

Customer Shopping Behavior Analysis

Uncovering insights from 3,900 purchases to drive data-driven business decisions

DATASET OVERVIEW

Project Foundation

3,900

Total Purchases

Transactions analyzed

18

Data Features

Customer & purchase attributes

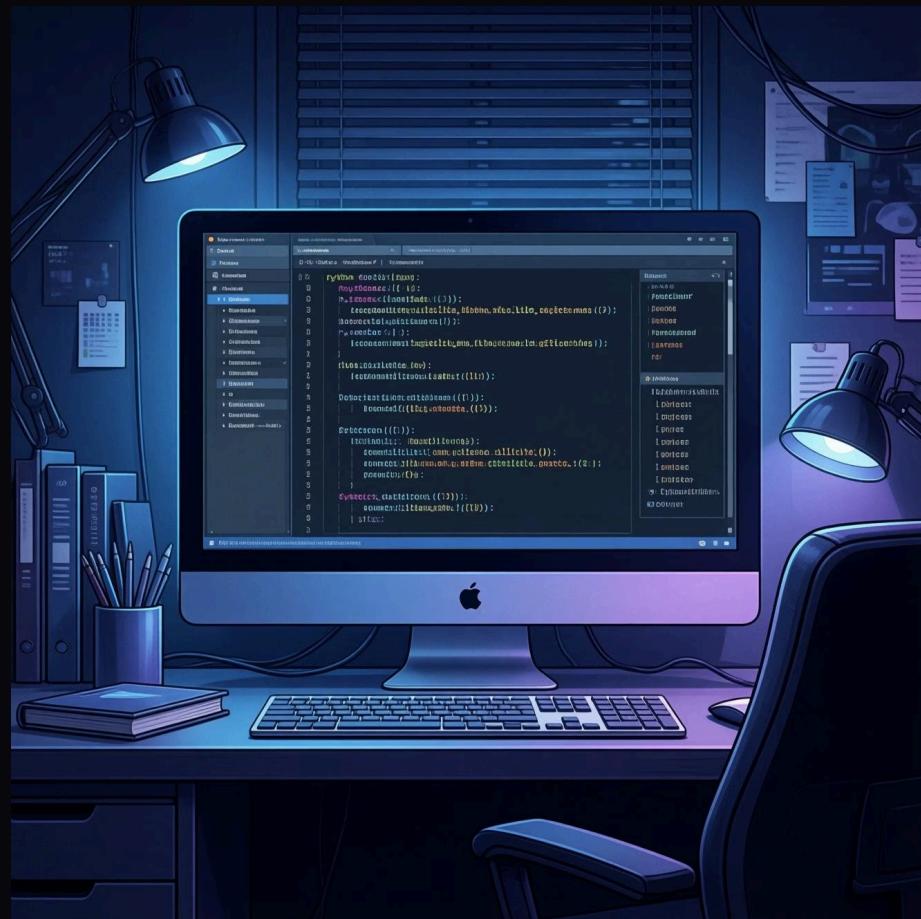
37

Missing Values

In Review Rating column

Comprehensive dataset covering demographics, purchase details, and shopping behavior indicators

Data Preparation & Engineering



01

Data Loading & Exploration

Imported with pandas, reviewed structure

02

Missing Value Treatment

Imputed ratings using median per category

03

Feature Engineering

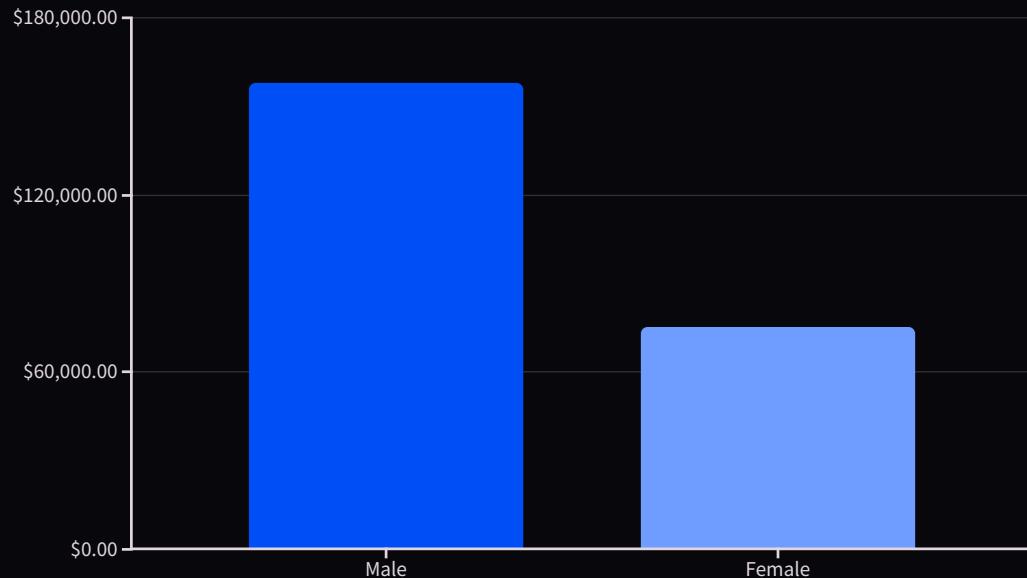
Created age_group and purchase_frequency_days

04

Database Integration

Loaded into MySQL for analysis

Revenue & Gender Analysis



Key Finding

Male customers generate **2.1x more revenue** than female customers, representing a significant opportunity for targeted marketing strategies.

