

Customer Shopping Behavior Analysis

Uncovering insights from 3,900 purchases to guide strategic business decisions through data-driven analysis of spending patterns, customer segments, and product preferences.



Dataset Overview

3,900

18

\$59.76

Total Purchases

Transactions analyzed
across all categories

Data Features

Comprehensive
customer and
purchase attributes

Average Purchase

Mean transaction
value across all
customers

3.75

Average Rating

Customer satisfaction
score out of 5.0



Data Preparation Journey



Data Loading

Imported dataset using pandas for initial exploration and structure analysis



Cleaning & Standardization

Handled 37 missing review ratings, standardized columns to snake case format



Feature Engineering

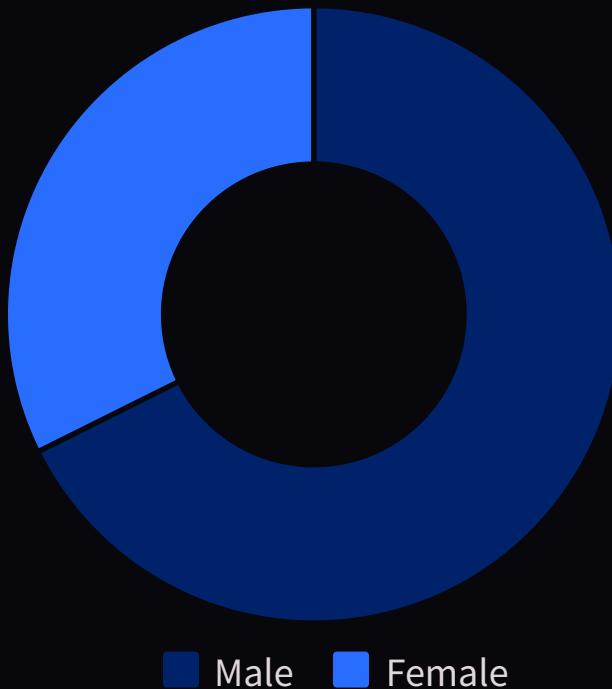
Created age groups and purchase frequency metrics for deeper insights



