■ Bright Coffee Shop Sales Analysis Project

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Tools Used: Snowflake, SQL, Power BI, Excel, GitHub

Duration: January – June 2023

Project Type: Business Insights & Dashboard Reporting

1. Introduction

This project focuses on analyzing sales performance data from Bright Coffee Shop, a small chain of coffee shops operating across multiple locations. The aim was to transform raw transaction data into actionable insights that help business leaders understand sales trends, customer behavior, and performance variations across time, products, and stores.

2. Project Objective

The objective was to develop a data analysis workflow and interactive dashboard to help the CEO and management team identify top-performing products, track month-over-month growth, understand customer traffic patterns, and make data-driven decisions to improve operations and revenue.

3. Tools and Technologies

Snowflake was used for data processing and SQL analysis, Power BI for dashboard creation, Excel for data formatting, and GitHub for version control and documentation.

4. Data Pipeline & Architecture

1. Source Data: Coffee shop transactions in CSV format.
2. ETL Process in Snowflake: Cleaning data, calculating total_amount, creating time buckets.
3. Storage: Processed tables in Snowflake.
4. Visualization: Power BI dashboard.
5. Output: Interactive business insights dashboard.

5. Key SQL Transformations

Key transformations included revenue per transaction, revenue by store, time bucket creation, and month-over-month (MoM) growth calculations using SQL window functions.

6. Power BI Dashboard Highlights

The dashboard includes KPI cards, MoM growth indicators, sales heatmaps, and filters by product, store, and category. February 2023 showed a decline in KPIs, while June 2023 was the peak month. Morning and afternoon hours generated the highest sales.

7. Recommendations

- Run February promotions to mitigate seasonal dips.
- Stock more coffee and bakery items during morning rush hours.

- Optimize staffing using the sales heatmap.
- Continue MoM tracking to identify trends early.

8. Key Learnings

- Strengthened SQL and Snowflake transformation skills.
- Gained experience with DAX and Power BI visuals.
- Improved data storytelling and presentation skills.

9. Next Steps

- Automate daily report generation.
- Integrate multiple store branches.
- Add customer segmentation for loyalty insights.

10. Conclusion

This project demonstrates how SQL, data visualization, and storytelling can turn raw sales data into actionable insights. By leveraging Power BI and Snowflake, Bright Coffee Shop can monitor trends, optimize operations, and make informed business decisions.