



# 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

**Rows**

Customer shopping records.

18

**Columns**

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

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## 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

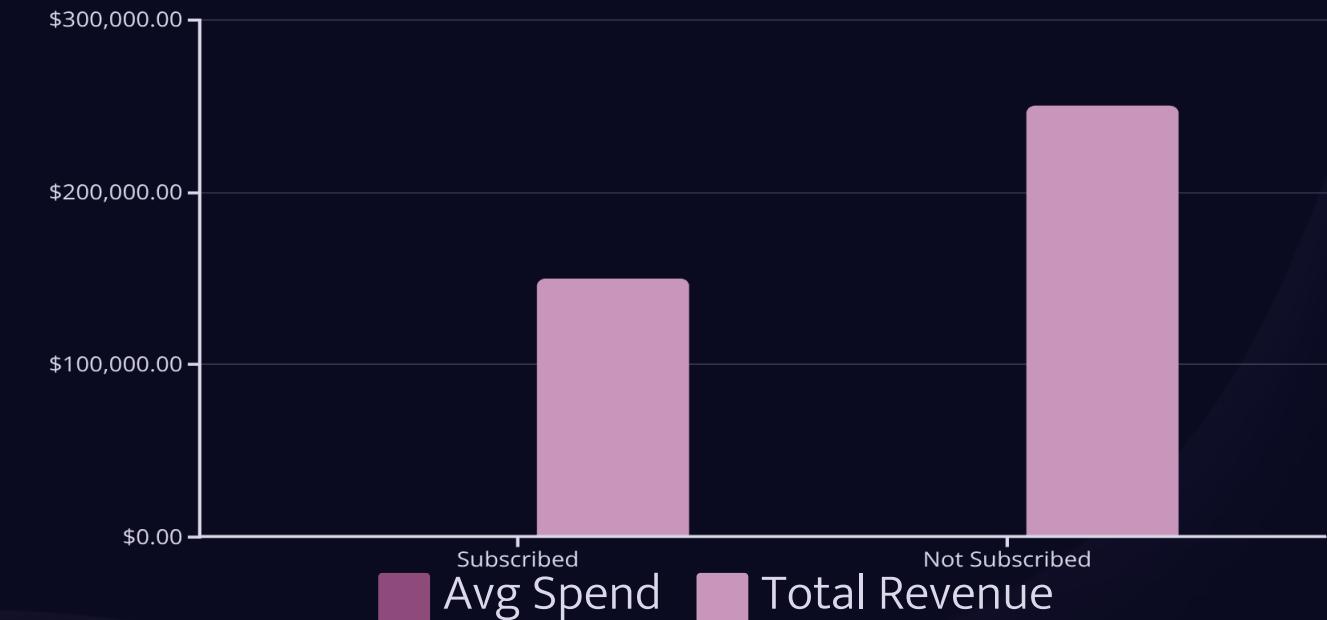
## Shipping Type Spend

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

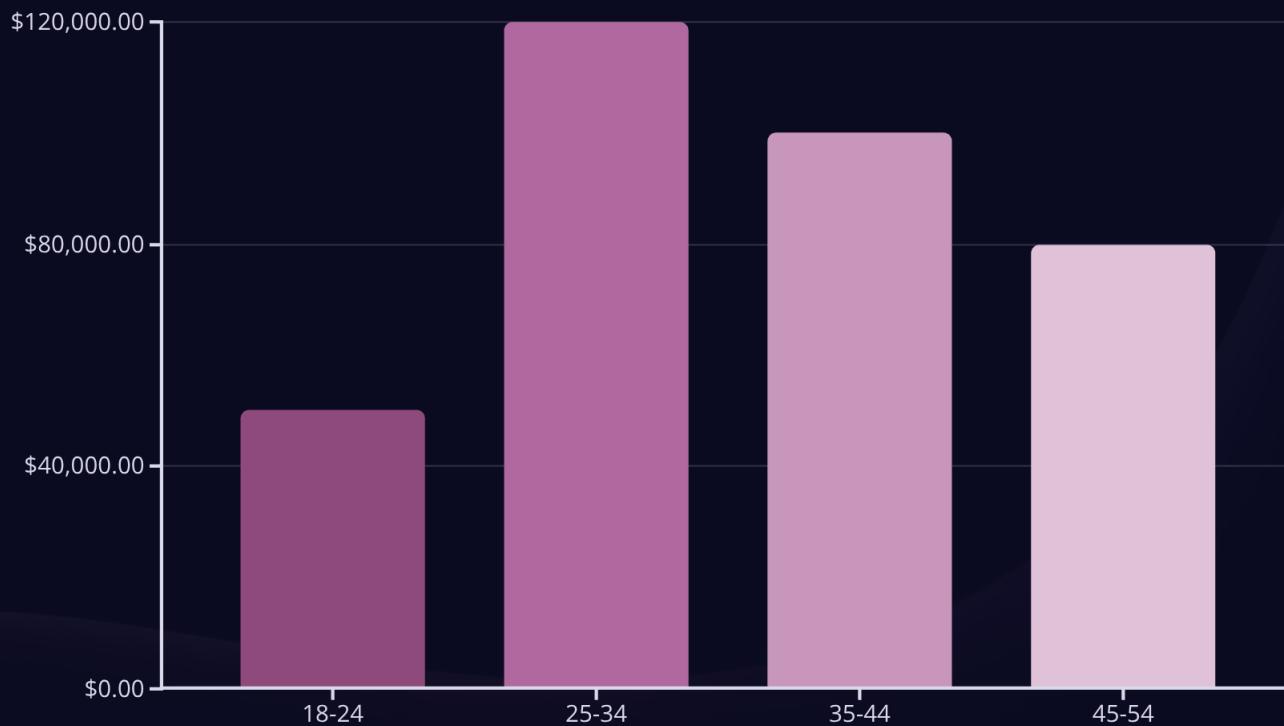
## Category Best Sellers

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.