Customer Shopping Behavior Analysis

Uncovering insights from 3,900 purchases to drive strategic decisions

The Foundation

3.9K
Total Purchases
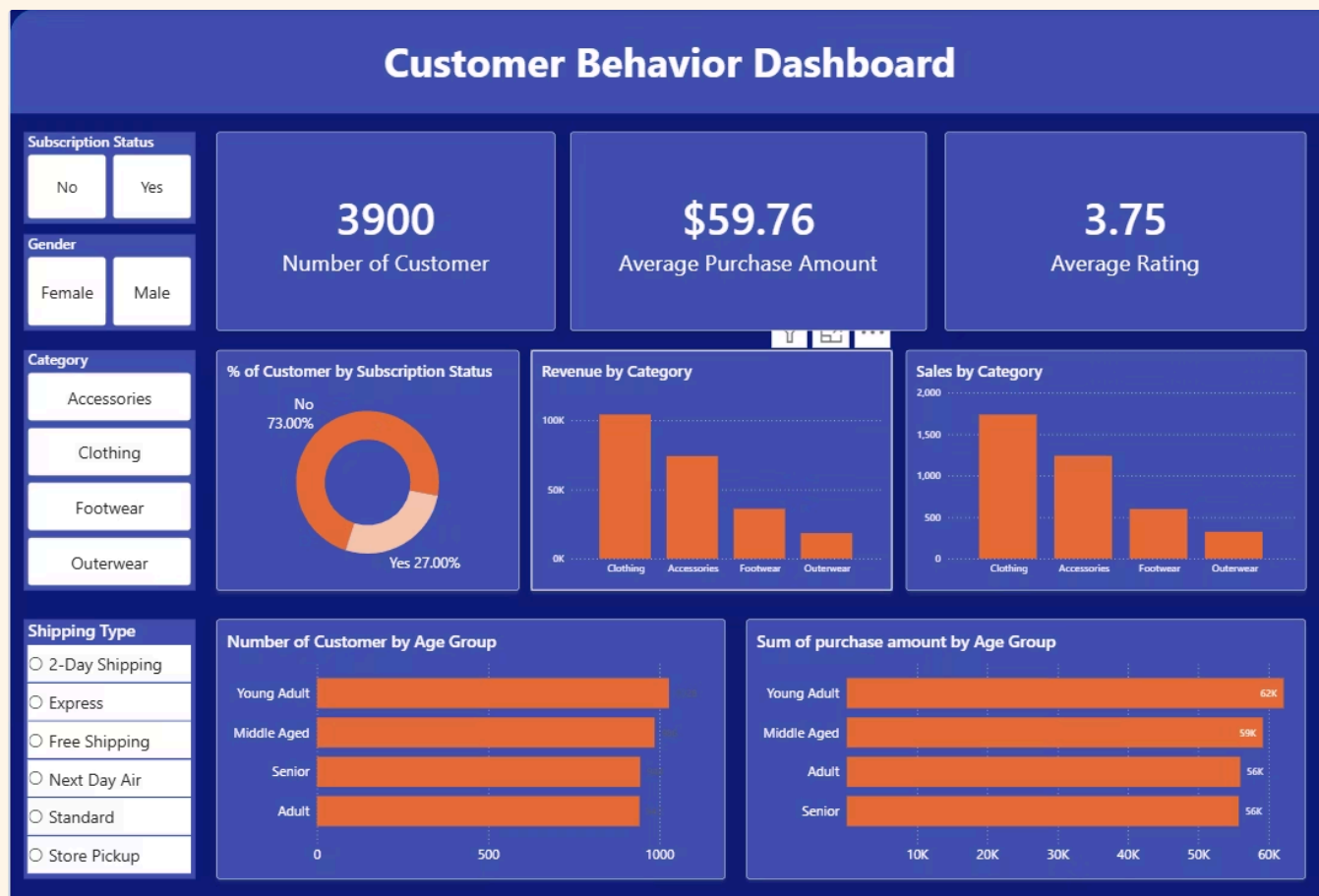Transactions analyzed

