



Unlocking Customer Behavior

Analyzing shopping data to understand purchase patterns and optimize retail strategies.

Project Overview

Goal

Understand customer behavior across groups, products, and channels.

Focus Areas

Discounts, reviews, seasonal trends, and payment preferences.

Impact

Improve engagement, marketing, and product strategies for sales growth and loyalty.



Dataset Summary

3900

18

Rows

Columns

Customer shopping records.

Detailed customer and transaction data.

Includes customer details, product info, transaction specifics, and behavior indicators for comprehensive analysis.



Exploratory Data Analysis (Python)

01

Data Loading

Used pandas to load and review initial records, confirming data integrity.

02

Shape & Structure

Checked dataset size and column data types for clarity and cleaning needs.

03

Missing Values

Identified null values to ensure data quality before analysis.

04

Descriptive Statistics

Summarized numerical columns to understand data spread and outliers.



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Key Insights from SQL Analysis

1

Revenue by Gender

Compared total revenue generated by male and female customers.

2

High-Spending Discount Users

Identified customers using discounts but spending above average.

3

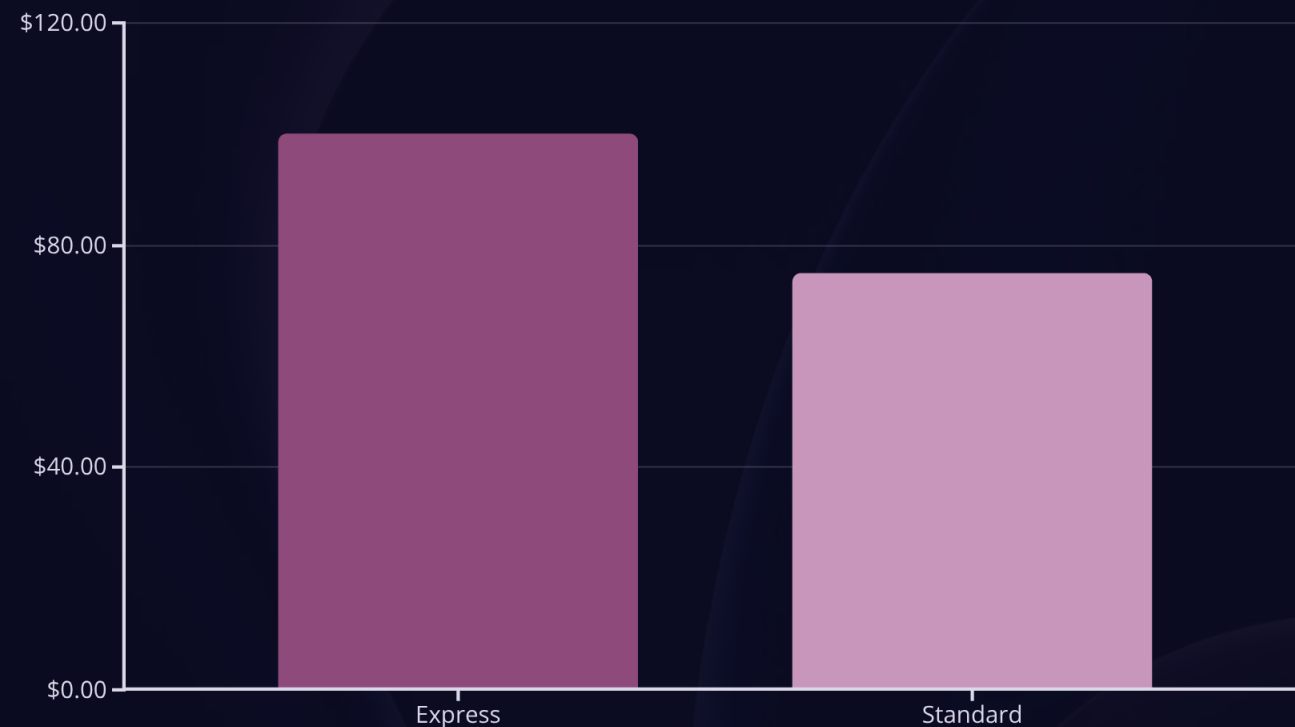
Top-Rated Products

Found the top 5 products with the highest average review ratings.

