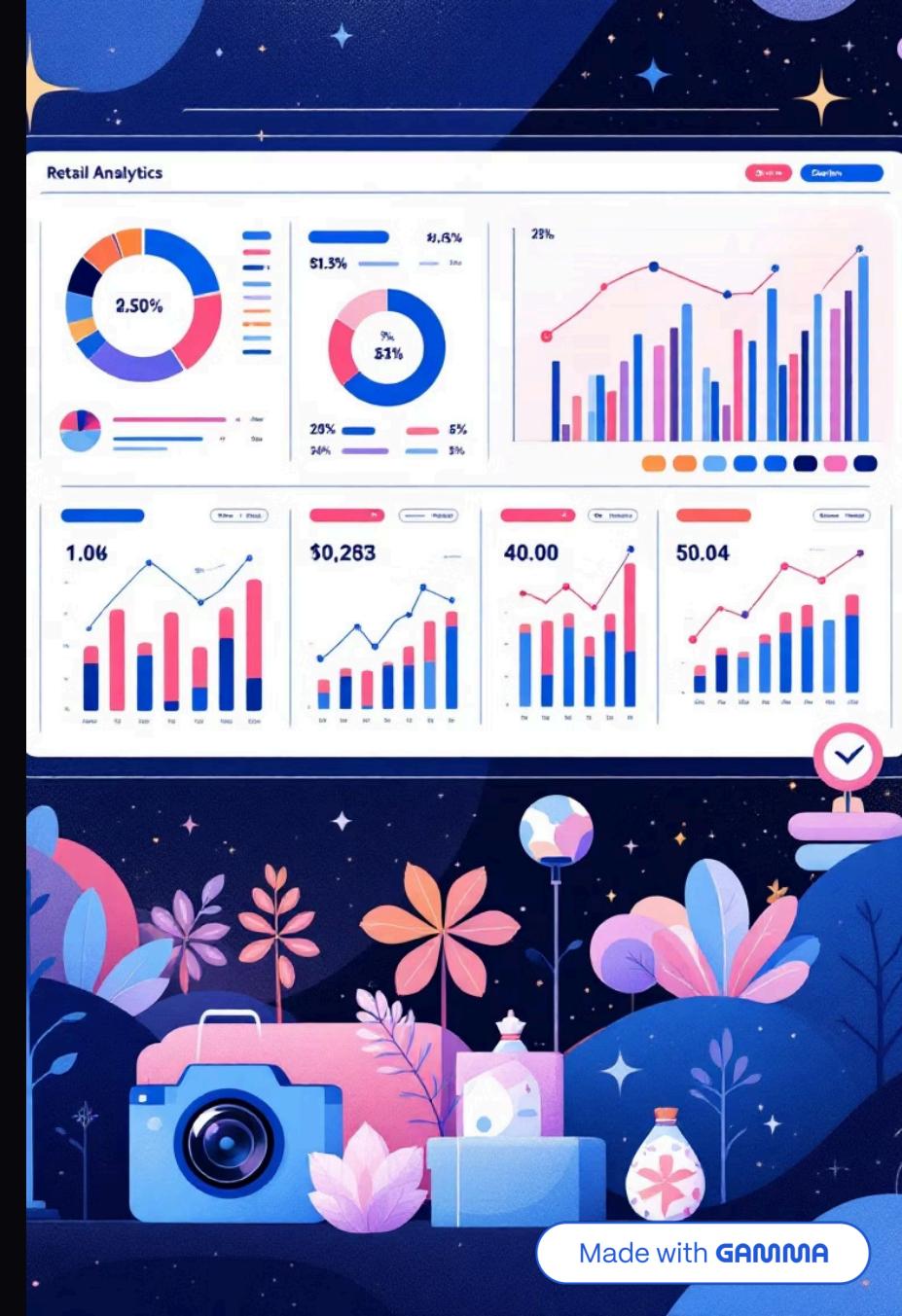


Customer Shopping Behavior Analysis

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



Dataset Overview

3,900

Total Purchases

Transactions analyzed
across all categories

18

Data Points

Features tracking
demographics and
behavior

25

Product Types

Items across 4 major
categories

50

Locations

Geographic
distribution of
customers



Made with GAMMA

Data Preparation Process

01

Data Loading & Exploration

Imported dataset using pandas, analyzed structure with df.info() and summary statistics

