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

Work Logs

Date	Number of Hours	Description of Work Done
27/01/26	2 hours	Research system architecture design to integrate patient web interface, clinician dashboard, database, and authentication services.
28/01/26	2 hours	Brainstorming on security and access control specifications and authentication requirements
29/01/26	2 hours	Mapped patient intake, triage submission, and queue processing logic
30/01/26	2 hours	Designed patient and clinician UI wireframes to support triage override workflows
31/01/26	2 hours	Reviewed triage decision models and severity scoring approaches for simulation
1/02/26	2.5 hours	Started creating Front-end React component structure for patient and nurse dashboards
3/2/26	3.5 hours	Continued working on the patient and nurse's dashboard
4/2/26	1.5 hours	Validated UI flows against triage process models
5/2/26	2 hours	Security requirements analysis to define authentication, authorization, and audit requirements
6/2/26	3 hours	Met with my team member to discuss how to change the designs already made and make changes to the project timelines regarding

		having a good presentation for the midterm
7/2/26	30 mins	Reviewing the progress of my partner on the specific tasks assigned
8/2/26	1 hour	Met with my teammate and assigned a new set of tasks for the next phase of the project
8/2/6	30 mins	Discussing with a healthcare worker on possible ideas to fortify the clinical design aspect of the project
9/2/26	1.5 hours	Final documentation and review of progress report, pushing to Git, and submission of progress report within the expected time frame

Summary Description of work done during this reporting period.

During the 2 weeks following the proposal, I contributed to both the design and implementation of the web app for the Remote Emergency Room Triage and Telemedicine System (e-Triage). Initial efforts focused on background research and on defining evaluation metrics to support a simulation-based web app.

Furthermore, I contributed to system design by developing centralized triage logic, data-flow models, and user-interface component prototypes, and by creating React front-end dashboards for patients and clinicians. A key challenge during this phase was ensuring that system functionality remained aligned with an academic simulation scope rather than real-world

deployment, which was addressed by restricting all data to synthetic scenarios.

Another challenge is deciding whether patients should have an account with the web app or access it as a guest, to limit the number of user details stored in our database for security reasons.

Repo Check in of implementation completed

During this reporting period, I committed multiple frontend components to the project GitHub repository to support patient intake and clinician workflows. These check-ins include the user registration page, patient dashboard, and doctor dashboard, along with their corresponding CSS styling files. The committed components establish role-based user interfaces and provide the foundational structure required for patient triage submission and clinician review within the academic research prototype. All components were implemented using a modular React architecture and organized to support future integration with backend services.

AI Use Section

AI Tool Name	**Version, Account Type**	**Specific feature for which the AI tool was used**	**Value Addition**
Gemini (LLM)	Pro, Free	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 on security and access control specifications and	Evaluated AI-generated suggestions, compared them with ideas I already

		authentication requirements	have, and tried to find a common ground for both ideas.
ChatGPT	GPT-5.2, Free Account	Language refinement and clarity	Reviewed, edited, and rewritten outputs to ensure academic tone, consistency, and originality

Appendix:

- Rewrite the progress report using formal academic language suitable for submission
- How should role-based access control be structured for patients, nurses, and doctors within the system?
- What authentication mechanisms are appropriate for an academic prototype of a remote ER triage system?
- How can authentication and authorization logic be modularized to support future system expansion?