

Retail Business Performance & Profitability Analysis

Objective

Analyze transactional retail data to:

- Identify profit-draining product categories
 - Optimize inventory turnover
 - Detect seasonal product behavior
 - Provide strategic suggestions for slow-moving and overstocked items
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Tools Used

- SQL Server Management Studio (SSMS)
 - Python (Pandas, Seaborn)
 - Power BI
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Key Visuals

1 Monthly Sales Trend (Line Chart)

Displays revenue trends over time, revealing peak sales periods and seasonal dips.

2 Profit Margin % by Product Category (Bar Chart)

Shows that Clothing had the highest profit margin %, followed by Electronics and Beauty.

3 Inventory Turnover by Product Category (Bar Chart)

Highlights Electronics as having the highest inventory turnover, indicating efficient stock movement.

4 Gender-wise Spending (Pie Chart)

Spending was nearly evenly split between Male and Female customers, with both contributing significantly to revenue.

Strategic Suggestions

- Focus on promoting **Clothing** category due to strong profit margins.

- Address overstocking in **Beauty** category with discounts and bundles.
 - Ensure **Electronics** inventory meets demand to prevent stockouts.
 - Align promotions with high-sales months to maximize impact.
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Deliverables

- SQL file: profitability_inventory.sql
 - Power BI file: retail_business_dashboard.pbix
 - PDF report: This document
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