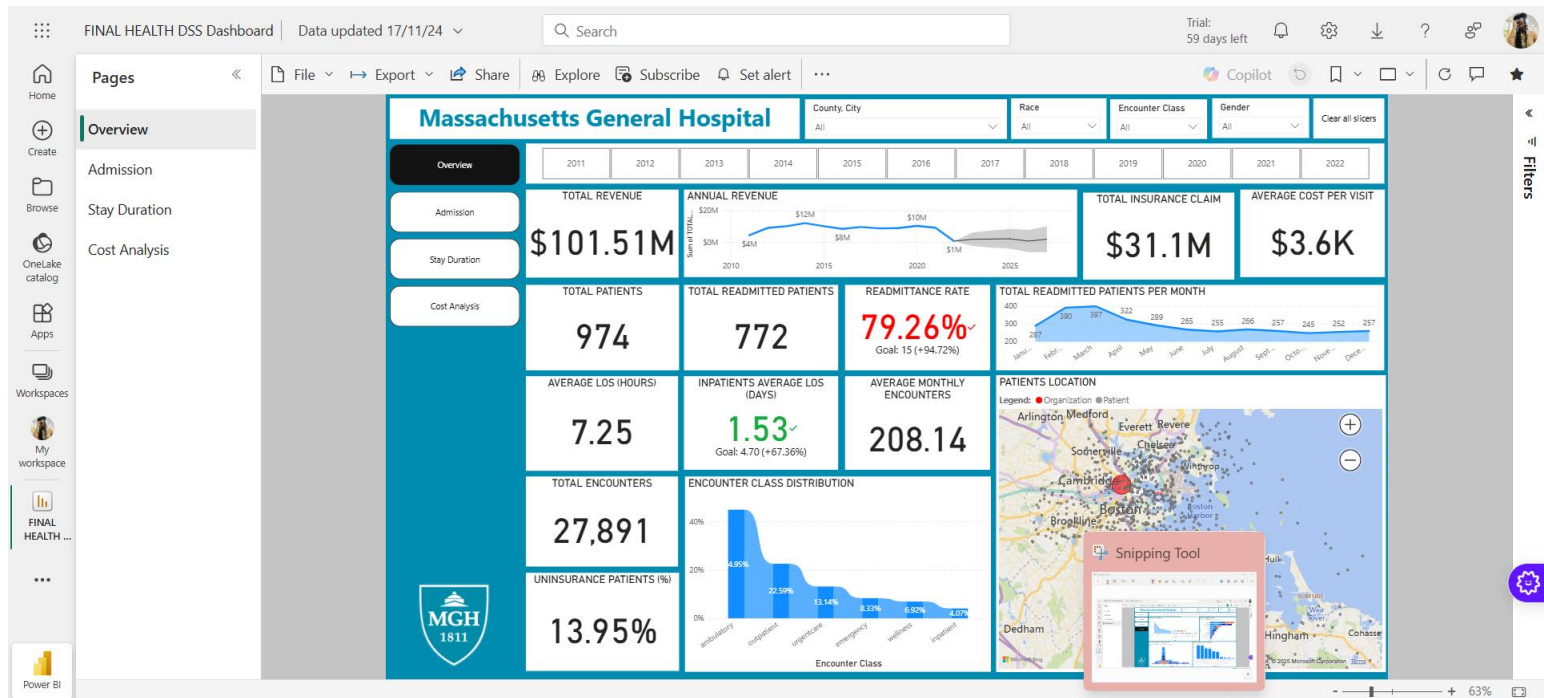


# From Raw Data to Real Impact: The ETSU Public Health Dashboard



## Introduction

Public health leaders need reliable data to make quick, informed decisions. At ETSU, a gap existed between complex raw datasets and decision-ready insights. The goal was to design a dashboard that simplifies health trends, supports policymakers, and improves accessibility for non-technical stakeholders.