18
Data Points
Features per customer

4
Categories
Product segments

Key Features Tracked

- Customer demographics & location
- Purchase details & spending patterns
- Shopping behavior & preferences
- Subscription & loyalty metrics

Python Analysis Pipeline

Load Data	Explore & Clean	Handle Missing Values	Engineer Features	Export to Database

Systematic approach to transform raw data into actionable insights

Missing Data

37 values imputed using median ratings

New Features

Age groups & purchase frequency created

Optimization

Redundant columns removed for clarity

10 Key Business Questions

01

Revenue by Gender

02

High-Spending Discount Users

03

Top-Rated Products

04

Shipping Type Impact

05

Subscriber Behavior

06

Discount Dependency

07

Customer Segmentation
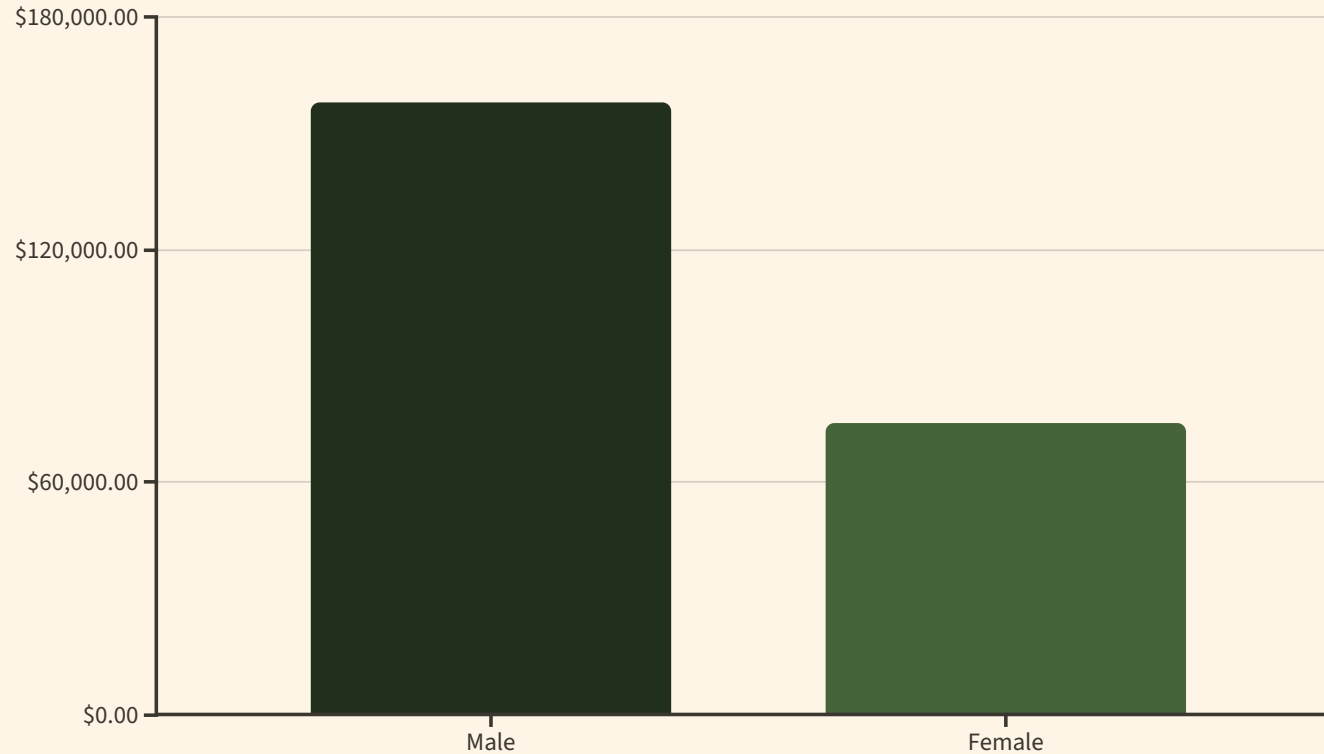
08

Category Leaders

09

Repeat Buyer Patterns

10

Age Group Revenue

Revenue Insights

Gender Revenue Gap

Male customers generate 2.1x more revenue than female customers, representing 68% of total sales.

