

Health Data Analytics Dashboard

-Real Time Project Report

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Section:CSE-05

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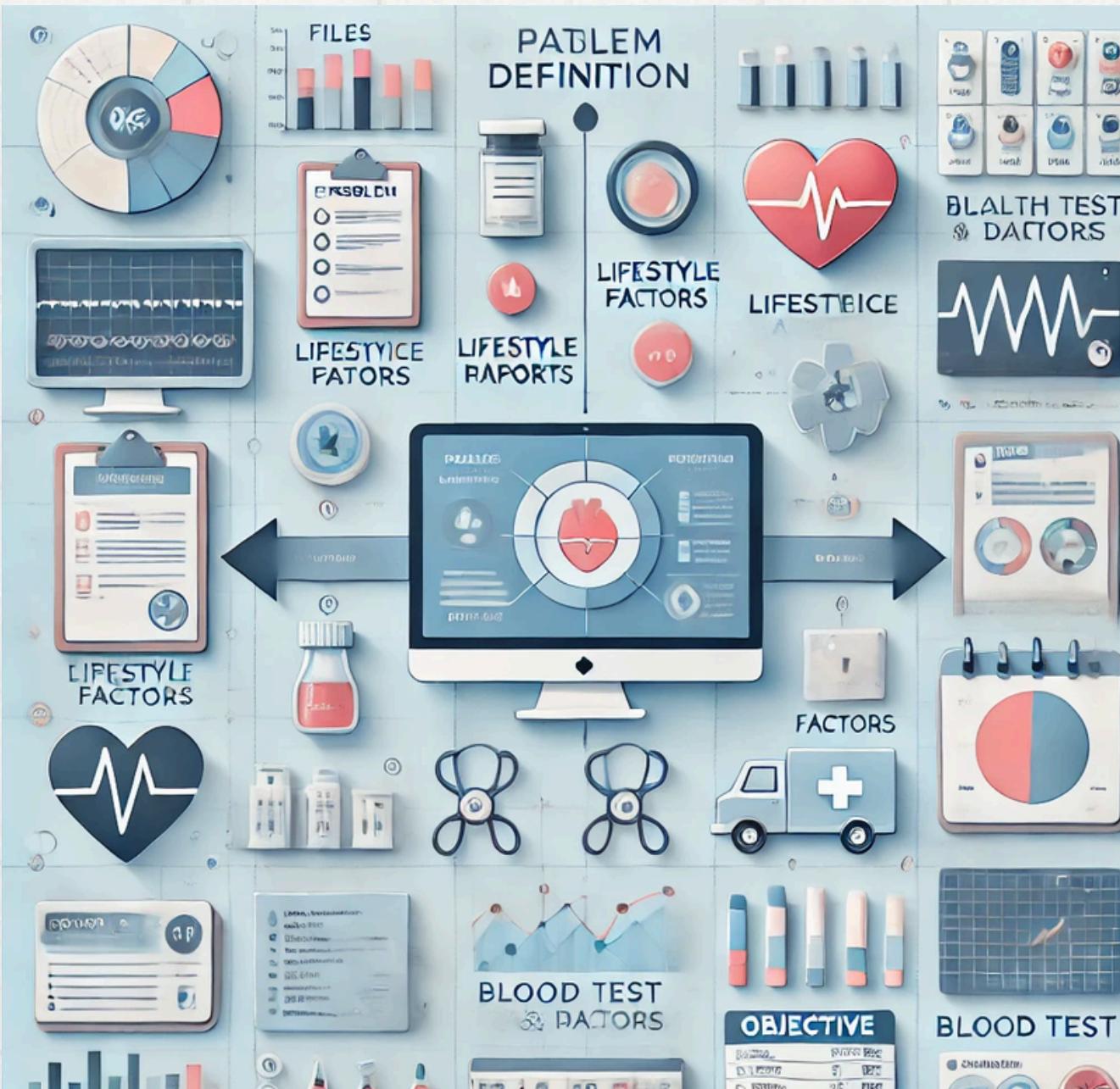
Campus:GNITC(SB)

Introduction to the Project

- The healthcare industry generates large amounts of patient data daily, making it essential to manage and present this information effectively.
- Data visualization in healthcare allows professionals to quickly interpret complex health data, which can improve patient outcomes.
- Objective: To create a dashboard that visually represents critical patient information, allowing healthcare providers to assess patient status and make timely decisions.



Problem Definition & Objective



01.

Problem: Managing and interpreting large volumes of patient data from various sources can be challenging, leading to delayed or incomplete assessments.

02.

Objective: Develop a visual dashboard to display patient metrics like demographics, lifestyle factors, blood test results, and doctor's notes. This will enhance data accessibility and support quick decision-making by healthcare providers.