## The Challenge

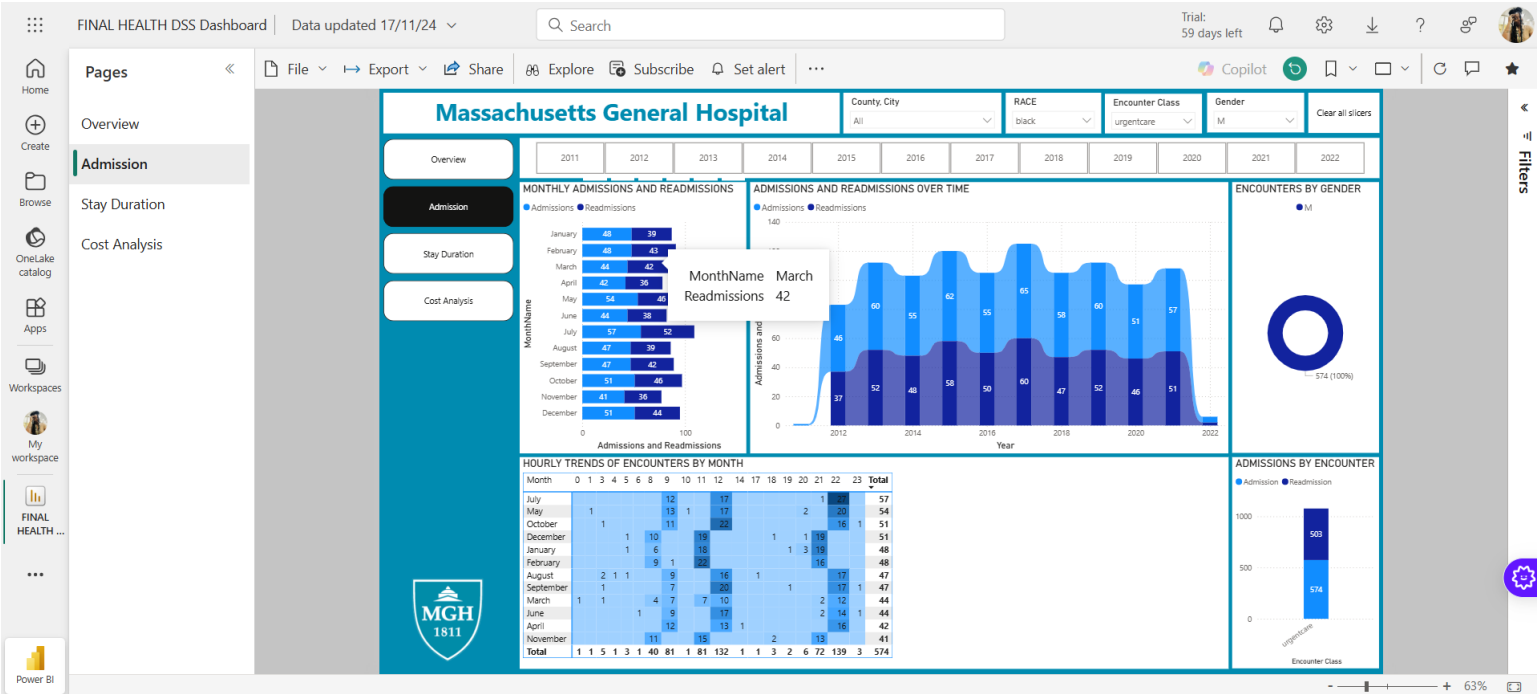
- Data scattered across multiple sources.
- Stakeholders struggled to visualize trends in admission, cost analysis, and stay duration.
- Need for a single, interactive platform to provide clarity and usability.