Database Integration

Connected to MySQL for advanced SQL analysis capabilities

Revenue Insights by Gender

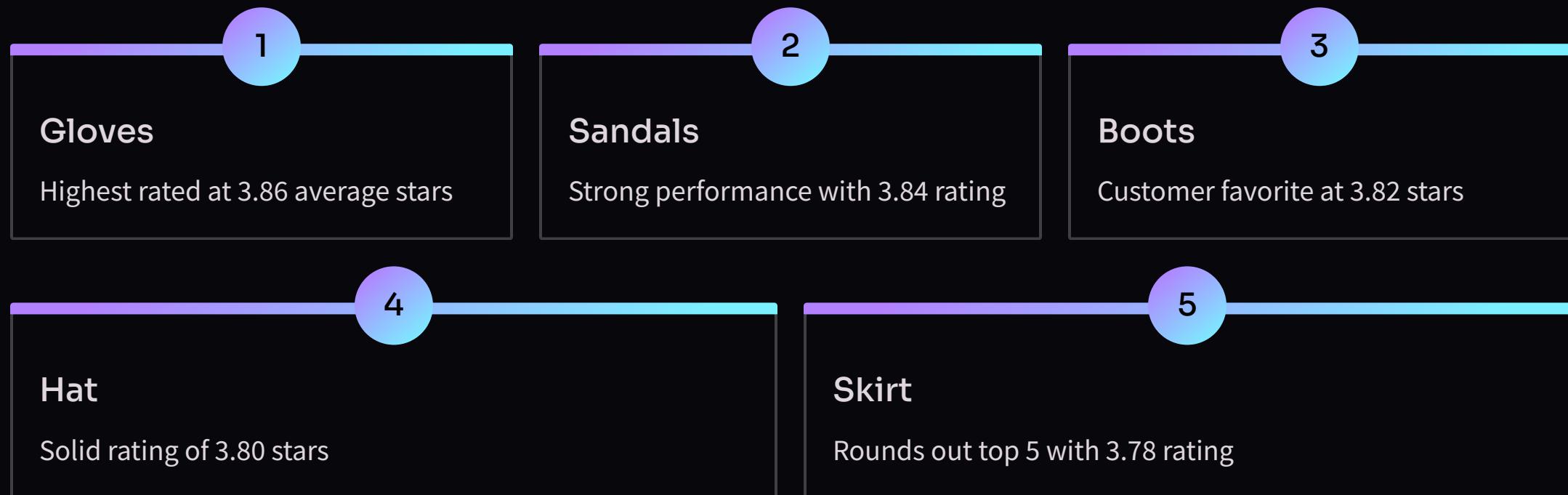


Male Customers Drive Revenue

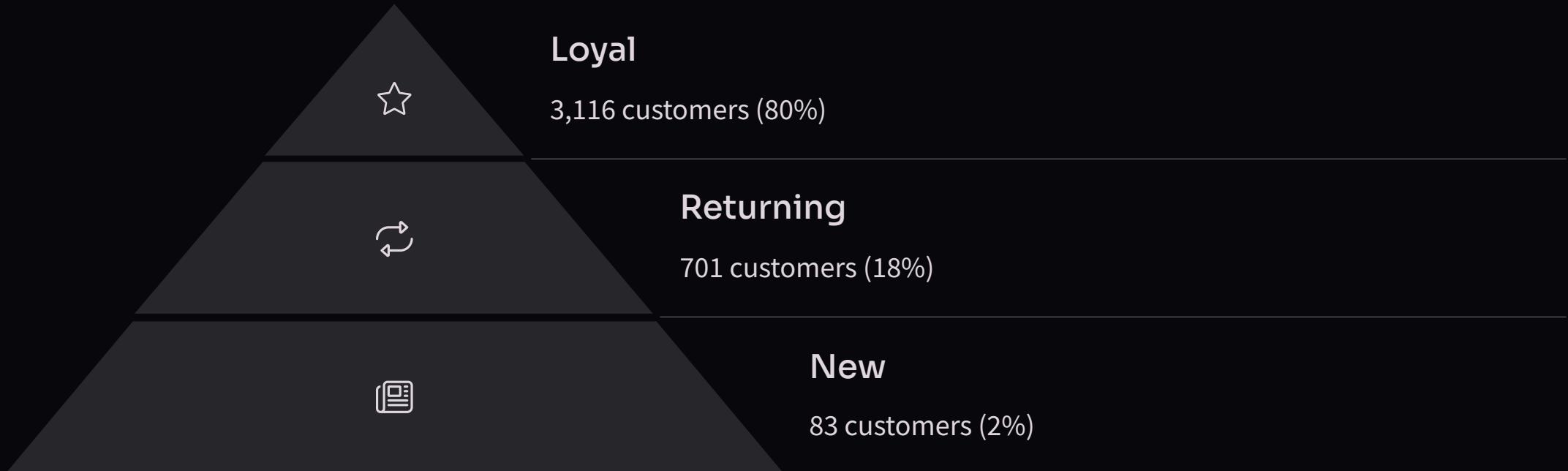
Male customers generate 68% of total revenue (\$157,890) compared to female customers at 32% (\$75,191).

This significant disparity suggests opportunities for targeted marketing campaigns to increase female customer engagement and spending.

Product Performance Analysis



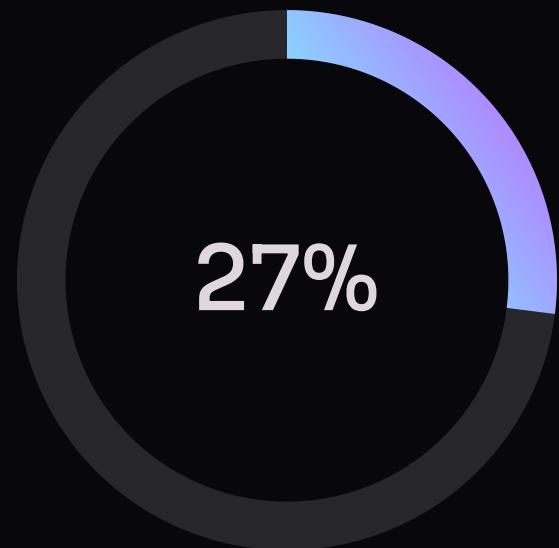
Customer Segmentation Breakdown



The majority of our customer base consists of loyal repeat buyers, indicating strong retention. Focus should be on converting the 18% returning customers into the loyal segment.