839 Customers

Used discounts but spent above average

Top-Rated Products

Gloves

3.86 rating

Sandals
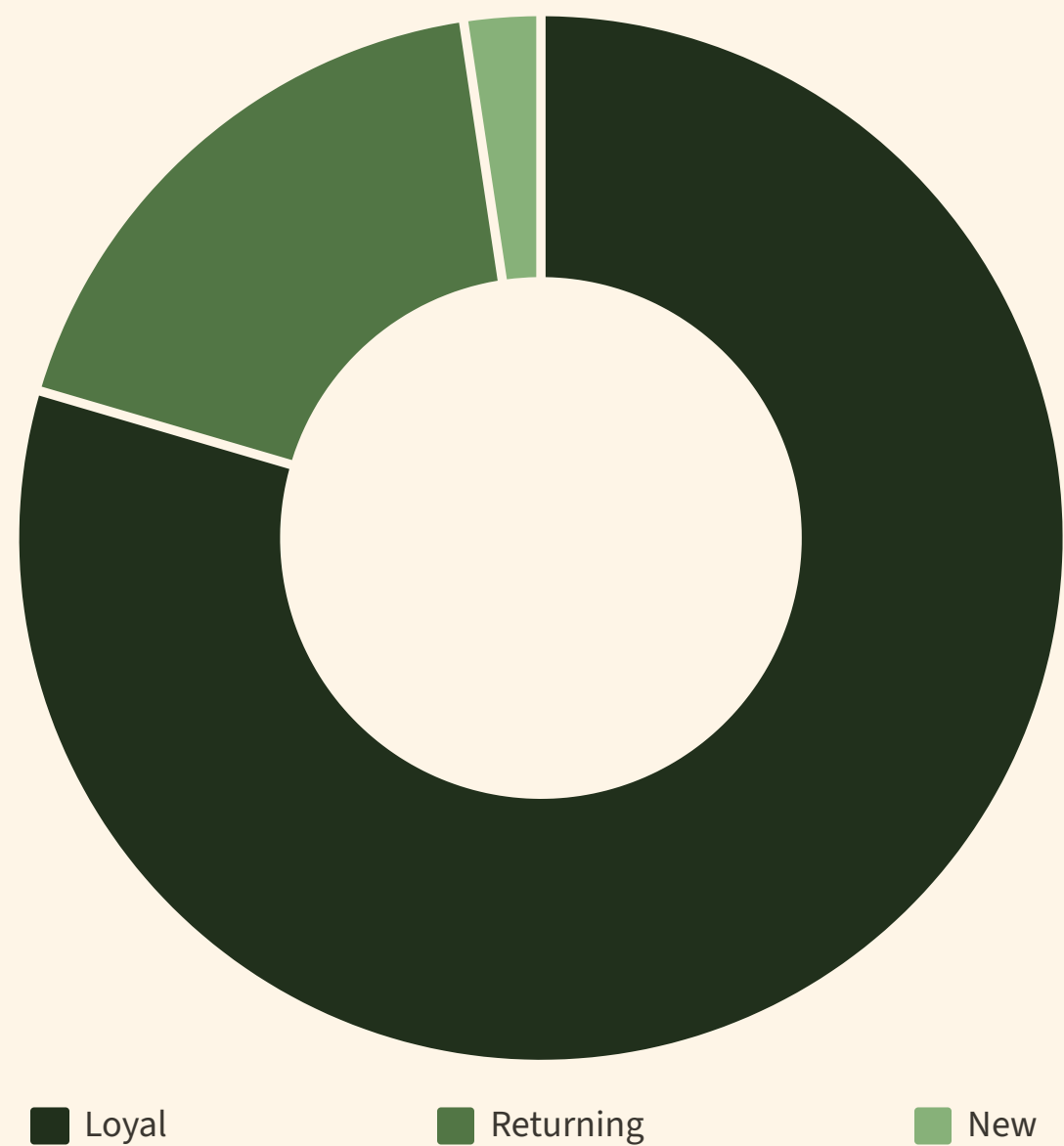
3.84 rating

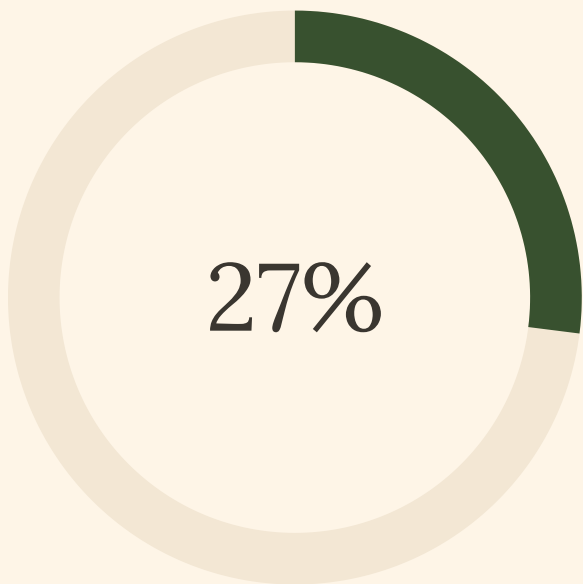## Boots

3.82 rating

Hat
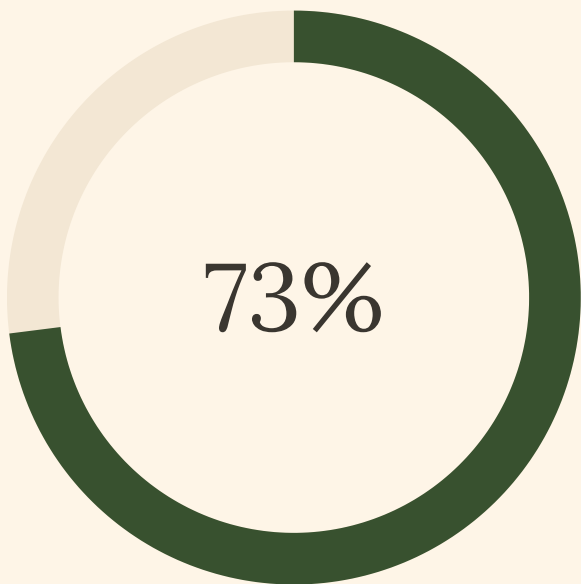
3.80 rating

Skirt

3.78 rating

Customer Segmentation

■ Loyal　　　　■ Returning　　　　■ New

Loyalty Dominates

80% of customers are loyal buyers, showing strong retention.

27%

Subscribers

73%

Non-Subscribers

Subscription rate: $59.49 avg spend vs $59.87 non-subscribers

Visual Intelligence

Clothing Leads

$100K revenue, 1,800 sales

Young Adults

Highest revenue at $45K

Express Shipping

$60.48 avg vs $58.46 standard

Made with GAMMA

Action Plan

Boost Subscriptions

Promote exclusive benefits to convert the 73% non-subscribers

Loyalty Programs

Reward repeat buyers to strengthen the 80% loyal base

Smart Discounting

Balance promotions with margin control—50% of hats sold with discounts

Next Steps

Focus Areas

Target high-revenue segments for maximum impact

- Highlight top-rated products in marketing campaigns
- Target young adults and express-shipping users
- Convert loyal customers into subscribers
- Optimize discount strategy by product category

$59.76	3.75	80%
Avg Purchase	Avg Rating	Loyal Customers