02

Missing Data Handling

Imputed 37 missing Review Rating values using median rating per product category

03

Feature Engineering

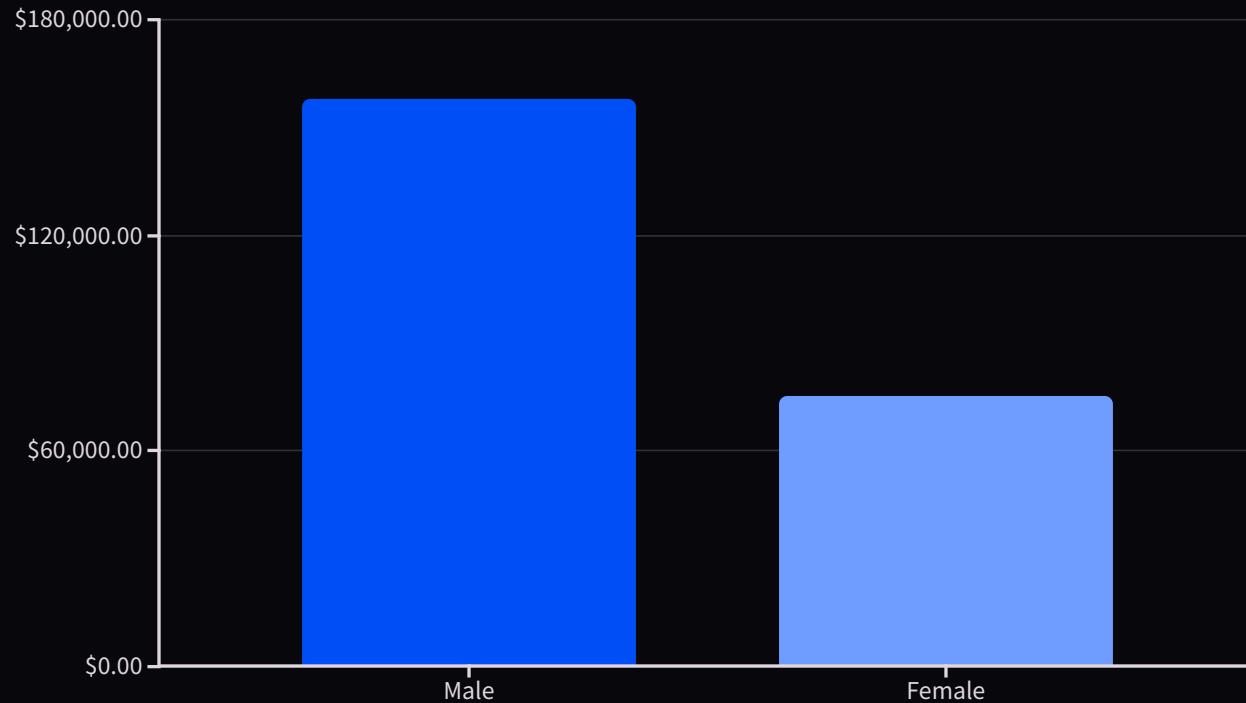
Created age_group bins and purchase_frequency_days for deeper analysis