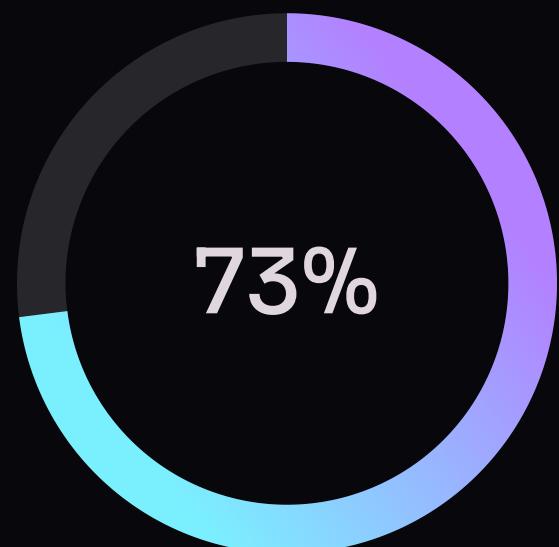
Subscription & Shipping Insights

Subscription Status



Subscribers

1,053 customers, \$59.49 avg spend



Non-Subscribers

2,847 customers, \$59.87 avg spend

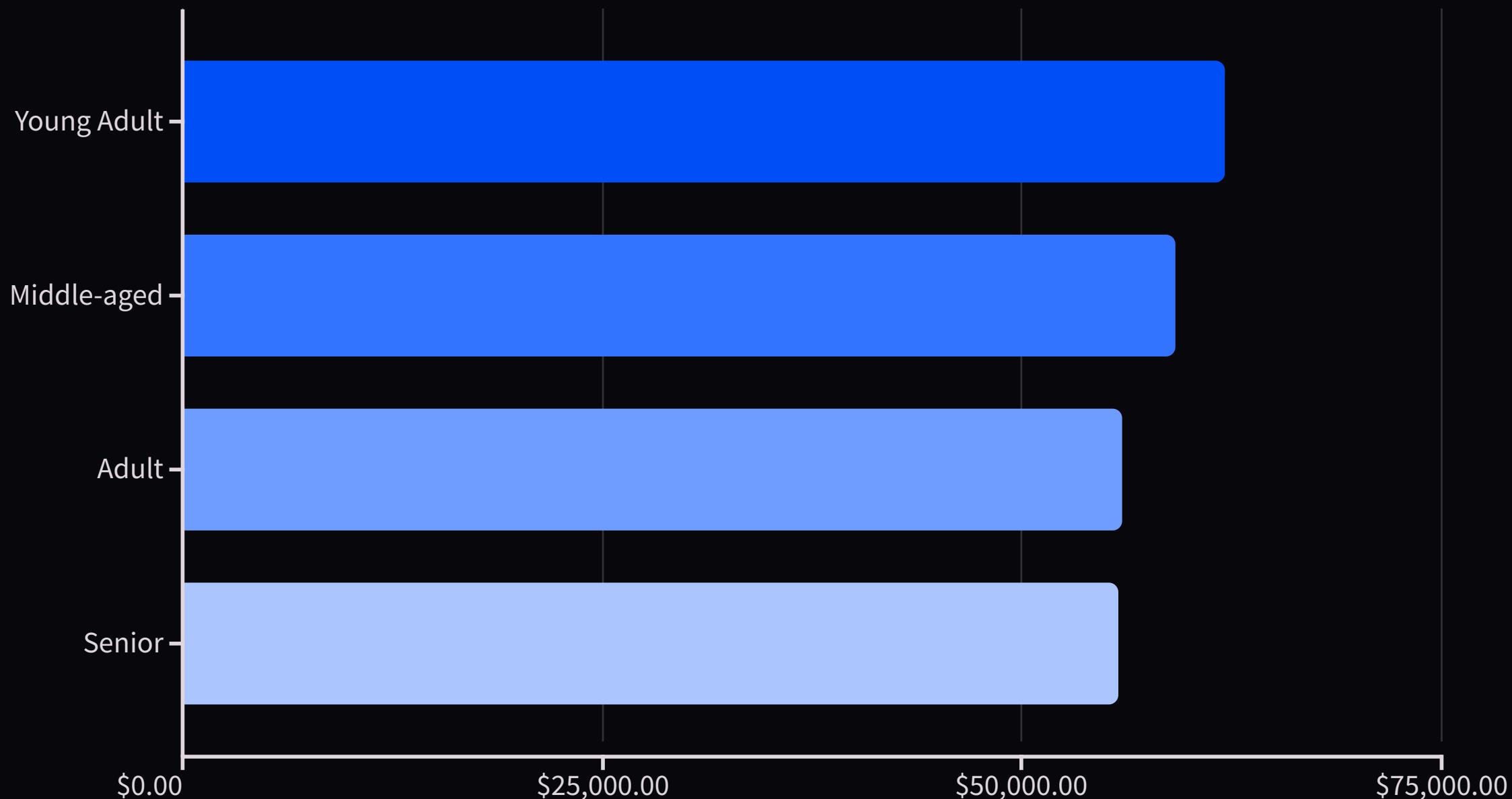
Shipping Preferences

Express Shipping: \$60.48 average purchase

Standard Shipping: \$58.46 average purchase

Express shipping customers spend 3.5% more on average, suggesting higher-value customer segment willing to pay for convenience.

Revenue by Age Demographics



Young adults lead revenue generation, contributing \$62,143. Revenue distribution is relatively balanced across age groups, indicating broad market appeal.



Discount Strategy Analysis



Discount-Dependent Products

Hat (50%), Sneakers (49.66%), and Coat (49.07%) have highest discount rates



High-Value Discount Users

839 customers used discounts but still spent above average (\$60+)



Strategic Opportunity

Balance promotional sales with margin control to optimize profitability

Strategic Recommendations

01

Boost Subscription Adoption

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

02

Enhance Loyalty Programs

Reward repeat buyers to grow the 80% loyal customer segment

03

Optimize Discount Policy

Review high-discount products to balance sales growth with margins

04

Leverage Top Products

Highlight top-rated items (Gloves, Sandals, Boots) in marketing campaigns

05

Target High-Value Segments

Focus on young adults and express-shipping customers for maximum ROI