



DEPI

Health Care in Egypt

Presented by Finally Team



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Project Introduction

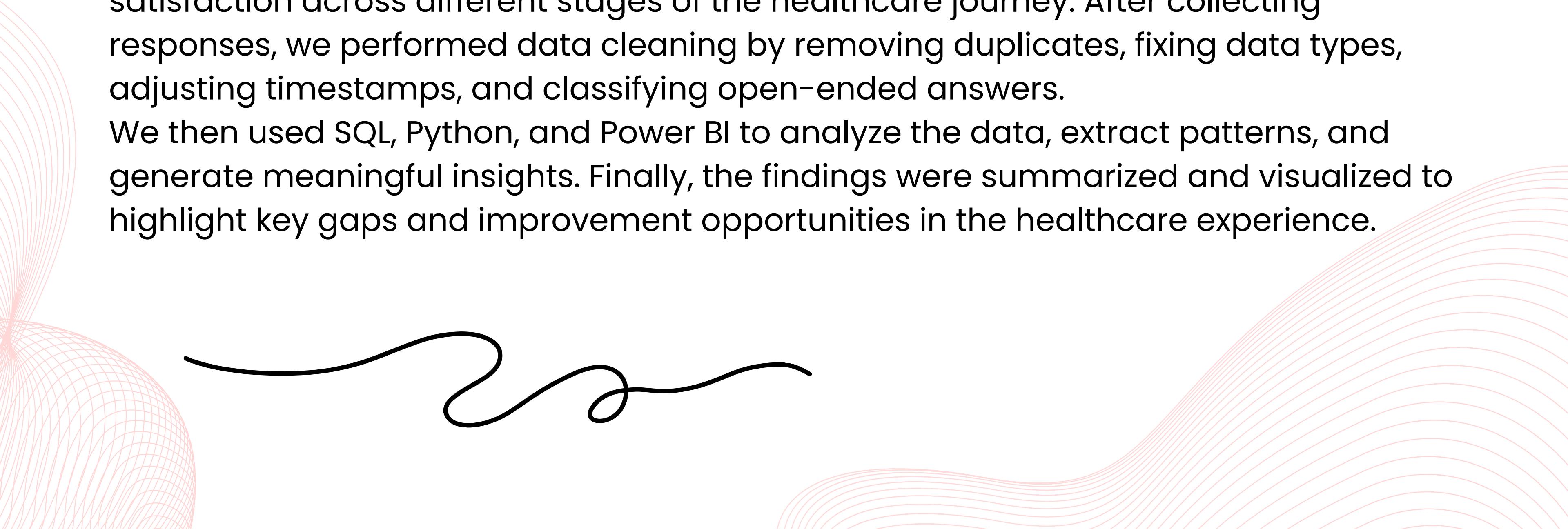
HEALTHCARE IS A CORE PILLAR FOR ANY DEVELOPING COUNTRY. IN EGYPT, PATIENTS OFTEN FACE ISSUES SUCH AS LONG WAITING TIMES, INCONSISTENT SERVICE QUALITY, AND LIMITED COORDINATION INSIDE MEDICAL FACILITIES. BECAUSE THESE CHALLENGES AFFECT THE PATIENT EXPERIENCE DIRECTLY, OUR TEAM CHOSE TO ANALYZE THE HEALTHCARE JOURNEY FROM THE PATIENT'S PERSPECTIVE USING REAL SURVEY DATA. THIS PROJECT AIMS TO HIGHLIGHT THE MAIN GAPS AND UNDERSTAND WHAT NEEDS IMPROVEMENT TO ENHANCE OVERALL HEALTHCARE QUALITY.

Projects Objectives

- Measure overall patient satisfaction across different healthcare services.
- Identify key pain points during the patient journey (booking, waiting, treatment, payment, discharge).
- Evaluate the performance of medical and administrative staff.
- Analyze facility conditions such as cleanliness, comfort, and accessibility.
- Provide data-driven insights to support decision-makers in improving healthcare quality.

