

# **Hospital Management Dashboard using SQL and Power BI**

## **Project Report**

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### **Abstract**

This project demonstrates a hospital management analysis system using SQL and Power BI. Data was staged in a Bronze layer, cleaned in a Silver layer, and finally visualized in Power BI. The approach improves data quality and provides insights into patients, doctors, appointments, and treatments.

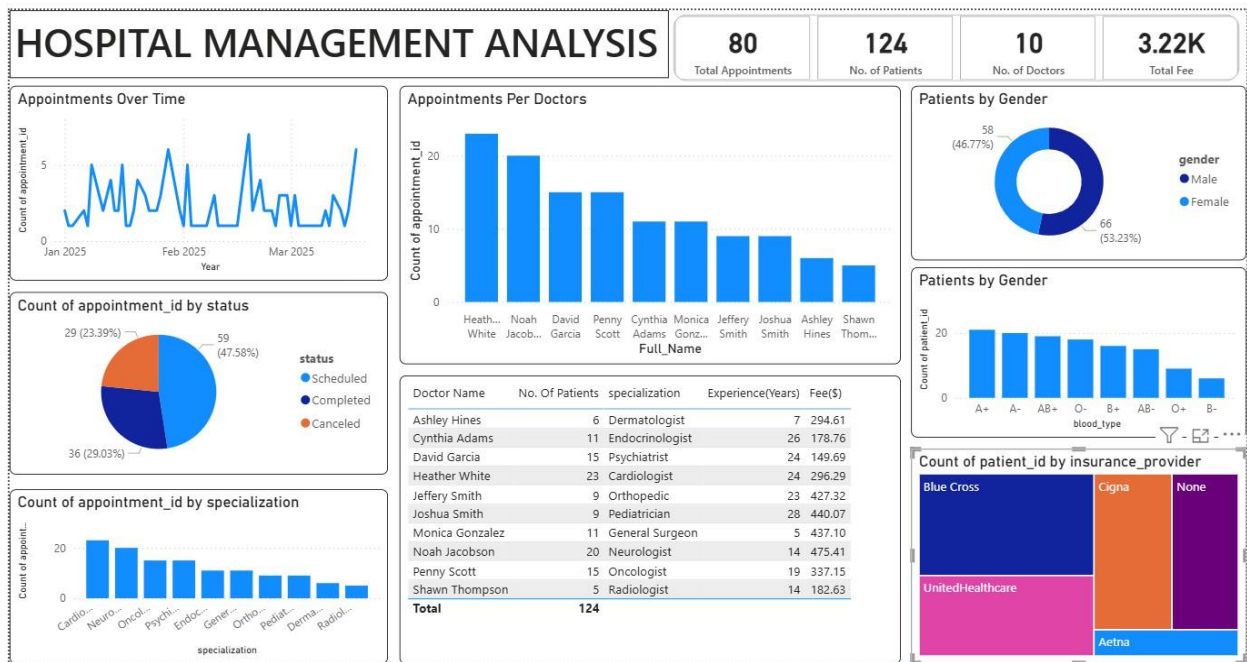
### **Methodology & Implementation**

SQL was used for schema design, data validation, and transformation from Bronze to Silver layers. Cleaning involved trimming spaces, removing duplicates, validating dates, and standardizing fields. Cleaned Silver layer data was imported into Power BI, where relationships were defined and KPIs were built. The Power BI dashboard highlights patient demographics, appointment trends, and doctor performance.

### **Results & Conclusion**

The dashboard provides actionable insights such as patient gender distribution, appointment completion rates, doctor specialization analysis, and insurance coverage. By combining SQL ETL processes with Power BI visualization, hospital administrators can make better data-driven decisions to optimize patient care and resource allocation.

# Hospital Management Dashboard



## Key Insights from Dashboard

- Total of 124 patients, 10 doctors, and 80 appointments analyzed.
- Gender split shows females (53.23%) slightly higher than males (46.77%).
- Most appointments are scheduled (47.58%), with 29.03% completed and 23.39% cancelled.
- Cardiologists and Neurologists received the highest appointments, showing demand in those areas.
- Heather White (Cardiologist) and Noah Jacobson (Neurologist) had the highest patient counts.
- Common insurance providers include Blue Cross, UnitedHealthcare, and Aetna, with some patients lacking coverage.

These insights help hospital management allocate resources effectively and identify improvement areas.