Discovery

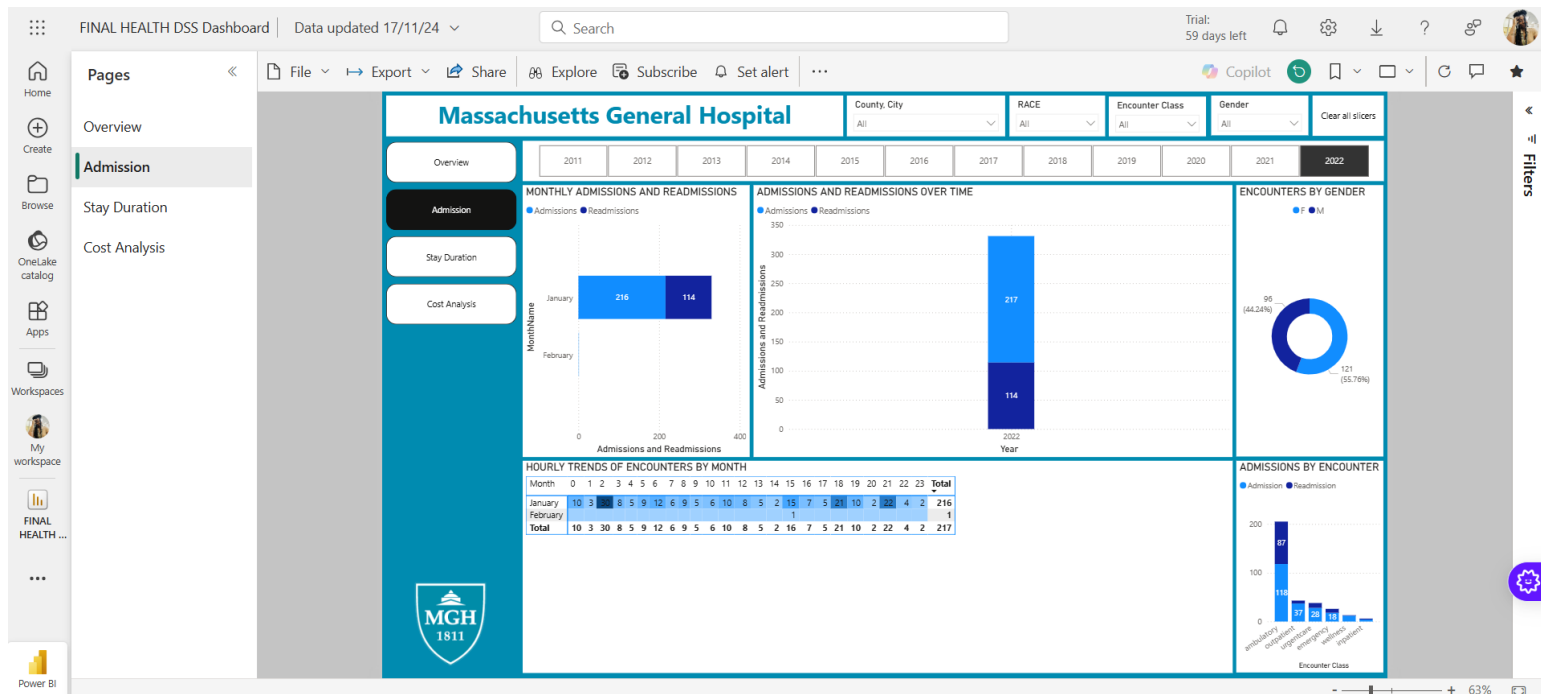
- Conducted stakeholder interviews with faculty and public health professionals to identify KPIs (Operational Efficiency, Financial Management, Geographical Access, Care Quality).
- Mapped user personas: researchers, students, policymakers.
- Identified need for mobile-friendly, quick-to-navigate visualizations.