04

Database Integration

Connected to PostgreSQL and loaded cleaned data for SQL analysis

Revenue by Gender

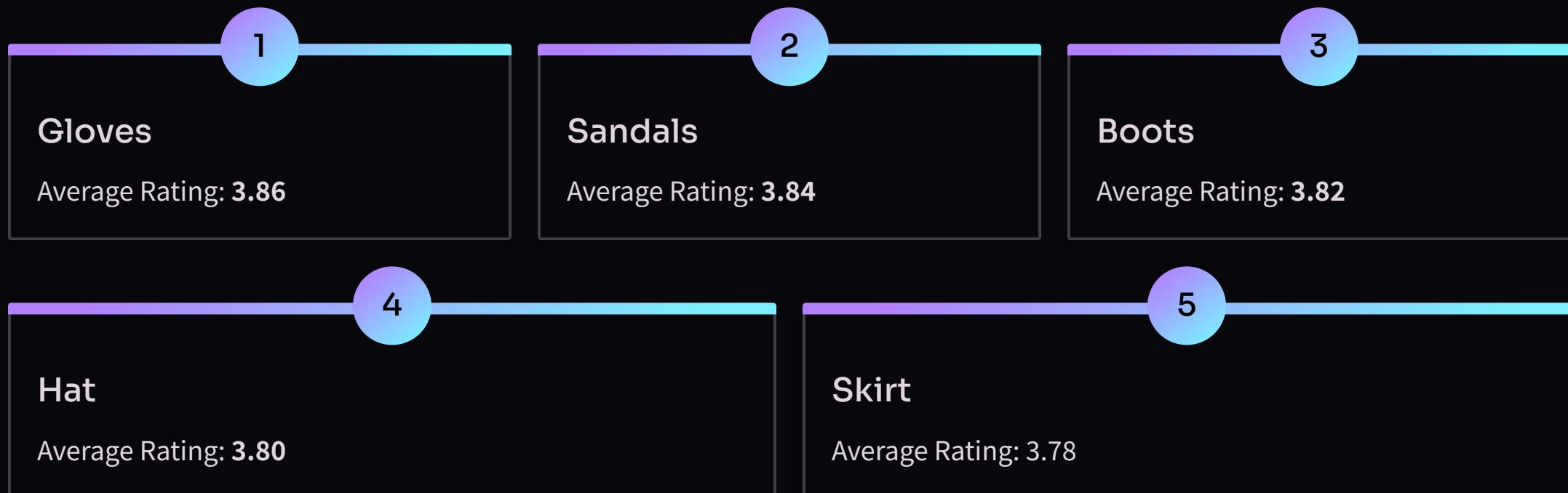


Key Insight

Male customers generate **2.1x more revenue** than female customers

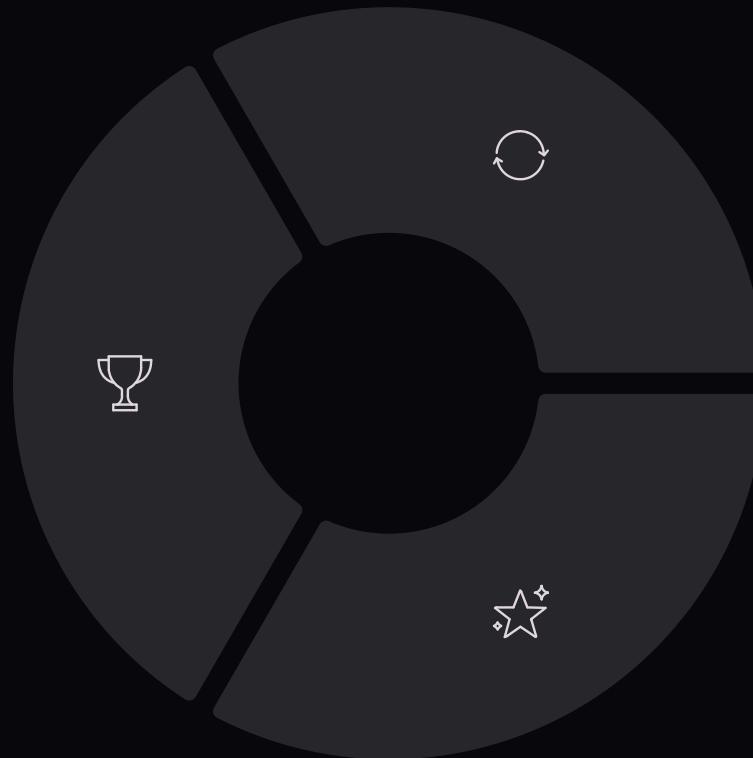
Consider targeted campaigns to increase female customer engagement and spending

