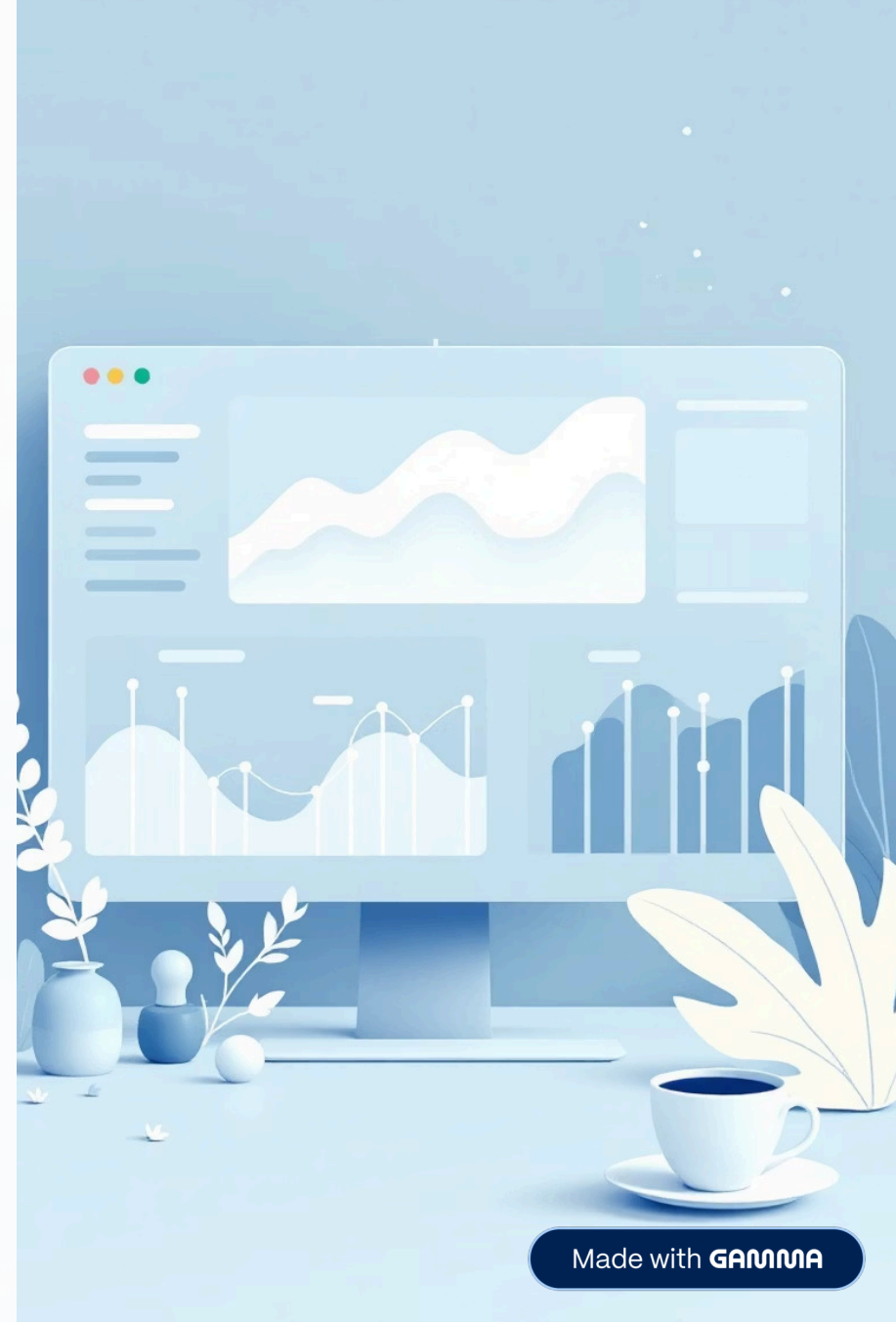


Customer Shopping Behavior Analysis

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



Dataset Overview

3,900	18	\$59.76
Total Purchases	Data Points	Avg Purchase
Transactions analyzed	Features per transaction	Per transaction
	3.75	
	Avg Rating	
	Customer satisfaction	