Total revenue analyzed: **\$233,081**

Top-Rated Products



Gloves

Rating: 3.86



Sandals

Rating: 3.84



Boots

Rating: 3.82



Hat

Rating: 3.80



Skirt

Rating: 3.78

Shipping & Subscription Insights

Express Shipping

Avg: \$68.48

Premium service drives
higher spend

Standard Shipping

Avg: \$58.46

Most common option

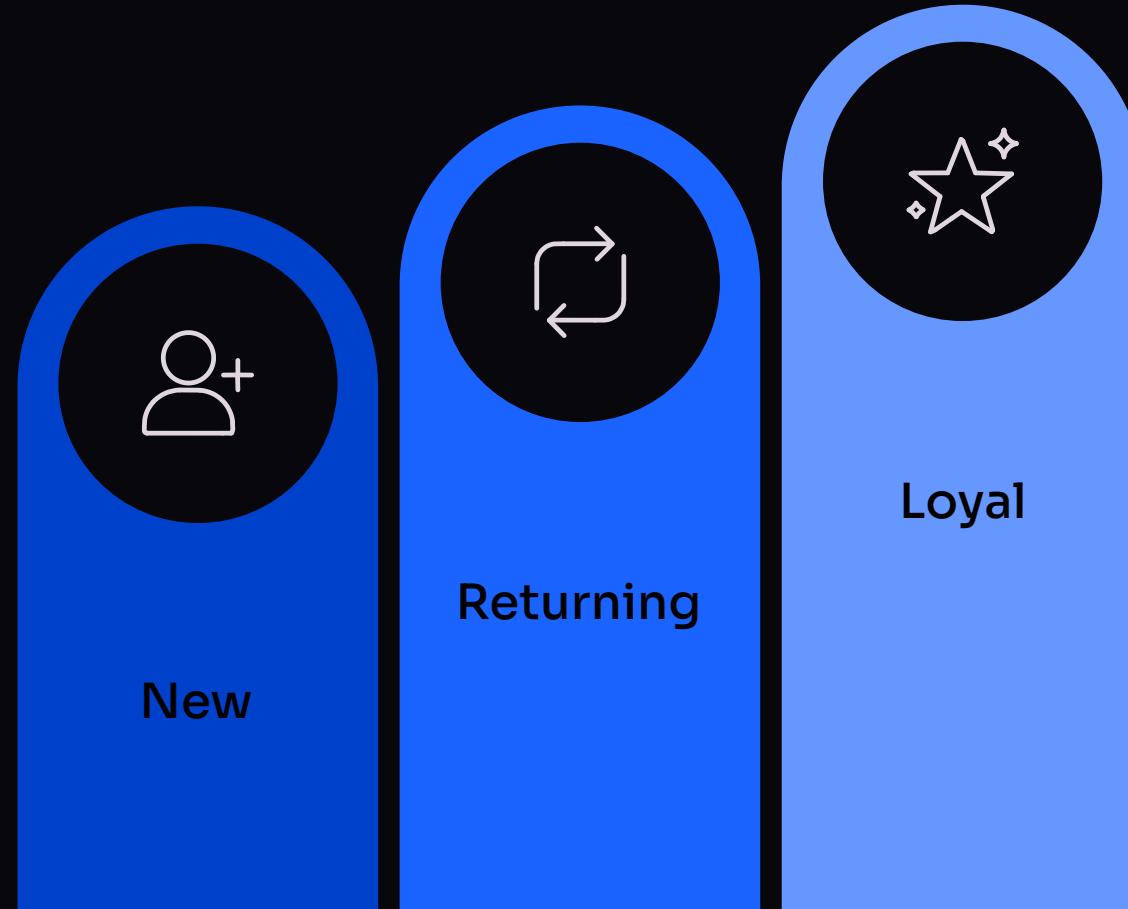
Subscription Status

2,847 non-subscribers (avg: \$59.87)

1,053 subscribers (avg: \$59.49)

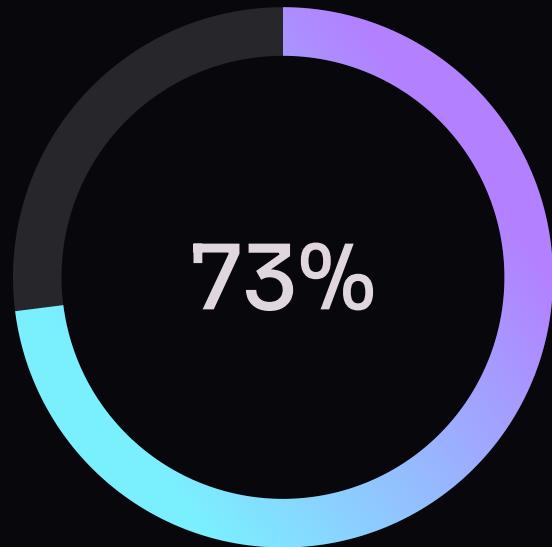
Similar spending patterns across both groups

