

INTERNAL MEMO

TO: Junior Data Analyst

FROM: Head of Data & Business Intelligence

DATE: November 24, 2025

SUBJECT: URGENT: Retail Sales Performance & Profitability Investigation

Dear Analyst,

We are currently reviewing the performance of our retail business following noticeable fluctuations in revenue, customer behavior, and product profitability across multiple categories.

The Executive Team has raised concerns that while sales volume appears stable, **profit margins and customer value may be underperforming**. Additionally, we lack clarity on **who our most valuable customers are, which products truly drive profit, and when sales peak during the year**.

To address this, we have exported a **raw transactional dataset** containing customer demographics, sales details, product categories, pricing, and cost data.

Your task is to **build a Sales Performance & Customer Insights Report using SQL** that answers the following critical business problems.

BUSINESS QUESTIONS TO ADDRESS

1. Are We Actually Making Profitable Sales?

Despite steady revenue, Finance suspects that some products generate high sales but low profit.

The Problem:

We need to identify whether our revenue growth is translating into real profit or being eroded by high costs.

2. Which Product Categories Deserve More Investment?

The marketing budget is limited, and leadership wants to invest only in categories that truly perform.

The Problem:

We need to determine whether categories with high sales volume also deliver strong profitability.

3. Who Are Our Most Valuable Customers?

Customer acquisition costs are rising, and retention is now a priority.

The Problem:

We do not know which customers drive the most revenue and repeat purchases.

4. How Do Customer Demographics Affect Sales?

Sales teams suspect that age and gender influence purchasing behavior.

The Problem:

We need to tailor promotions and product offerings to the right demographic groups.

5. When Do We Actually Make the Most Money?

Operational teams need insights to optimize staffing and inventory.

The Problem:

We lack clarity on sales trends over time.

6. Are Customers Buying in Bulk or Small Quantities?

Inventory planning depends on understanding transaction behavior.

The Problem:

We need to determine whether customers typically make bulk purchases or small, frequent ones.

Get to work!!!

Best Regards,

Head of Data & Business Intelligence

Mr. Smith Johnson

COLUMN DEFINITIONS

1. Transaction & Customer Information

- transactions_id: Unique identifier for each transaction
- customer_id: Unique identifier for each customer
- gender: Gender of the customer
- age: Age of the customer

2. Sales & Product Information

- category: Product category (e.g., Clothing, Beauty, Electronics)
- quantity: Number of items purchased
- price_per_unit: Price per single unit
- total_sale: Total value of the transaction

3. Cost Information

- cogs: Cost of Goods Sold for the transaction
- Time Information
- sale_date: Date of the transaction
- sale_time: Time the transaction occurred