Top Products & Customer Ratings



Customer Segmentation Insights

Loyal Customers
3,116 customers (79.9%)
Highest value segment with
consistent purchase history



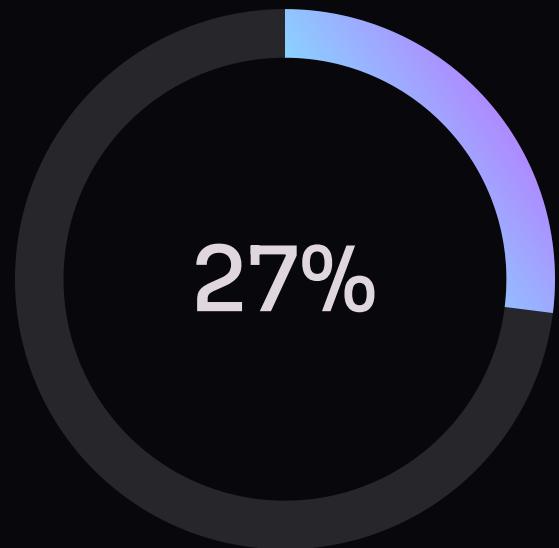
Returning
701 customers (18.0%)

Growth opportunity to convert into
loyal segment

New Customers
83 customers (2.1%)

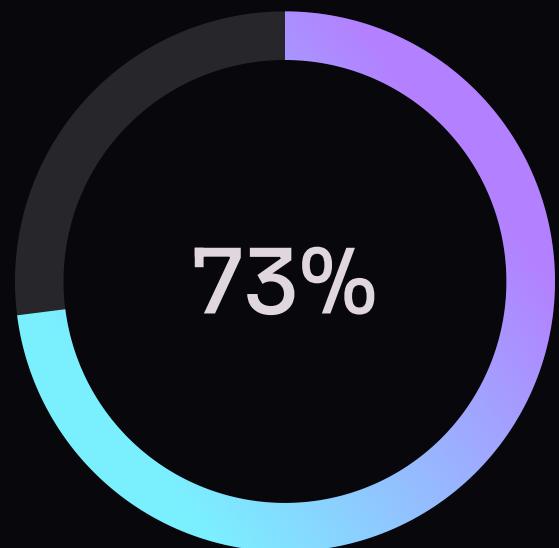
Fresh acquisition requiring
engagement strategies

Subscription Analysis



Subscription Rate

1,053 of 3,900 customers



Non-Subscribers

2,847 customers

Revenue Comparison

- Subscribers: \$62,645 total (\$59.49 avg)
- Non-subscribers: \$170,436 total (\$59.87 avg)