Loyalty Distribution

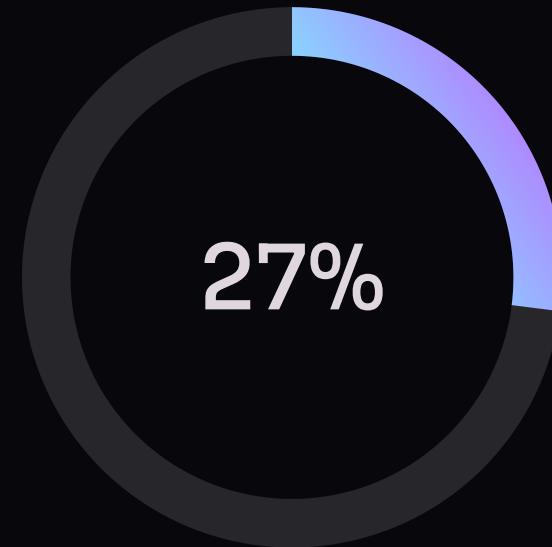


Overwhelming majority are **loyal customers**, indicating strong retention but limited new customer acquisition

Category Performance Dashboard



Non-Subscribers



Subscribers

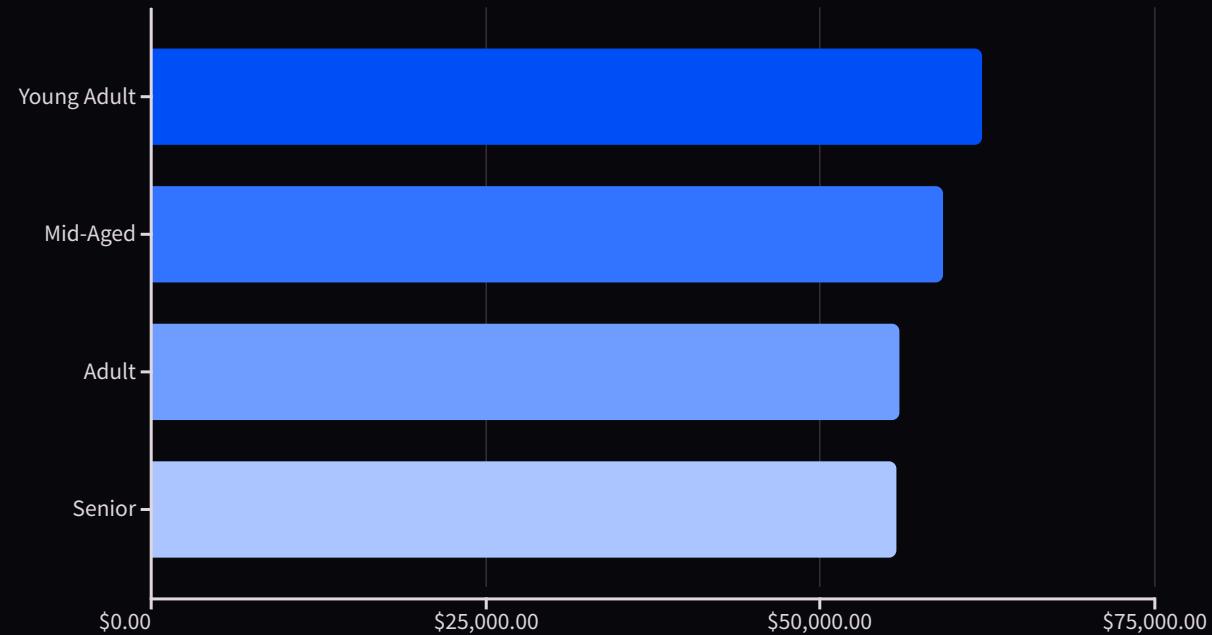
Revenue Leaders

- Clothing: \$95K
- Accessories: \$75K
- Footwear: \$35K

Key Metrics

- Avg Purchase: **\$59.76**
- Avg Rating: **3.75**

Revenue by Age Group



Balanced Distribution

Revenue relatively evenly distributed across age groups, with young adults leading slightly.

Opportunity for age-specific marketing campaigns to maximize each segment.

Action Plan for Growth

Boost Subscriptions

Promote exclusive benefits to convert 73% non-subscribers

Loyalty Programs

Target 3,116 loyal customers with rewards

Optimize Discounts

Balance revenue growth with profit margins strategically

Highlight Top Products

Feature high-rated items in marketing campaigns

Target High-Value Segments

Focus on young adults and express shipping users