Shipping & Subscription Impact

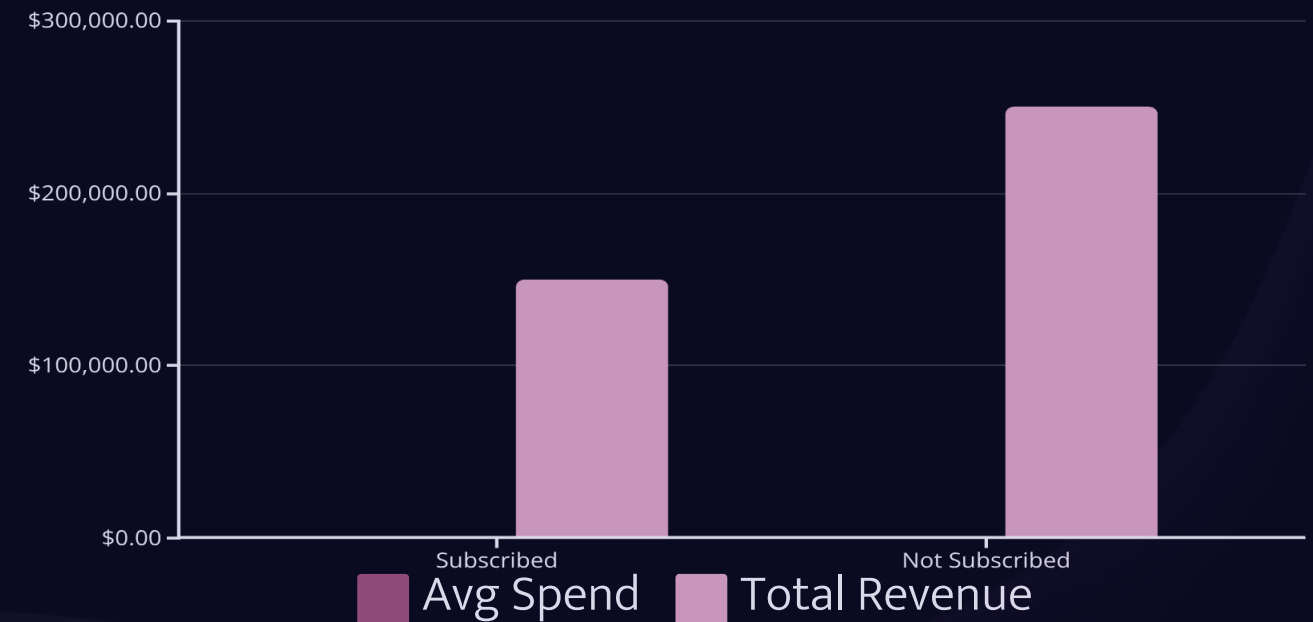
Shipping Type Spend

Average purchase amount compared between Standard and Express shipping options.



Subscription Impact

Average spending and total revenue for subscribed vs. non-subscribed customers.



Customer Segmentation



Segmenting customers helps tailor marketing efforts and loyalty programs effectively.

Product Performance & Age Group Revenue

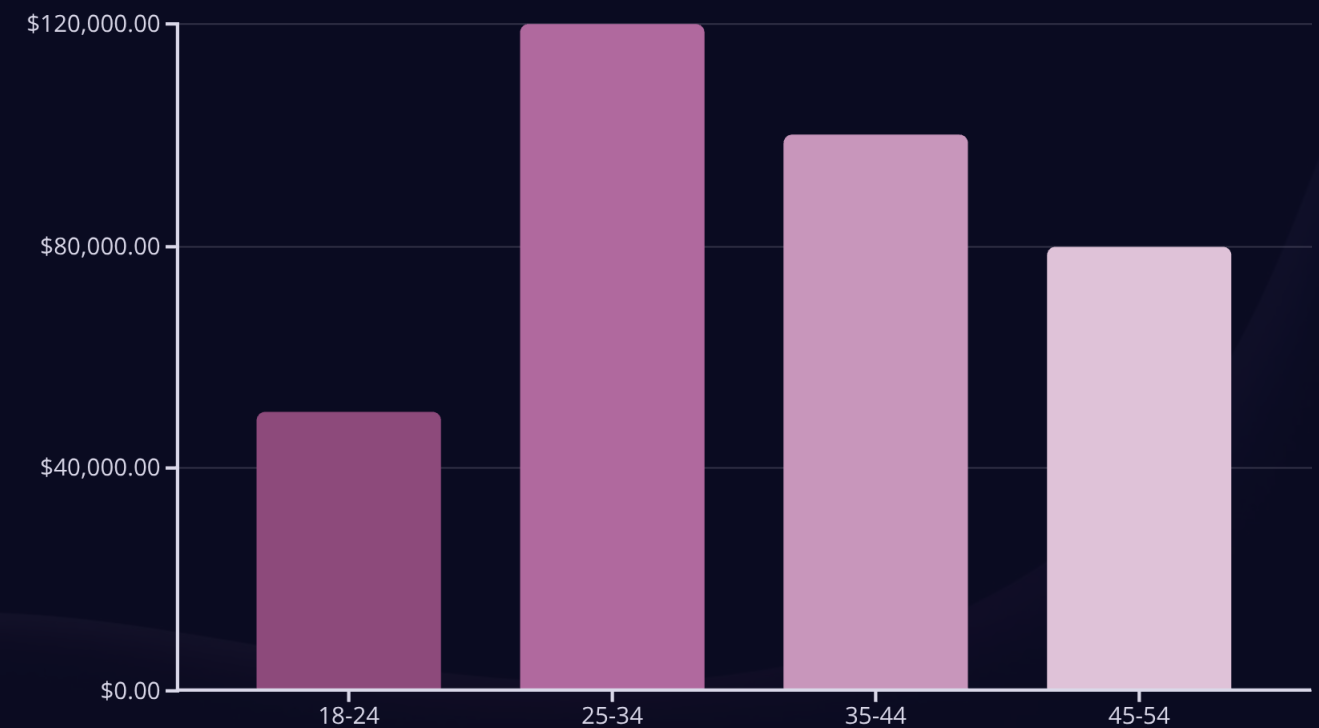
Category Best Sellers

Top 4 most purchased products within each product category identified.

- Accessories
- Clothing
- Footwear
- Outerwear

Revenue by Age Group

Total revenue contribution across different customer age groups.





Power BI Dashboard

A comprehensive Power BI dashboard visualizes key insights from the customer shopping behavior analysis.

This dashboard provides an interactive overview of customer trends, product performance, and sales channel effectiveness.

Business Recommendations

→ Focus on Female Customers

Increase ads, offers, and product designs for female buyers due to higher revenue generation.

→ Improve Subscription Plan

Add better benefits like exclusive discounts or free shipping to boost subscriber spending.

→ Convert Loyal Customers

Target repeat buyers with special subscription-only offers.

→ Promote Best-Selling Products

Highlight top products in Accessories, Clothing, Footwear, and Outerwear.

→ Encourage Express Shipping

Promote express shipping with offers for higher average purchase values.