Methodology

The project followed a clear and structured methodology. First, we designed a detailed patient-focused survey created through Google Forms to measure satisfaction across different stages of the healthcare journey. After collecting responses, we performed data cleaning by removing duplicates, fixing data types, adjusting timestamps, and classifying open-ended answers. We then used SQL, Python, and Power BI to analyze the data, extract patterns, and generate meaningful insights. Finally, the findings were summarized and visualized to highlight key gaps and improvement opportunities in the healthcare experience.



Data Cleaning

1. Removing Missing Values:

- All incomplete or empty responses—especially in open-ended questions—were removed to ensure the dataset is accurate and free from gaps.

2. Eliminating Duplicate Entries:

- We checked for and removed duplicate records to prevent repeated responses from affecting the analysis.

3. Correcting Data Types:

- Numerical, categorical, and date fields were standardized to their correct formats, making calculations and filtering more reliable.

4. Adjusting Timestamps:

- All timestamps were cleaned and unified into a consistent format to allow proper sorting and time-based analysis.

5. Classifying Open-Ended Responses:

- Text-based answers were categorized into clear themes to convert qualitative feedback into structured, analyzable data.

Analytical Questions & SQL Analysis

Analytical Questions:

- Which factors most affect patient satisfaction?
- How long do patients wait before their appointments?
- How do patients rate facility cleanliness and comfort?
- Is booking a service easy and efficient?
- How well are departments coordinated?

Analytical Questions & SQL Analysis

SQL Analysis:

- Counted patient visits by service type and category.
- Calculated average satisfaction by service, age group, and gender.
- Evaluated nursing and medical staff performance.
- Assessed facility cleanliness, booking ease, payment clarity, and discharge process.
- Identified the most positive and most critical aspects of the patient experience.

Key Insights

- **Department Coordination:** Communication and coordination between departments need improvement.
- **Staff Performance:** Nurses and doctors receive high marks in care and communication, but response speed can be improved.
- **Patient Recommendations:** While most patients would recommend the facility, recurring gaps highlight areas needing immediate attention.
- **Waiting Times:** Long waiting periods significantly reduce overall patient satisfaction.
- **Facility Cleanliness:** Cleanliness levels vary across areas; some departments score below expectations.
- **Booking Process:** Generally rated good, but inconsistencies exist between service types.

Visualizations

Patient Satisfaction by Service Type:

- Shows how satisfied patients were across different healthcare services, helping identify which services need improvement the most.

Impact of Waiting Times:

- Highlights the relationship between waiting times and overall satisfaction, showing which areas or services cause delays that reduce patient experience.

Facility Cleanliness & Coordination:

- Visualizes cleanliness ratings of different areas (waiting rooms, patient rooms, bathrooms) and shows how well departments coordinate for patient care.

