

CSIS 4495 Project Progress Report

Title: Optimizing Emergency Department Throughput via Remote Digital Triage and Synchronous Telemedicine Interventions

Team Members

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CSIS 4495-003

Summary of Work Completed During This Reporting Period

During this reporting period, I contributed primarily to the system design, analytical planning, and frontend workflow support for the e-Triage academic prototype. My work focused on ensuring that the system architecture and user workflows align with the research objectives and simulation-based evaluation scope defined in the project proposal.

I participated in designing the overall system architecture, including the interaction between the patient-facing interface, nurse dashboard, backend triage logic, and data storage. I also mapped the end-to-end triage workflow, from patient symptom submission to preliminary triage assignment and nurse override, to support later performance analysis and comparison against traditional emergency department workflows.

As the Data Analytics team member, I contributed to defining key evaluation metrics such as patient waiting time, queue prioritization, and simulated Left Without Being Seen (LWBS) rates. These metrics will be used in later phases to evaluate the impact of remote triage on emergency department throughput.

In addition, I helped work on frontend UI components to support role-based workflows, specifically the Home page, Login page, and Nurse Dashboard, along with their associated CSS modules. These components provide the structural foundation for nurse-in-the-loop triage review and support future integration with backend services.

A key challenge during this phase was maintaining an appropriate academic prototype scope. This was addressed by restricting all system interactions to synthetic patient data and focusing on design justification and evaluation readiness rather than real-world deployment.

Work Logs

Date	Number of Hours	Description of Work Done
27/01/26	2.0	Reviewed proposal requirements and system architecture for remote triage workflow
28/01/26	2.5	Designed data flow and triage process models for simulation-based evaluation
29/01/26	2.5	Defined evaluation metrics (waiting time, prioritization, LWBS)
30/01/26	2.5	Designed low-fidelity UI wireframes for nurse and patient workflows
31/01/26	2.0	Reviewed security and role-based access requirements conceptually
01/02/26	3.0	Implemented Home page and Login UI components using React
03/02/26	3.0	Implemented Nurse Dashboard UI and modular CSS styling
04/02/26	1.5	Validated UI flows against triage process and evaluation needs
06/02/26	3.0	Team meeting to coordinate progress, scope, and timeline alignment
08/02/26	2.0	Final review, documentation updates, and GitHub preparation

AI Use Section

AI Tool Name	Version, Account Type	Specific feature for which the AI tool was used	Value Addition
ChatGPT	GPT-5.2, Free Account	Academic writing assistance for progress report drafting and structuring	Refined technical accuracy, aligned content with the report 1 template, and integrated the work done from the proposal
ChatGPT	GPT-5.2, Free Account	Brainstorming system design, workflow modeling, and evaluation planning	Assisted in structuring the remote triage workflow, clarifying data flow between patient and nurse interfaces, and identifying appropriate evaluation metrics aligned with a data analytics perspective
ChatGPT	GPT-5.2, Free Account	Language refinement and clarity	Reviewed and refined drafted content to improve academic tone, clarity, and coherence while ensuring originality and preserving my own analysis and