- identify implementation challenges and bottlenecks, and
- support the development of intelligent models for improving healthcare service delivery.

What Participation Involves
If you agree to participate, you will be asked to complete a structured questionnaire about your healthcare facility's record management systems and experiences with EHR implementation.
- The questionnaire will take approximately 10–15 minutes to complete.
- No clinical patient data will be collected.
- Questions relate only to institutional systems and professional experiences.

Voluntary Participation
Your participation is completely voluntary. You may:
- decline to answer any question, and
- withdraw from the survey at any time before submission without penalty or consequences.

Confidentiality and Data Protection
- No personally identifiable information is required.
- Responses will be anonymized and analyzed in aggregate form only.
- Data will be used strictly for academic and research purposes.
- All collected data will be securely stored and accessible only to the research team.

Risks and Benefits
There are no anticipated physical or psychological risks associated with participation.
While there is no direct personal benefit, your responses may contribute to:
- improved digital health systems,
- better healthcare resource optimization, and
- evidence-based policy development.

Ethical Approval

This study has been conducted in accordance with institutional research ethics guidelines and international standards for research involving human participants.

Ethical Approval Number: ADM/E22A/VOL.VII/148311664
Approving Institution: Health Research Ethics Committee (HREC), University of Benin Teaching Hospital (UBTH), Nigeria

Contact Information

If you have questions about this research, please contact:

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Consent Statement

Please read the statement below carefully:

I confirm that I have read and understood the information provided above. I understand that my participation is voluntary and that my responses will be used anonymously for academic research purposes. By proceeding with this questionnaire, I freely consent to participate in this study.

Participant Consent

☐ **I agree to participate in this study**

☐ **I do not agree to participate**

(Only participants who agree should proceed to the questionnaire.)

QUESTIONNAIRE

SECTION A: HEALTHCARE FACILITY INFORMATION

A1. Name of Hospital/Clinic (Optional)

A2. Location

- State: _____

- Local Government Area (LGA): _____

A3. Type of Healthcare Facility *(Select one)*

☐ Tertiary Hospital

☐ Secondary Hospital

☐ Primary Healthcare Centre

☐ Private Clinic

☐ Specialist Hospital

SECTION B: HEALTH RECORD SYSTEM STATUS

B1. What type of patient record system does your facility currently use?

☐ Paper-based only

☐ Electronic Health Records (EHR) only

☐ Hybrid (Paper + Electronic)

B2. If EHR or Hybrid is used, indicate year of adoption

☐ 2025

☐ 2024

☐ 2023

☐ 2022

☐ 2021

☐ 2020 or earlier

☐ Not applicable

B3. Modules currently implemented (Tick all that apply)

☐ Patient Registration/Demographics

☐ Outpatient Management

☐ Inpatient Management

☐ Consultation & Clinical Notes

☐ Nursing Notes

☐ Laboratory Information System

☐ Radiology Information System

☐ Pharmacy Management

☐ Surgery/Operation Theatre

☐ Emergency Department Module

SECTION C: EHR INFRASTRUCTURE AND DEPLOYMENT

C1. What infrastructure does your EHR system use?

☐ Cloud-based

☐ On-premises

☐ Both cloud and on-premises

☐ Not sure

☐ Not applicable

C2. Data backup and recovery solution available

☐ Automated daily backup

☐ Manual backup only

☐ No backup solution

☐ Not sure

SECTION D: INFRASTRUCTURE READINESS (LIKERT SCALE)

Please rate the following using the scale:

1 = Very Poor; 2 = Poor; 3 = Moderate; 4 = Good; 5 = Excellent

Item	1 2 3 4 5
D1. Reliability of electricity supply	☐ ☐ ☐ ☐ ☐
D2. Reliability of internet connectivity	☐ ☐ ☐ ☐ ☐
D3. Availability of computer hardware	☐ ☐ ☐ ☐ ☐
D4. Network performance within facility	☐ ☐ ☐ ☐ ☐
D5. Adequacy of IT technical support	☐ ☐ ☐ ☐ ☐

SECTION E: EHR PERFORMANCE AND RELIABILITY

E1. How frequently do technical issues occur in your EHR system?

☐ Daily

☐ Weekly

☐ Monthly

☐ Rarely

☐ Never

☐ Not applicable

E2. How are technical issues typically resolved?

☐ In-house IT support

☐ Vendor support

☐ No dedicated support

☐ Not applicable

SECTION F: EHR BOTTLENECKS AND IMPLEMENTATION CHALLENGES

F1. What challenges have you experienced? (Select all that apply)

☐ High cost of implementation

☐ Poor internet connectivity

☐ Power supply instability

☐ Insufficient IT infrastructure

☐ Lack of staff training

☐ Resistance from staff

☐ Vendor technical support issues

☐ Data privacy/security concerns

☐ System downtime/crashes

☐ Lack of system integration

☐ Complexity of system

F2. In your opinion, what are the TOP TWO barriers to full EHR adoption?

1. _____

2. _____

SECTION G: USER SATISFACTION (LIKERT SCALE)

Please indicate overall staff perception of the EHR system.

1 = Very Dissatisfied; 2 = Dissatisfied; 3 = Neutral; 4 = Satisfied; 5 = Very Satisfied

Item	1	2	3	4	5
G1. Overall satisfaction with EHR system	☐	☐	☐	☐	☐
G2. Ease of system use	☐	☐	☐	☐	☐
G3. Improvement in workflow efficiency	☐	☐	☐	☐	☐
G4. System reliability	☐	☐	☐	☐	☐

SECTION H: FUTURE ADOPTION INTENT

H1. If not fully digital, does your facility plan to transition to EHR soon?

☐ Yes

☐ No

☐ Maybe

SECTION I: OPTIONAL COMMENTS

Please provide any additional comments regarding EHR implementation:

_____

_____

_____