Visualization Name: Percentage of Test Result

Description:
This donut chart represents the distribution of patients' test outcomes across three result categories — **Normal, Abnormal,** and **Inconclusive.**

Insights from the chart:

- **Normal Results – 33.36%**
  → Indicates that one-third of patients had test results within the healthy range.
- **Abnormal Results – 33.56%**
  → Slightly higher percentage of patients showed results outside the normal range, suggesting possible health issues that may require further diagnosis or treatment.
- **Inconclusive Results – 33.07%**
  → Nearly one-third of the tests did not produce a clear outcome, possibly due to insufficient data or the need for re-testing.

Purpose:
This visualization helps hospital administrators and doctors quickly assess the **overall quality and accuracy of medical tests** performed. It also provides insight into how many patients may require **follow-up testing or medical attention.**

Chart Type: Donut Chart
Tool Used: Power BI
Data Source: Hospital dataset (CSV)

Visualization Name: Top 5 Doctor

Description:
This horizontal bar chart highlights the **top five doctors** based on the **number of patients they have treated or consulted.** It provides a quick comparison of doctor performance and patient handling capacity within the hospital.

Insights from the chart:

- **Michael S.** ranks **first**, attending the highest number of patients.
- **John Smith** follows closely in second place.
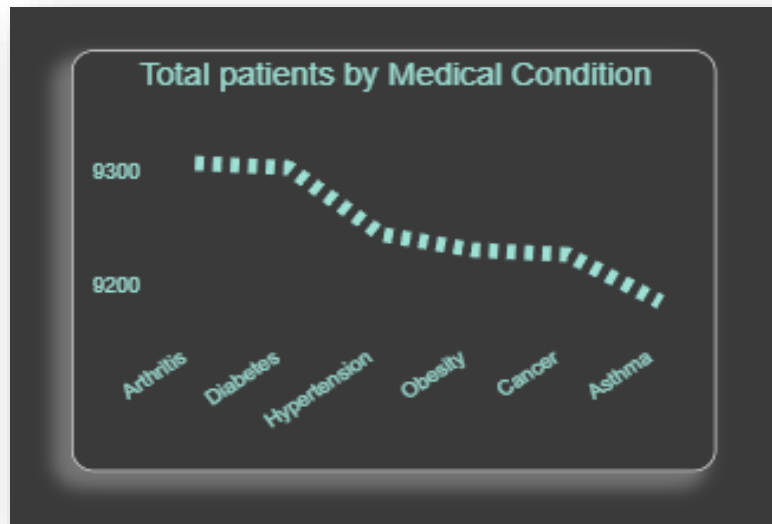- **Robert S., James S.,** and **Michael J.** complete the top five.

Purpose:
This visualization helps hospital management quickly identify **high-performing doctors** who manage large patient volumes or have strong patient engagement. It also assists in balancing workloads and recognizing staff contributions.

Chart Type: Horizontal Bar Chart
Tool Used: Power BI
Data Source: Hospital dataset (CSV)

Visualization Name: Total Patients by Medical Condition

Description:
This line chart illustrates the **number of patients categorized by different medical conditions** such as Arthritis, Diabetes, Hypertension, Obesity, Cancer, and Asthma. It helps analyze which health conditions are most common among hospital patients.

Insights from the chart:

- **Arthritis** and **Diabetes** show the **highest patient counts**, indicating these are major health concerns among the patients analyzed.
- **Hypertension** and **Obesity** have slightly fewer patients but still represent a significant portion.
- **Cancer** and **Asthma** cases are comparatively lower, suggesting either fewer admissions or successful preventive measures.
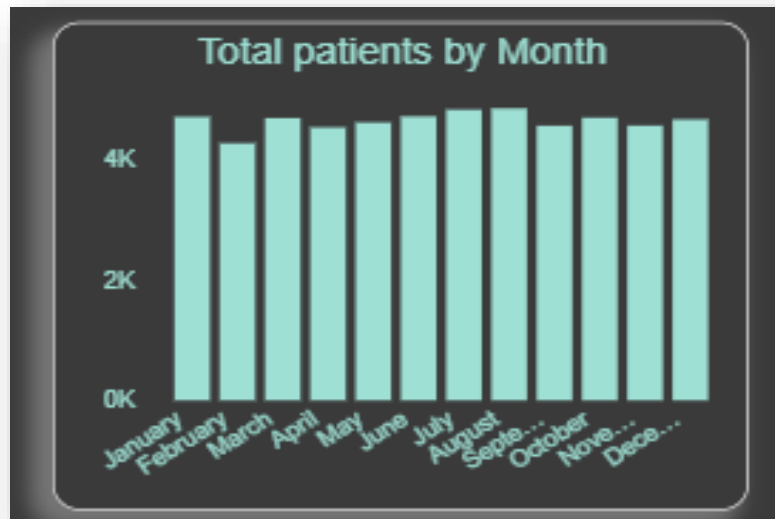
Purpose:
This visualization enables healthcare administrators and analysts to understand **disease distribution** within the hospital. It supports decisions on **resource allocation**, **treatment planning**, and **preventive health strategies**.

Chart Type: Line Chart
Tool Used: Power BI
Data Source: Hospital Dataset (CSV)

Visualization Name: Total Patients by Month

Description:
This bar chart displays the total number of patients recorded each month throughout the year. It provides a month-by-month overview of patient volumes, helping identify patterns or fluctuations in hospital visits over time.

Insights from the Chart:

- Patient numbers remain relatively stable across all months, averaging around 4,000 patients monthly.
- Minor variations may exist, but there are no significant peaks or drops, indicating consistent healthcare demand year-round.
- This steady trend suggests effective patient flow management and balanced hospital operations throughout the year.
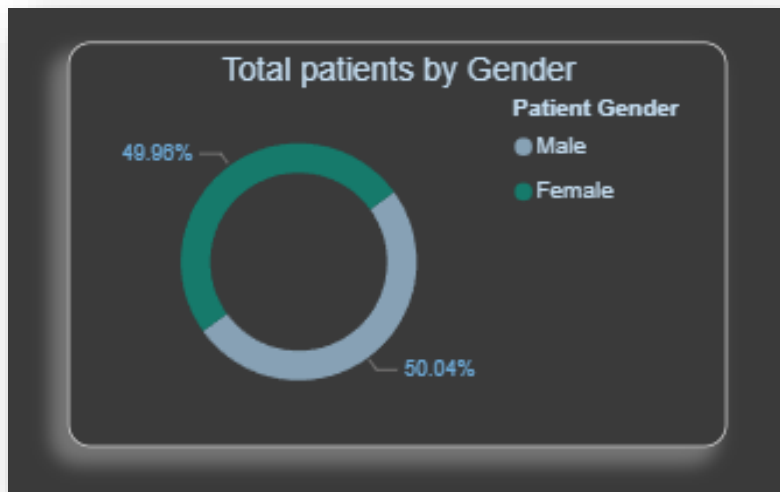
Purpose:
The visualization assists hospital administrators and analysts in monitoring patient volumes across different months. Understanding monthly trends helps with resource allocation, staff scheduling, and forecasting hospital capacity needs

Chart Type: Bar Chart
Tool Used: Power BI
Data Source: Hospital Dataset (CSV)

Visualization Name: Total Patients by Gender

Description:
This donut chart displays the distribution of total patients based on gender, dividing them into two categories — Male and Female. It provides an overview of gender representation among hospital patients, helping assess demographic balance in healthcare services.

Insights from the chart:

- Male patients make up **50.04%** of the total, representing a slightly higher proportion.

- Female patients account for **49.96%**, showing near parity between genders.

