

Hospital Management Dashboard Project

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Abstract: *The Hospital Management Dashboard Project aims to simplify and improve how hospital data is managed, analyzed, and presented. In hospitals, a lot of information such as patient details, doctor performance, bed availability, treatment costs, and hospital revenue needs to be handled daily. Managing all this data manually can be time-consuming and confusing. To solve this problem, this project uses Power BI and Excel to create a smart and interactive dashboard that shows all important information in one place*

Keywords: *Hospital Management Dashboard.*

I. INTRODUCTION

Edverciity by Livetechskills is a leading IT development and training center based in Nagpur, Maharashtra. The organization specializes in providing industry-relevant training and internships in emerging technologies such as Data Science, Artificial Intelligence, Full Stack Development, Cloud Computing, Java, Python, and more. Their mission is to bridge the gap between academic learning and industry requirements by offering hands-on experience and real-world projects.

II. METHODOLOGY

The methodology in data analytics outlines the systematic approach followed to collect, process, analyze, and visualize data to derive actionable insights. In the context of the Hospital Management Dashboard (Healthcare Dashboard) project, the methodology involves several key stages:

1. Data Collection: Gather hospital data (patients, doctors, billing, etc.).
2. Data Cleaning: Remove errors and format data properly.
3. Analysis: Use Python or BI tools to analyze key metrics.
4. Dashboard Design: Create visual charts and summaries.
5. Testing & Deployment: Verify accuracy and deploy for use.

III. RESULTS AND DISCUSSION

A. The Hospital Management Dashboard successfully displays all key information in one place, making hospital operations easier to monitor and manage. The dashboard includes important metrics such as the total number of patients, available doctors, occupied beds, revenue, and appointment trends.

B. From the visualizations, it was observed that the outpatient department (OPD) had the highest number of patient visits compared to other departments. The monthly revenue chart showed consistent income growth, while the doctor performance graph highlighted which doctors handled the most patients. The bed occupancy report helped identify peak hours and periods of high patient load.

C. Overall, the dashboard provided clear and interactive insights that helped in quick decision-making, better resource management, and improved hospital efficiency. It demonstrated how Power BI can turn raw hospital data into meaningful visuals that support effective hospital administration.



Figures

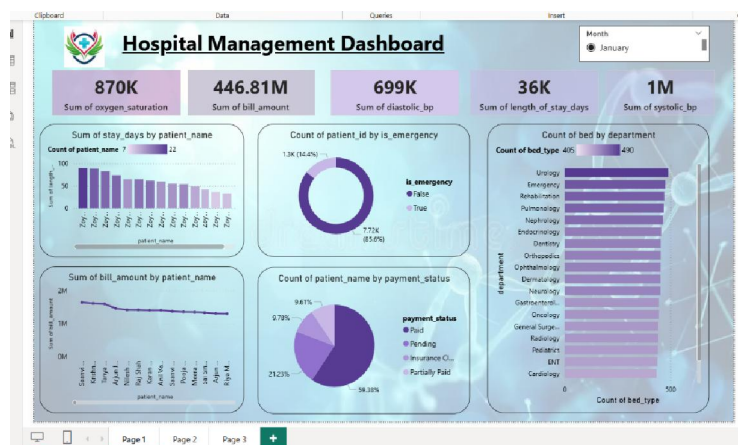


Figure 1: Hospital Management Dashboard Overview

This dashboard shows key hospital performance indicators such as total oxygen saturation (870K), bill amount (446.81M), diastolic BP (699K), length of stay (36K), and systolic BP (1M).

It includes visuals showing patient stay days, bill amount by patient, emergency cases, payment status, and bed count by department.

These insights help in understanding hospital workload, patient payments, and department utilization efficiently.

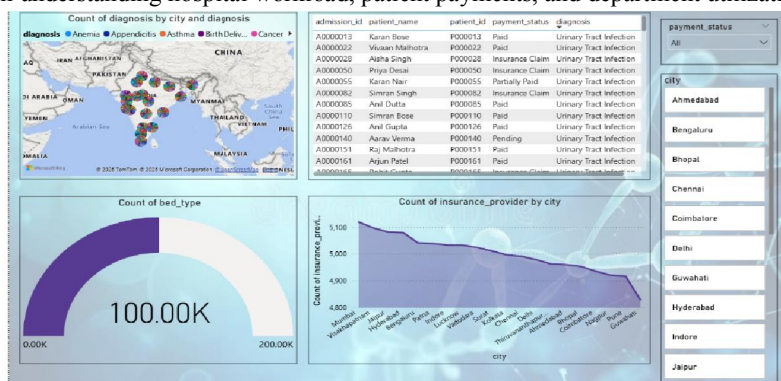


Figure 2: Diagnosis and City-wise Analysis

This page presents the geographical distribution of diagnoses across various Indian cities using a map visualization.

It also includes charts for bed type count, insurance providers by city, and a table showing patient name, ID, payment status, and diagnosis.

This helps track disease trends regionally, monitor payment patterns, and identify areas with higher hospital activity.

This figure illustrates multiple analytical insights including customer feedback by stock availability, top-selling and least-sold products, category-wise sales comparison, and total purchase amount by payment methods. It provides a clear overview of consumer preferences and purchase behaviors across different product categories and payment options on Amazon.



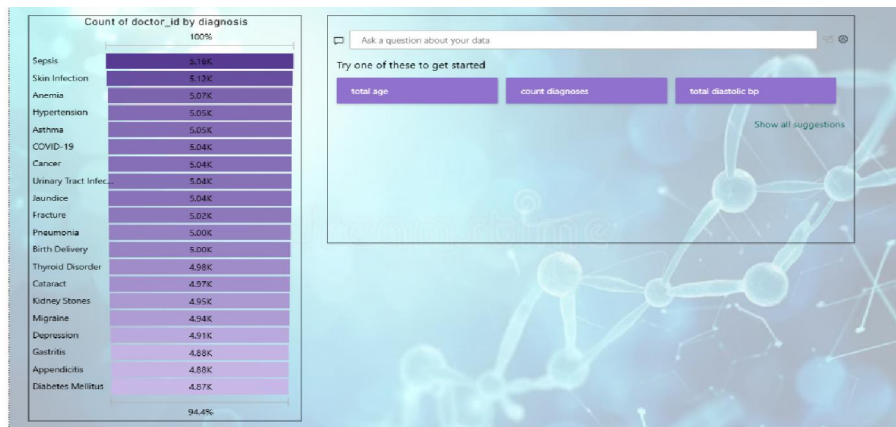


Figure 3: Doctor and Diagnosis Analysis

This section displays the count of doctors by diagnosis type, showing which diseases or conditions are most frequently handled.

Common diagnoses like Sepsis, Skin Infection, Anemia, Hypertension, and Asthma appear prominently.

It also features a Q&A section for interactive insights, allowing users to query data (like total age or diagnosis count).

This figure helps evaluate doctor workload and the frequency of specific diseases within the hospital.

IV. CONCLUSION

The Hospital Management Dashboard helps to easily monitor patient data, doctor performance, and hospital activities. It provides clear visual insights for better decision-making, improved efficiency, and effective hospital management using Power BI and Excel..

V. ACKNOWLEDGMENT

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