Project Overview

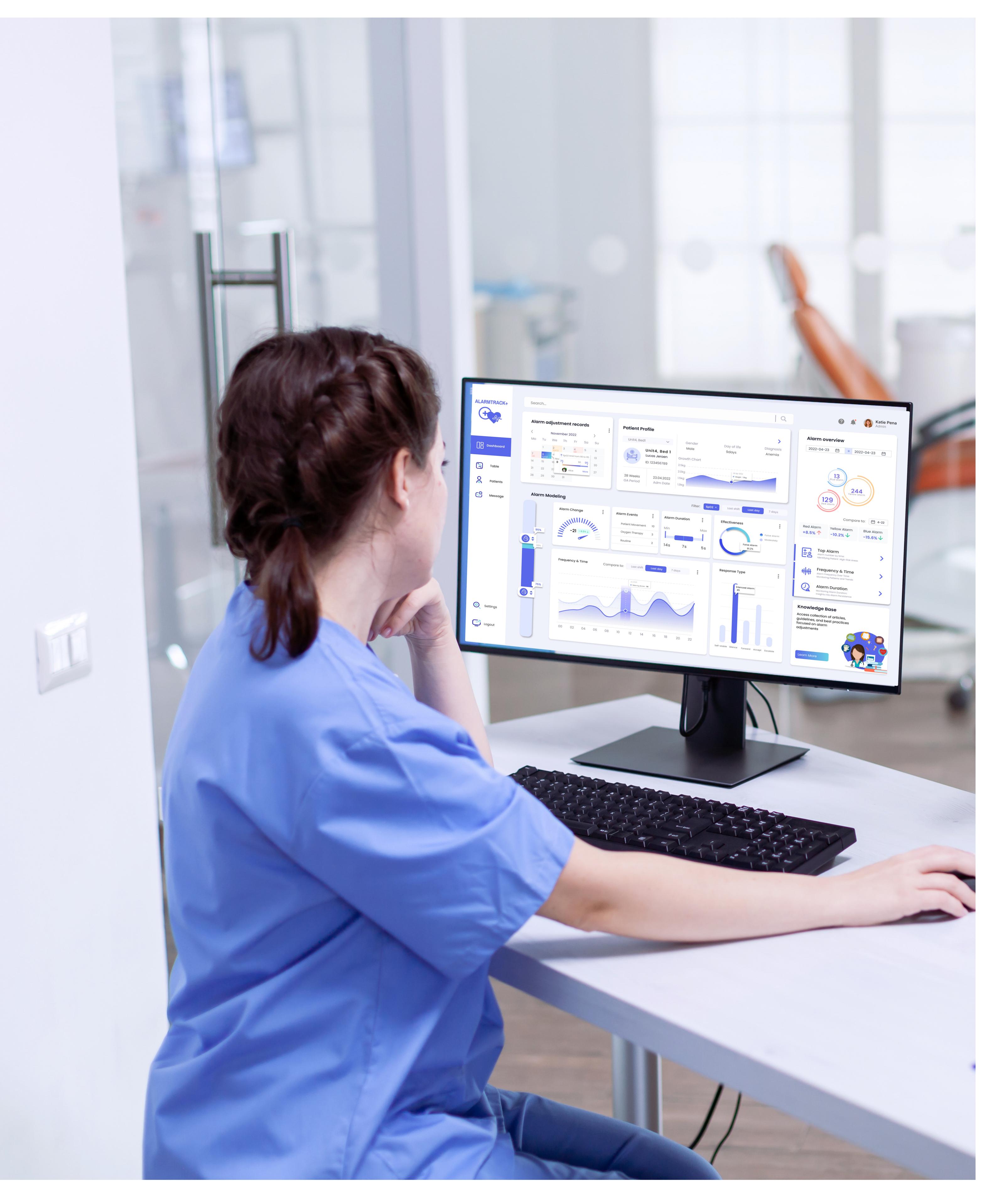
This study presents a comprehensive exploration of designing interfaces tailored to nurses' needs for adjusting alarm limits, aimed at enhancing their decision-making and patient care. Leveraging a multidisciplinary approach, this project amalgamates insights from nursing practices, user-centered design, and data visualization.

Drawing on meticulous literature review, direct observations, interviews, and user surveys, the project meticulously dissected the intricacies of nurses' interactions with alarm systems. This investigation highlighted the necessity for a dashboard that not only reduces the cognitive load on nurses but also empowers them to make informed decisions based on alarm data. The resulting system interfaces offer data customization and visualization capabilities, facilitating rapid and accurate alarm limit adjustments.

Therefore, this project has generated interfaces that involves tracking, analyzing, and visualizing the data logged by the nurses in response to alarms and their evaluations, thus supports nurses in adjusting alarm limits for an individual patient.

Optimizing Alarm Management in the NICU

Designing Interfaces for supporting nurses to customize Alarm Limits



Key Findings

Throughout the theoretical and field study phases of this research, significant insights were garnered regarding the intricate dynamics of nurses' decision-making processes pertaining to alarm response and adjustment. Drawing upon these insights, comprehensive models were developed that shed light on the nuanced factors influencing nurses' decisions in both scenarios. These models provided a structured foundation for identifying key determinants and essential information that nurses require during their decision-making journey. Leveraging these

Final Design

The final design is a system that consists of five main pages:

- 1. Alarm Lists Page.
- 2. Nurse Response Page.
- 3. Alarm Evaluation Page.
- 4. Vital Signs Graph Page
- 5. Data Dashboard Page

Conclusions

In essence, this graduation project endeavors to revolutionize alarm management in the NICU. Through the design of interactive interfaces and a comprehensive dashboard, the project aims to streamline alarm response, reduce alarm fatigue among nurses, and ultimately contribute to the creation of a quieter, more efficient NICU environment.

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Optimizing Alarm Management in the NICU
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MSc. Graduation Project

Committee

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