

# Customer Shopping Behavior Analysis

Uncovering insights from 3,900 purchases to guide strategic business decisions





↗ OVERVIEW

# Project Scope

This analysis examines transactional data from 3,900 purchases across multiple product categories to reveal spending patterns, customer segments, product preferences, and subscription behavior.

3.9K

Total Purchases

18

Data Features

4

Categories



DATA

# Dataset Overview



## Customer Demographics

Age, gender, location, and subscription status



## Purchase Details

Item, category, amount, season, size, and color

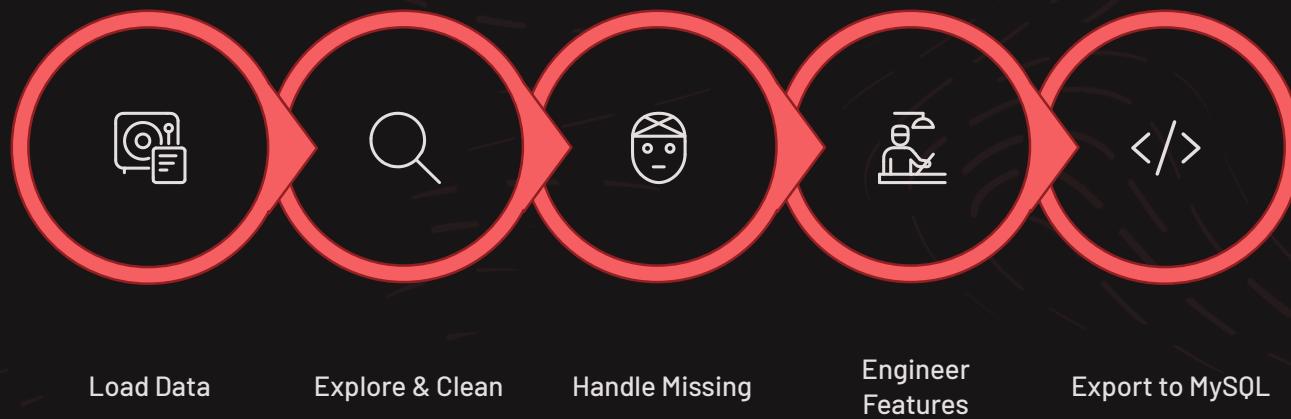


## Shopping Behavior

Discounts, frequency, ratings, and shipping preferences

- ❑ Missing Data: 37 values in Review Rating column were imputed using median ratings by category

# Data Preparation in Python



## Key Transformations

- Imputed missing Review Ratings using category medians
- Created age\_group bins for demographic analysis
- Engineered purchase\_frequency\_days from transaction data
- Dropped redundant promo\_code\_used column
- Loaded cleaned data into MySQL for business analysis



# Revenue Insights

## Gender Revenue Gap

Male customers generated \$157,890 vs. Female \$75,191 in total revenue

## Express Shipping Premium

Express shipping users spend \$60.48 on average vs. \$58.46 for Standard

## Age Group Leaders

Young adults contribute most revenue at \$62,143, followed by middle age at \$59,197

# Product Performance

## Top-Rated Items



3.7

Scarf



3.7

Pants



3.7

Jeans



3.6

Blouse



3.6

Shirt

## Discount-Dependent Products

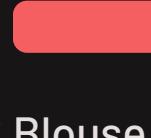
Products with highest percentage of discounted purchases:



Handbag

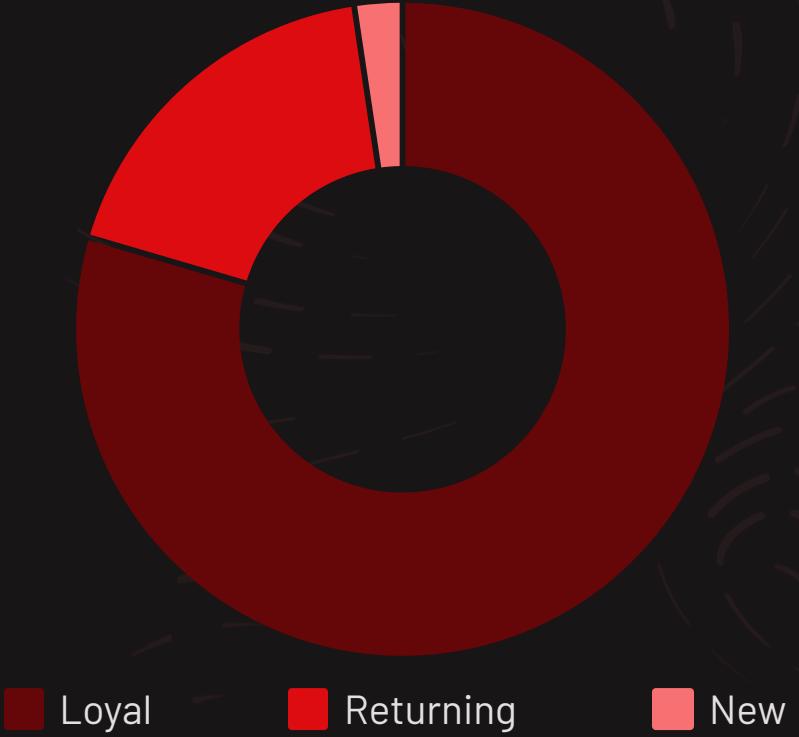
Skirt

Sandals



Socks

# Customer Segmentation



## Segment Breakdown

Customer classification based on purchase history reveals a strong loyal base comprising 80% of customers, with opportunities to convert returning buyers.

**Loyal: 3,116**

Frequent purchasers driving sustained revenue

**Returning: 701**

Growth opportunity segment

**New: 83**

Fresh customer acquisition

X<sub>1</sub> SUBSCRIPTIONS

# Subscription Analysis

## Subscription Gap

Only 27% of customers subscribe, representing significant growth potential

## Spending Patterns

Non-subscribers slightly outspend subscribers (\$59.87 vs. \$59.49 average), but subscribers show higher loyalty with 958 repeat buyers



 DASHBOARD

# Power BI Dashboard Highlights



## Key Metrics

3.9K customers with \$59.76 average purchase amount tracked across subscription status, gender, and category filters



## Category Performance

Clothing dominates with \$104K revenue and 1,737 sales, followed by Accessories at \$74K

# Strategic Business Recommendations

01

## Boost Subscriptions

Promote exclusive benefits to convert the 73% non-subscriber base

02

## Loyalty Programs

Reward repeat buyers to accelerate movement into the Loyal segment

03

## Review Discount Policy

Balance promotional sales boosts with margin control on high-discount products

04

## Product Positioning

Highlight top-rated items like Scarves and Pants in marketing campaigns

05

## Targeted Marketing

Focus on high-revenue young adults and express-shipping premium customers