Walmart Sales Analysis

Data Analyst: Rhom Joshua Garcia

Client/Sponsor: Walmart Branch Operations & Sales Management

Purpose:
This project aims to analyze Walmart's sales data to uncover insights about branch performance, customer purchasing behavior, and profitability trends. The goal is to provide data-driven recommendations that will help the business improve sales, enhance customer satisfaction, optimize inventory allocation, and identify high-margin opportunities.

Scope / Major Project Activities:

ACTIVITY	DESCRIPTION
Data Cleaning and Preparation	Format numerical fields (unit price, profit margin), parse dates/times, handle missing or inconsistent data, and ensure dataset is analysis-ready.
Exploratory Data Analysis (EDA)	Perform initial descriptive analysis to understand distributions, trends, and anomalies in sales, ratings, and profit margins.
Sales Performance Analysis	Evaluate revenue, quantity sold, and profit margin by city, branch, product category, and time period.
Customer Behavior Analysis	Investigate patterns in payment method usage, spending habits, and ratings across different locations and product categories.
Profitability & Category Analysis	Identify high-margin products and branches, and determine factors that drive higher profitability.

Visualization & Dashboard Development	Create interactive dashboards to display insights in a user-friendly way.
Insights and Recommendations	Summarize findings and provide actionable business recommendations to improve sales strategy and operations.

This project does not include:

- Predictive modeling or forecasting of future sales.
- Integration with live transactional databases.
- Operational implementation of recommendations.

Deliverables:

- Clean, well-documented sales dataset ready for analysis.
- EDA summary report highlighting key trends and patterns.
- Visual dashboards showing sales performance, customer behavior, and profitability metrics.
- Final insights and recommendations report for decision-makers.

Schedule Overview / Major Milestones:

Milestone	Expected Completion Date	Description/Details
Data Cleaning and Preparation Completed	Day 1 – [Aug 11, 2025]	Dataset cleaned, all columns correctly formatted, missing data handled, date/time parsed.
EDA Completed	Day 2 – [Aug 12, 2025]	Summary statistics created, initial trends identified, anomalies noted.
Sales Performance Analysis Completed	Day 3 – [Aug 13, 2025]	Revenue, quantity sold, and margins analyzed by city, branch, category, and time period.
Customer Behavior Analysis Completed	Day 4 – [Aug 14, 2025]	Payment preferences, rating patterns, and spending habits evaluated.
Profitability & Category Analysis Completed	Day 5 – [Aug 15, 2025]	High-margin products and branches identified, correlations between price, quantity, and margin explored.
Dashboard Created	Day 6 – [Aug 16, 2025]	Interactive dashboard designed with filters and drill-down

		capabilities.
Final Report & Recommendations Completed	Day 7 – [Aug 17, 2025]	Full project write-up with insights, visuals, and business recommendations delivered.

*Estimated date for completion: August 17, 2025