Execution

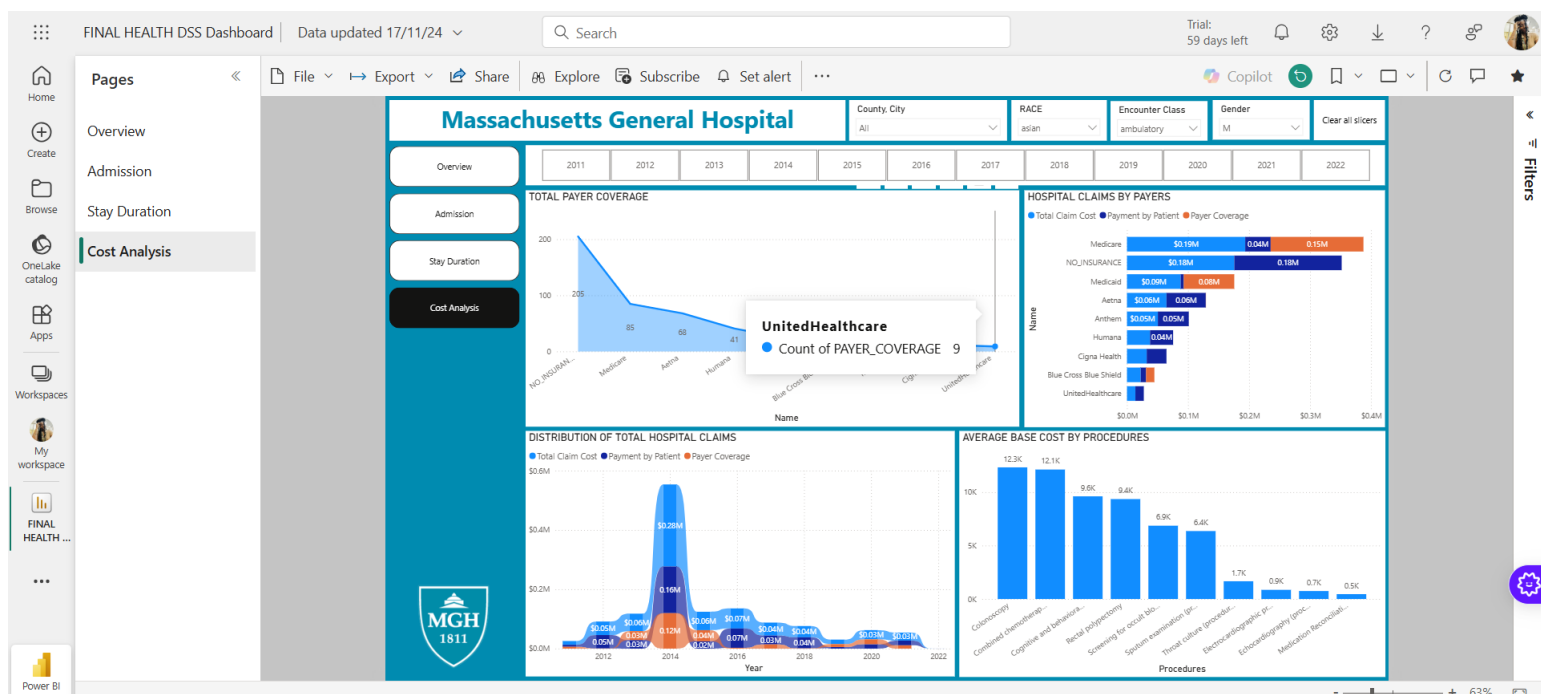
- Tools: Python, Power BI, Streamlit, and Django.
- Designed intuitive dashboard views with filters by admission, length of stay, and cost analysis.
- Integrated backend pipelines to ensure data accuracy and real-time updates.
- Applied trauma-informed principles in design (clear labels, color choices, and accessibility).



