

Medical Data Dashboard Project Report

Project Overview

This Medical Data Dashboard provides an in-depth analysis of patient data related to heart health. It visualizes key metrics such as heart rate, systolic and diastolic blood pressure, sugar levels, CK-MB, and troponin levels for a total of 1,319 patients. The dashboard helps medical professionals identify trends and potential risk factors for heart-related issues.

Objectives

- Visualize patient heart health data, including key metrics like heart rate, blood pressure, and sugar levels.
- Segment data by age groups, gender, and condition (positive vs. negative).
- Provide summary statistics such as average, median, and range for all metrics.

Data Source

The dataset includes:

- **Heart Rate**: Patient heart rates ranging from a minimum of 20 bpm to a maximum of 1,111 bpm.
- **Systolic & Diastolic Blood Pressure**: Blood pressure levels with systolic values ranging from 42 to 223 and diastolic values from 38 to 154.
- **Sugar Levels**: Blood sugar levels ranging from a minimum of 35 to a maximum of 541.
- **CK-MB & Troponin**: Cardiac enzymes with CK-MB levels from 0.32 to 300 and Troponin levels from 0.001 to 10.3.

Tools Used

- **Data Visualization Tool**: Tableau (used to create the dashboard).

- **Data Processing**: Excel and SQL (for data cleaning and preparation).

Key Metrics Visualized in the Dashboard

1. **Total Patients**: The dashboard displays data for 1,319 patients.
2. **Average Age**: The average age of patients is 56.19 years, with the data segmented by gender.
3. **Heart Rate**:
 - Average Heart Rate: 78.34 bpm.
 - Median Heart Rate: 74 bpm.
4. **Systolic & Diastolic Blood Pressure**:
 - Systolic: Average of 127.2, Median of 124.
 - Diastolic: Average of 72.27, Median of 72.
5. **Sugar Levels**:
 - Average Sugar: 146.6, Median of 116.
6. **CK-MB & Troponin**:
 - CK-MB: Average of 15.27, ranging from 0.32 to 300.
 - Troponin: Average of 0.361, ranging from 0.001 to 10.3.

Insights and Analysis

- **Heart Rate**: The data shows significant variation in heart rates, with some patients displaying rates as high as 1,111 bpm.
- **Blood Pressure**: Elevated systolic and diastolic values suggest that many patients could be at risk of hypertension-related conditions.
- **Sugar Levels**: A considerable number of patients have high blood sugar levels, indicating a risk of diabetes or other metabolic conditions.
- **CK-MB & Troponin Levels**: High levels of these cardiac enzymes indicate potential heart

damage in some patients.

Conclusion

This dashboard provides medical professionals with a clear overview of patient health, enabling the identification of risk factors and trends that could inform treatment plans.

Medical Data Dashboard:

