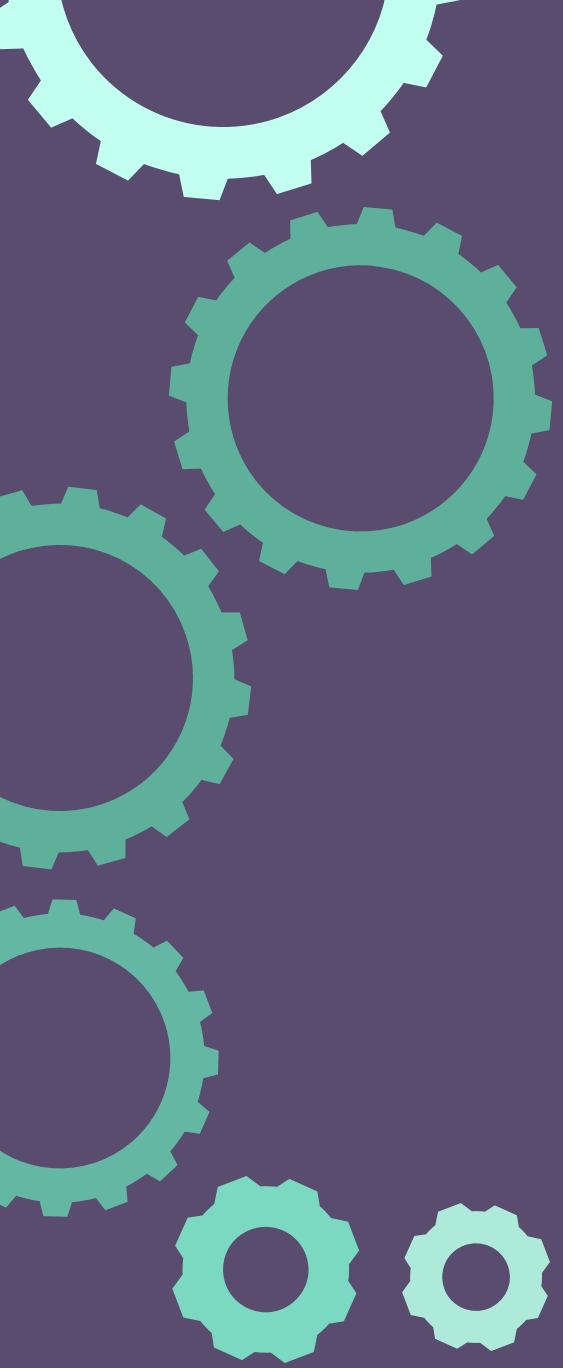


Walmart Sales Analysis with SQL

by Rahul Wagh

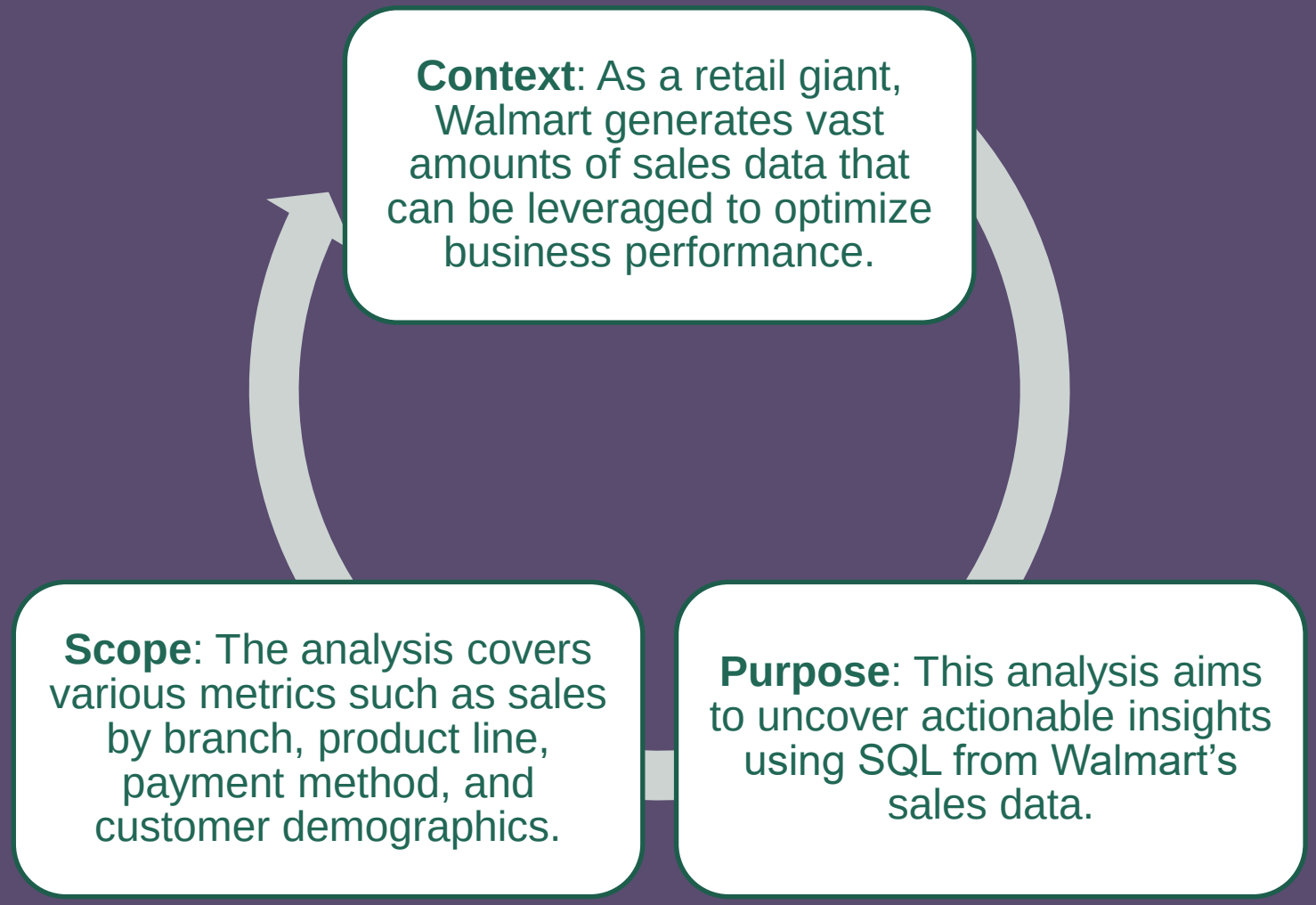
Abstract

Objective: To extract meaningful insights from Walmart's sales data using SQL queries to inform sales strategies and decision-making.

Methodology: SQL queries were employed to analyze various aspects of sales, including total sales, gross income, product performance, and customer behaviour.

Key Findings: Identification of top-performing branches and product lines, detailed analysis of sales trends, and profiling of customer segments.

Introduction



Data Overview

Dataset: 15 columns, including Invoice_ID, Branch, City, Customer Type, Gender, Product Line, Unit Price, Quantity, Total, Date, Time, Payment Method, COGS, Gross Income, and Rating.

Source: Walmart sales transactions across multiple branches.

Tools: SQL for querying the data.

Data Preparation

Data cleaning and formatting.

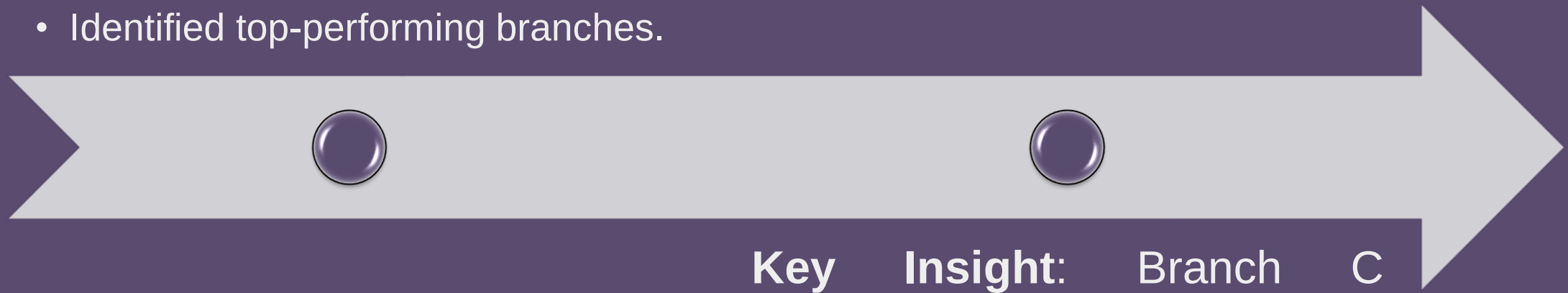
Feature engineering: Added columns for Time_of_the_day, Day, and Month.

Date format standardization for consistency in analysis

Sales by Branch

Analysis:

- Retrieved all sales transactions by branch.
- Identified top-performing branches.



Key Insight: Branch C generated the highest sales, indicating strong performance

Product Line Analysis

Analysis:

- Calculated total sales for each product line.
- Identified most and least successful product categories.

Key Insight: The Food and Beverages category led in sales, while Health and Beauty lagged.

Payment Method Analysis

Analysis:

Examined sales transactions by payment method.

Analyzed customer preferences for cash, credit card, and electronic payments.

Key Insight: Cash was the most preferred payment method, indicating a customer trend towards traditional payment modes.

Gross Income by City

Analysis:

- Calculated total gross income generated in each city.
- Identified cities with the highest profitability.

Key Insight: City Naypyitaw contributed the most to gross income, highlighting its economic significance.

Customer Rating Analysis

Analysis

Calculate the average customer rating for each branch.

Correlated customer satisfaction with sales performance.

Key Insight: Higher customer ratings were observed in branches with better sales, suggesting a link between customer satisfaction and revenue.

Sales Trend Over Time

Analysis:

- Analyzed monthly sales and gross income trends.
- Identified seasonal patterns and peaks.

Key Insight: Sales peaked in January, likely due to holiday shopping.

Weekend vs. Weekday Sales

Analysis

Compared sales transactions between weekends and weekdays.

Examined differences in customer behaviour.

Key Insight: Weekend sales were higher, suggesting increased shopping activity during these days.

High-Value Transactions

Analysis:

- Identified transactions with totals above the average.
- Analyzed contributing factors to high-value purchases.

Key Insight: High-value transactions were more common in specific branches and product lines.

Conclusion

Summary: The analysis provided deep insights into Walmart's sales performance, highlighting top-performing branches, product lines, and customer behaviour trends.

Impact: These findings can guide Walmart's inventory management, marketing strategies, and customer engagement efforts.

Future Tasks

Further Analysis

Data Collection: Continue collecting and analyzing data for ongoing optimization.

Conduct deeper analysis of customer segments to personalize marketing.

Explore the impact of promotions and discounts on sales.

Integrate more advanced analytics like predictive modelling for sales forecasting.

Thank You….