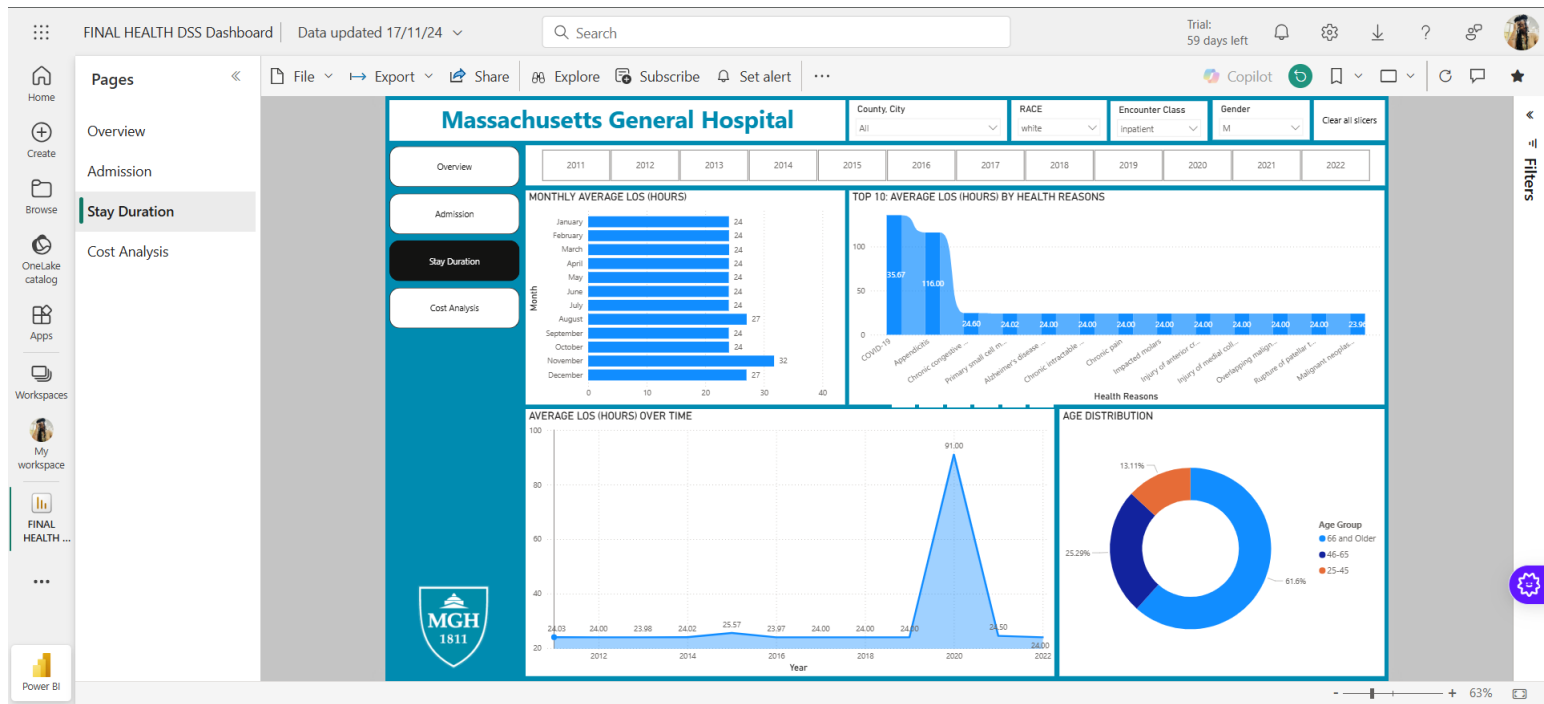
Admission Rate Analysis (Admissions & Readmissions)



Admission Dashboard Filter by Year



Cost Analysis Dashboard (Claim Cost Distribution)



## Stay Duration Dashboard (Length of Stay)

### Impact

- 60% reduction in time needed by faculty to gather insights.
- Improved student research experience with real-time, interactive dashboards.
- Supported community decision-makers in identifying trends for targeted interventions.

### Lessons Learned

- Simplicity matters, visuals must guide, not overwhelm.
- Collaboration across public health + tech ensured the dashboard solved the right problem.
- Product thinking (problem → discovery → execution → impact) was key to adoption.

### Deliverables

- Interactive Dashboard
- Case Study PDF with detailed visuals
- GitHub Repo with project