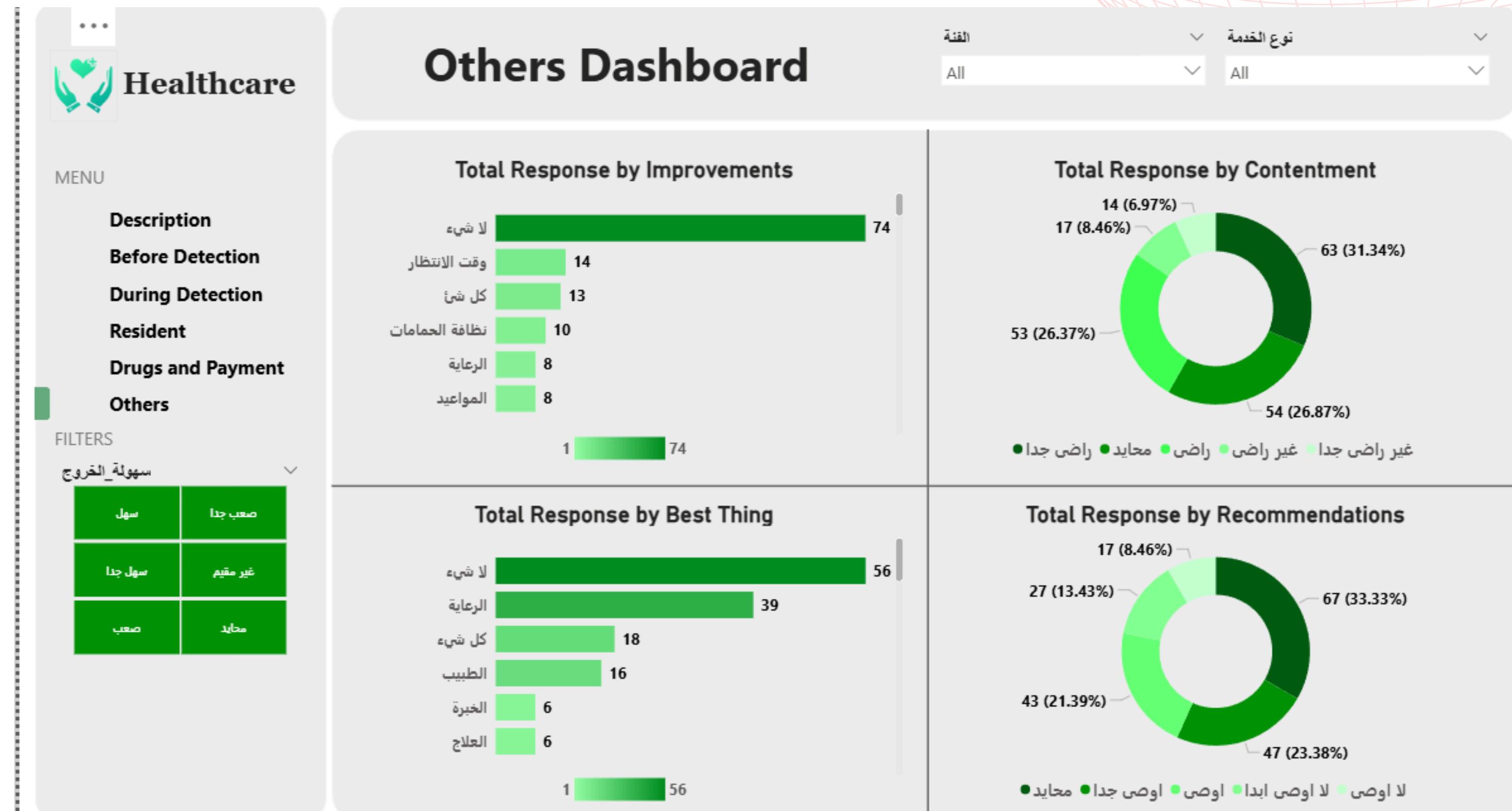
Staff Performance:

- Displays scores for nurses and doctors, including care, communication, empathy, and response times, allowing comparison between different teams.

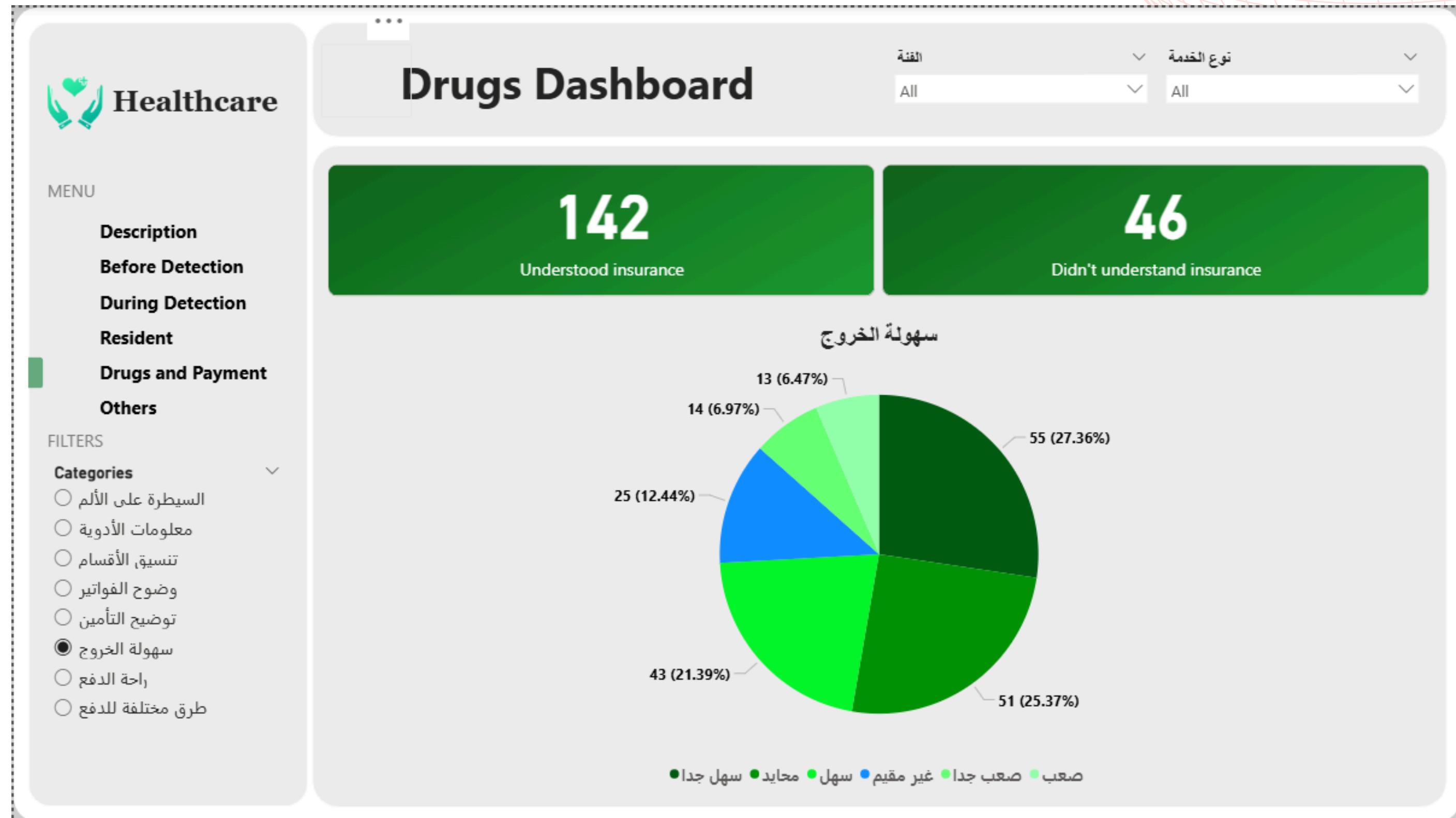
Ease of Booking, Payment, and Discharge:

- Summarizes how patients perceive the efficiency and clarity of administrative processes, identifying bottlenecks and areas needing improvement.