Similar spending patterns suggest untapped subscription potential



Discount Strategy Impact

High-Discount Products

- Hat: 50% discount rate
- Sneakers: 49.66%
- Coat: 49.07%

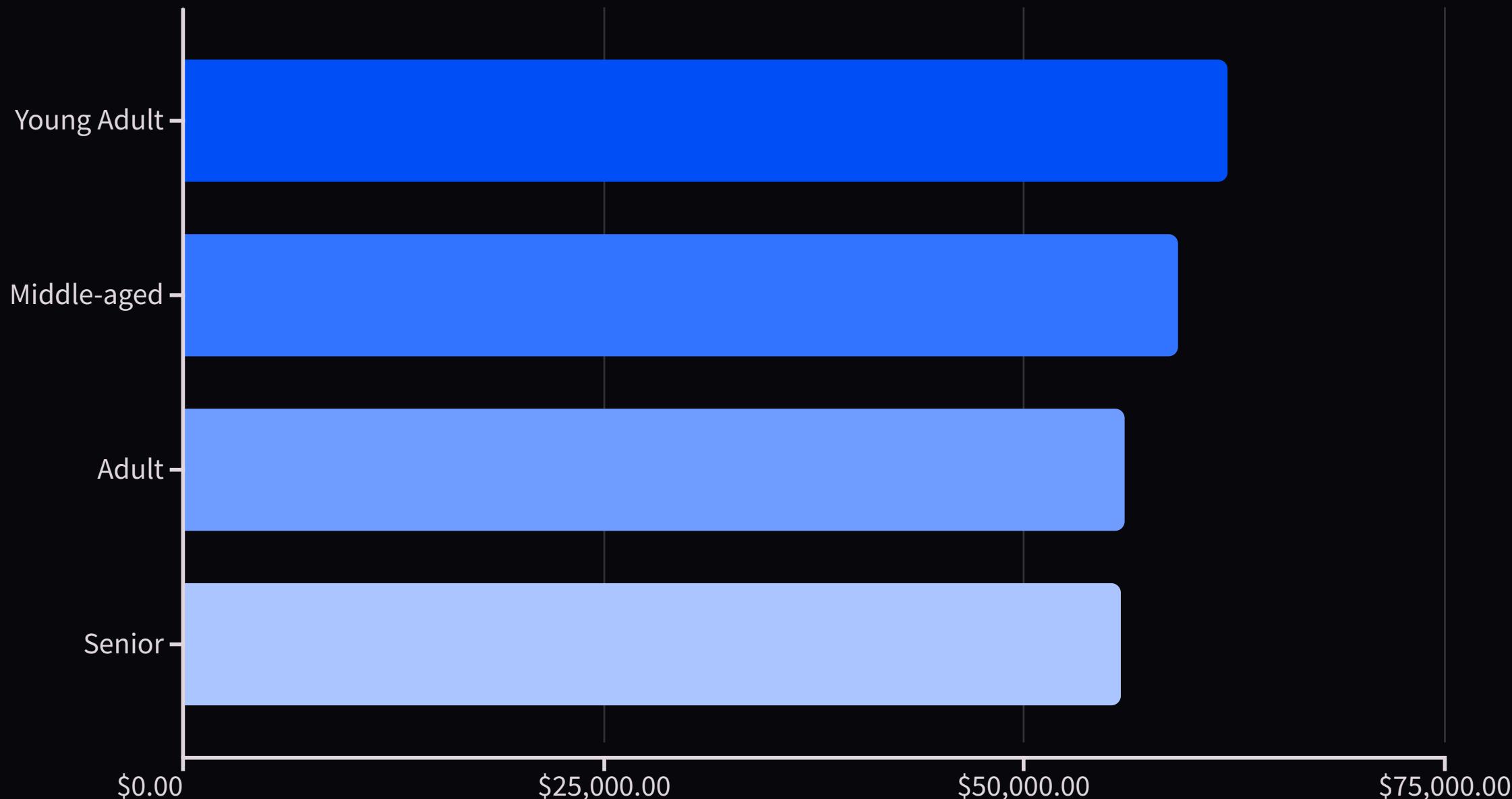
Smart Spenders

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

Shipping Preference

Express shipping: \$60.48 avg
Standard shipping: \$58.46 avg

Revenue by Age Group



Young adults lead revenue generation, but all segments show balanced contribution

Strategic Recommendations

Boost Subscriptions

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

Loyalty Programs

Reward repeat buyers to strengthen the 79.9% loyal customer segment

Optimize Discounts

Balance promotional sales with margin control on high-discount products

Product Positioning

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

Targeted Marketing

Focus on high-revenue demographics and express-shipping preference customers