

Stockholm
University

Heart to Say

The Global Pioneer in Cardiac Language Translation

Group A – Team N+an

Project Name: Heart to Say

Group Member: Ifani, Nan, Sahid, Zhao, Mahmoud

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Agenda

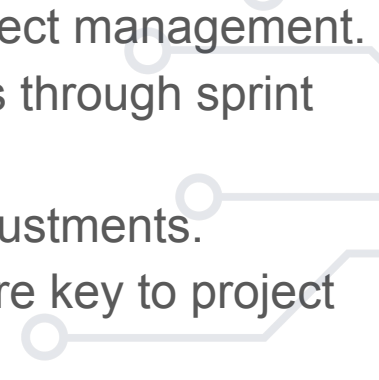
- Medical problem
- Project development methodology
- Pipeline & insights
- Findings and user testing
- Live demo



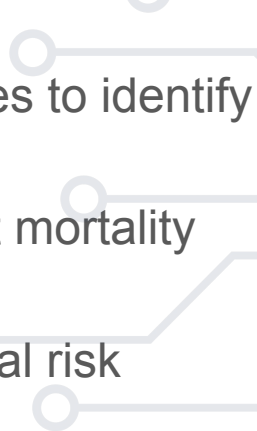
Medical Problem

- **Medical Problem:** Heart failure is a leading cause of death worldwide, with high mortality rates especially in lower-income countries like Pakistan.
- **Dataset:** Data from heart failure patients in Pakistan, focusing on factors such as age, comorbidities (e.g., diabetes, hypertension), and lab tests (e.g., ejection fraction).
- **Solution:** The dataset enables predictive models to assess heart failure mortality risk, helping doctors and nurses in Pakistan identify high-risk patients and manage treatment plans effectively.

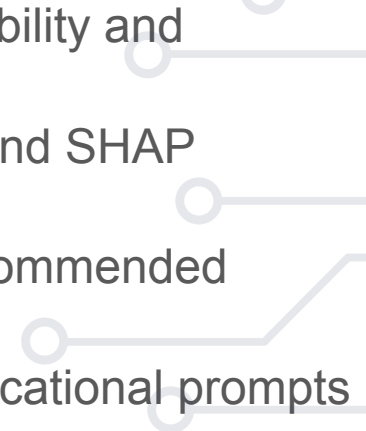
Development methodology

- **Scrum Framework:** Applied Scrum for iterative, flexible project management.
 - **Regular Feedback:** Continuous feedback from stakeholders through sprint reviews.
 - **Challenges:** Issues with dataset selection required agile adjustments.
 - **Lessons Learned:** Flexibility and continuous refinement were key to project success.
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Dataset and pipeline

- **Data Preprocessing:** Cleaned and transformed patient data.
 - **Diagnostic Analytics:** Used correlations and clustering techniques to identify patient risk factors.
 - **Predictive Modeling:** Applied machine learning models to predict mortality based on key health indicators.
 - **Prescriptive Analytics:** SHAP visualizations helped identify critical risk factors.
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Findings and user testing

- **User Testing Methods:** Used both SUS for quantitative usability and Think-Aloud for qualitative insights.
 - **Focus:** Evaluated the ease of navigation, task completion, and SHAP interpretation.
 - **Findings:** Participants found the dashboard intuitive but recommended simplifying certain features for better user experience.
 - **Improvements:** Adjustments made to the UI and added educational prompts based on feedback.
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Demo

[Heart to Say Dashboard](#)

