

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

Made with GAMMA

Dataset Overview



Customer Demographics

Age, gender, location, and subscription status



Purchase Details

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



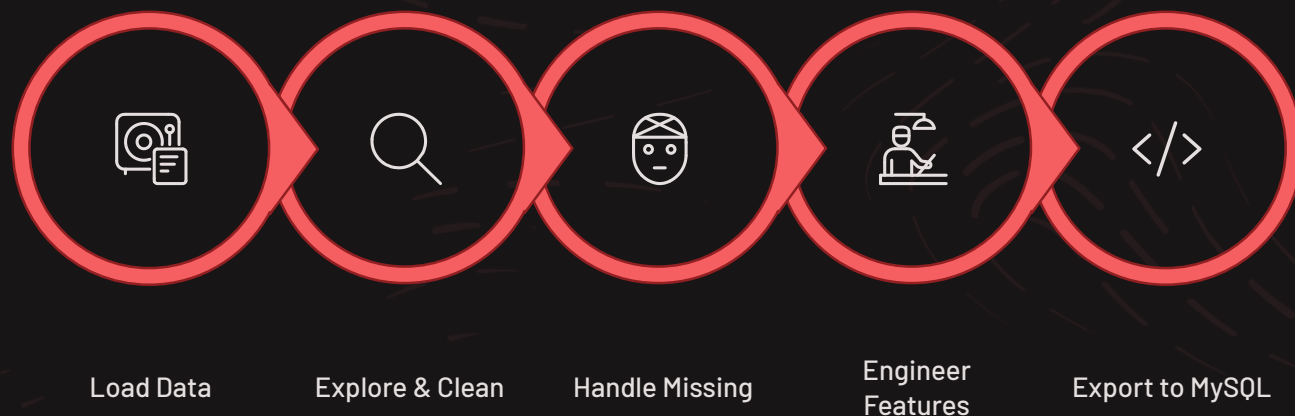
Shopping Behavior

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



Scarf



Pants



Jeans



Blouse



Shirt

Discount-Dependent Products

Products with highest percentage of discounted purchases:



Handbag



Skirt



Sandals

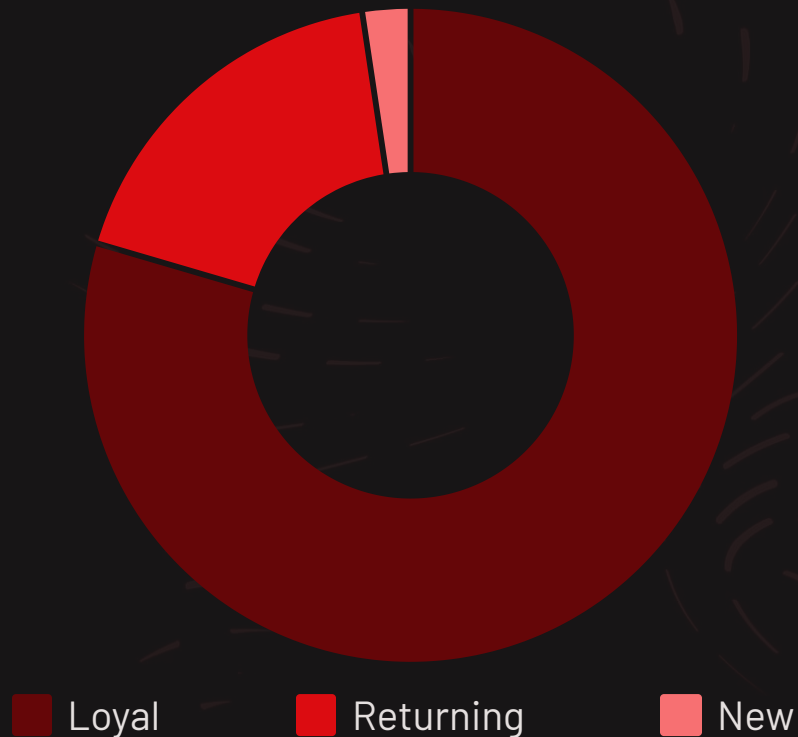


Blouse



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

X₁ 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