- The minimal difference indicates that both genders access hospital services almost equally, suggesting balanced healthcare reach and inclusivity.
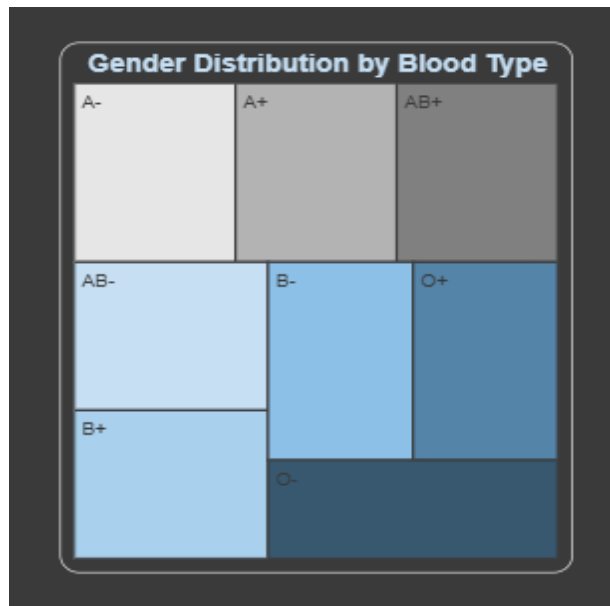
Purpose:
This visualization helps healthcare administrators and analysts understand the gender distribution of patients. Such insights support gender-sensitive healthcare planning, equitable policy development, and better resource allocation across patient groups.

Chart Type: Donut Chart
Tool Used: Power BI
Data Source: Hospital Dataset (CSV)

Visualization Name: Gender Distribution by Blood Type

Description:
This treemap visualizes the distribution of patients by **blood type**, categorized by gender. Each block represents a specific blood type (such as A+, O−, B+, etc.), and the size of each block reflects the number of patients with that blood type. The chart helps analyze blood type prevalence within the hospital's patient population.

Insights from the chart:

- Blood types such as **O− and O+** appear more prominent, indicating a higher number of patients in these categories.

- Blood types **A+ and B−** also show moderate representation among patients.

- Rare blood types like **AB− and AB+** occupy smaller areas, reflecting their naturally lower occurrence.

- The visualization provides an at-a-glance understanding of how blood types are distributed across the patient population.
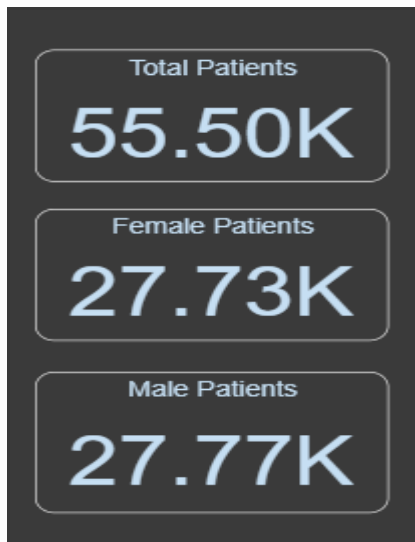
Purpose:
This visualization helps hospital staff and administrators understand blood type distribution among patients. It supports effective blood bank management, emergency preparedness, and donor-matching strategies within the healthcare system.

Chart Type: Treemap
Tool Used: Power BI
Data Source: Hospital Dataset (CSV)

Visualization Name: Total Patients Overview

Description:
This KPI (Key Performance Indicator) dashboard summarizes the overall count of hospital patients, categorized by gender. It displays the total number of patients, along with separate counts for male and female patients, providing a quick snapshot of patient demographics.

Insights from the chart:
• The **total number of patients** is **55.50K**, indicating the hospital's overall patient volume.
• **Female patients** account for **27.73K**, representing nearly half of the total population.
• **Male patients** slightly outnumber females at **27.77K**, showing a nearly balanced gender ratio.
•The minimal difference between male and female counts reflects equitable access to healthcare services.

Purpose:
This visualization provides hospital administrators and analysts with a concise overview of patient distribution by gender. It helps in monitoring total patient counts, identifying demographic balance, and supporting data-driven decision-making for hospital operations and planning.

Chart Type: Card Visualization
Tool Used: Power BI
Data Source: Hospital Dataset (CSV)