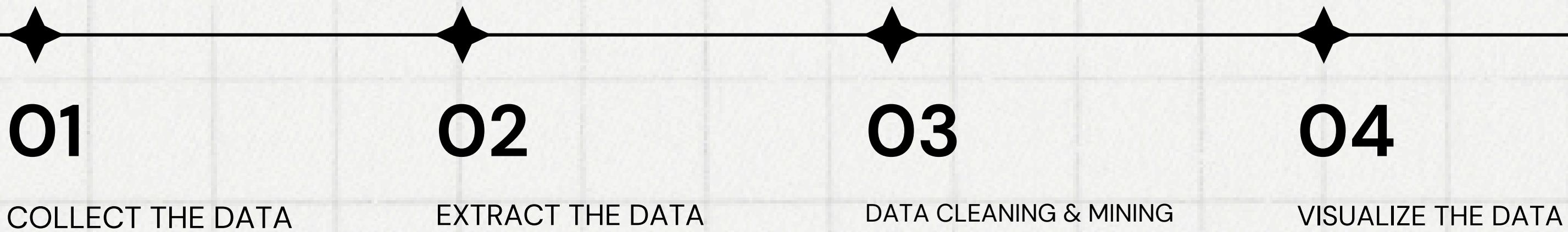
Methodology

- Data Cleaning

- Missing Values: Handled by either imputing averages or removing incomplete records based on importance.
- Data Consistency: Ensured consistency in units, formats, and text labels for easy comparison and visualization.
- Outliers: Identified and reviewed outliers in blood test values to ensure they were either accurate or addressed if they were errors.
- Tools Used: Utilized libraries like Pandas for cleaning and standardizing the data.



Visualization process



Data Visualization Approach



- Visualization Tools: Used Tableau/Power BI for creating visualizations, focusing on clarity, interactivity, and ease of use.
- Design Principles:
 - Clarity: Data presented in a way that is easy to read and interpret.
 - Usability: Layout optimized to ensure healthcare providers can quickly locate and interpret critical information.
 - Accessibility: Focus on ensuring information is accessible and prominent, highlighting key health metrics.
- Goal: Provide healthcare providers with a clear and concise view of patient data for better decision-making.

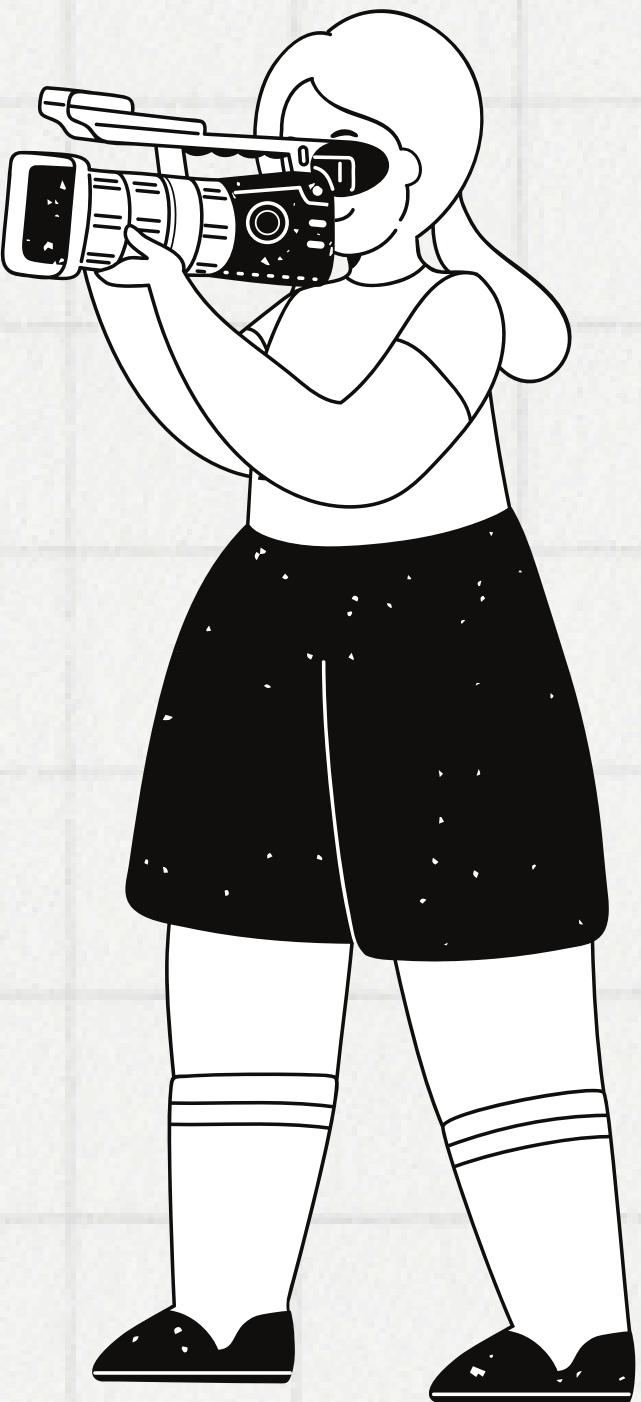
Development & Implementation

- Designing the Layout: Focus on a simple, user-friendly design, ensuring each section is logically arranged.
- Visualization Creation: Developed visuals using a combination of tools (e.g., Tableau, Power BI).
- Interactivity: Some visual elements are interactive, like tooltips for more details on blood report values.
- Testing: Iterative testing for usability, gathering feedback on the layout and data clarity.
- Challenges: Ensuring all critical data points were easily visible without overwhelming the viewer.



Innovation and Originality

- Focus on Visualization: This project uniquely emphasizes clear and concise visualization for healthcare, rather than presenting raw data.
- Immediate Visual Cues: Using icons and color highlights to indicate critical patient information, which aids in quick assessments.
- Enhanced Usability: User-friendly layout tailored for healthcare professionals, allowing them to interpret patient data efficiently.



Conclusion

- Summary: This dashboard provides a streamlined and visual approach to presenting patient health data, enabling quick, informed decision-making.
- Key Benefits:
- Simplifies data interpretation for healthcare providers.
- Highlights critical data points that may require urgent attention.
- Impact: Sets a foundation for enhancing healthcare data management and supports a proactive approach to patient care.



**Thank you
very much!**