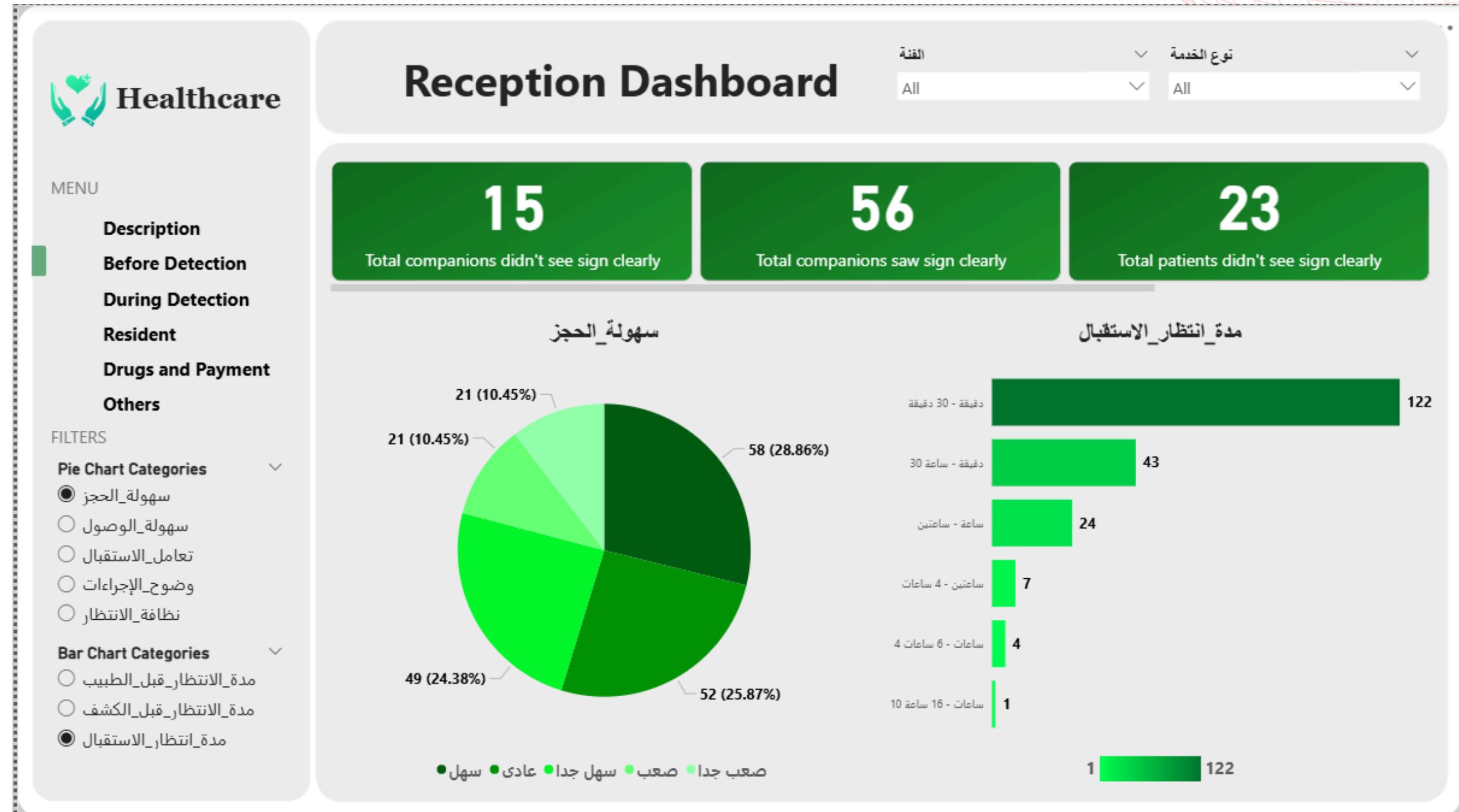
Visualizations

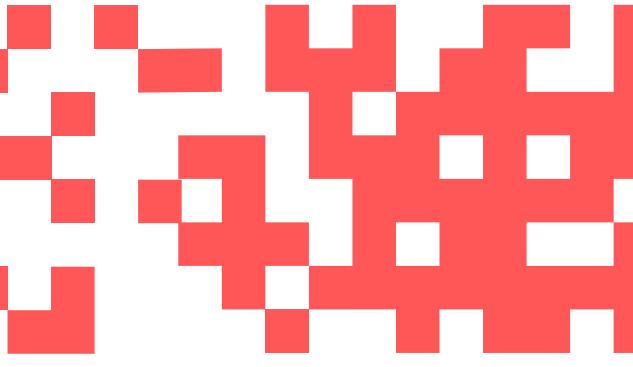


Visualizations



Visualizations





Recommendations

Reduce Waiting Times:

- Implement appointment management systems and optimize patient flow to minimize delays.

Improve Facility Cleanliness:

- Regular monitoring and cleaning schedules to maintain high hygiene standards in all areas.

Enhance Department Coordination:

- Streamline communication between departments to ensure smoother patient journeys.

Invest in Staff Training:

- Continuous training programs for nurses and doctors to improve service quality and patient interaction.

Simplify Booking, Payment, and Discharge Processes:

- Introduce digital systems to make administrative tasks faster, clearer, and more efficient.

Continuous Feedback Collection:

- Regularly collect patient feedback to track improvements and identify emerging issues.

Conclusion

The main goal of this project was to highlight the current gaps in Egypt's healthcare system and take a first step towards improvement using analytical insights. By examining the patient experience—from waiting times and facility conditions to staff performance and administrative processes—we aimed to identify areas that need attention. Ensuring a well-functioning healthcare system is essential not only for the well-being of current citizens but also for future generations. Ultimately, this study emphasizes that data-driven analysis can guide effective decisions, leading to better health services, higher patient satisfaction, and a stronger, healthier nation.



Thank You

Finally team