Customer Demographics

- Age, Gender, Location
- Subscription Status

Shopping Behavior

- Purchase patterns & frequency
- Discounts & promotions





Data Preparation in Python

01

Data Loading & Exploration

Imported dataset, checked structure and summary statistics

02

Missing Data Handling

Imputed 37 missing Review Ratings using category medians

03

Feature Engineering

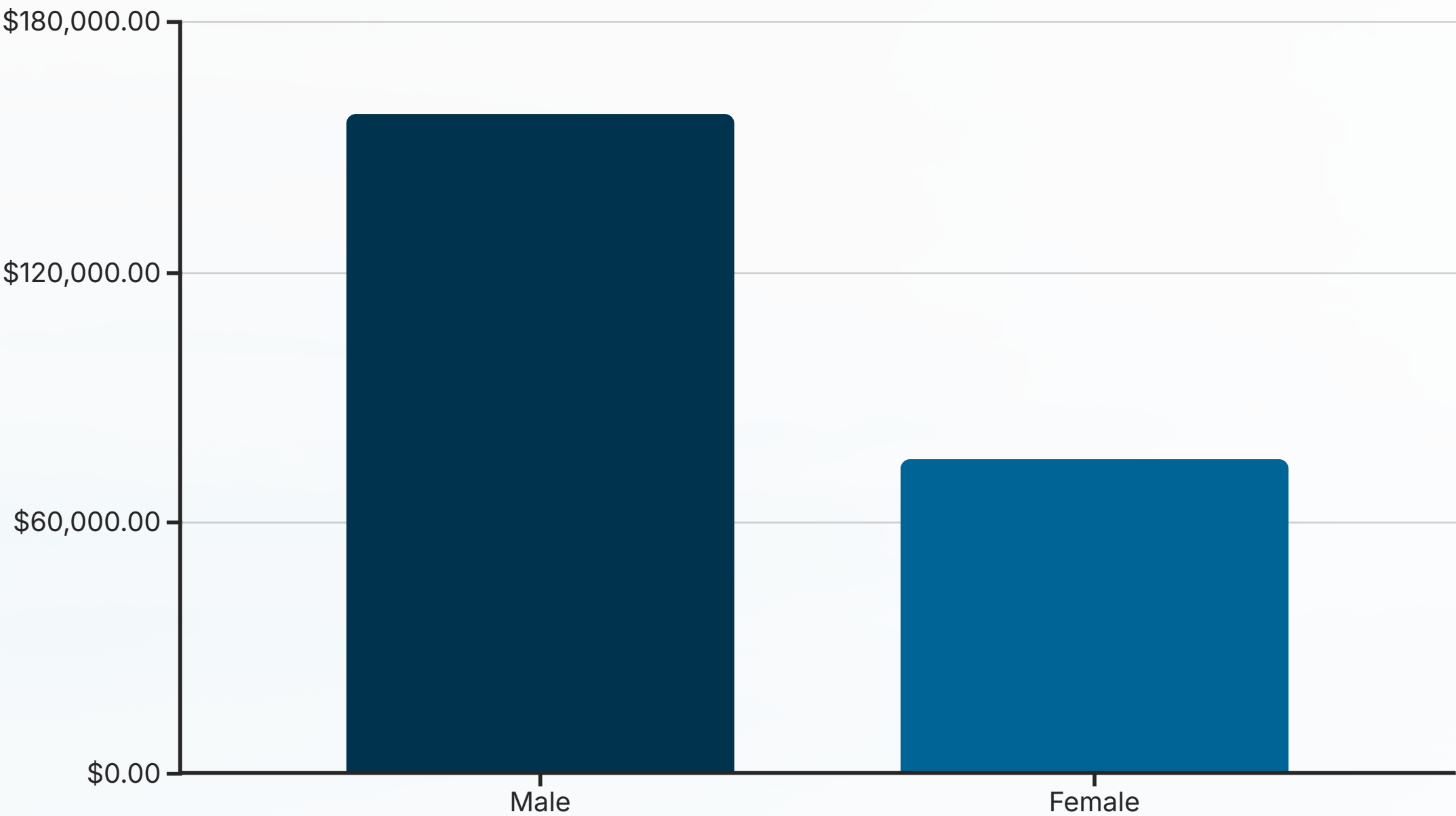
Created age groups and purchase frequency metrics

04

Database Integration

Connected to PostgreSQL for advanced SQL analysis

Revenue Insights by Gender



Key Finding

Male customers generate 2.1x more revenue than female customers

Opportunity

Expand female-focused product lines and marketing campaigns

Smart Discount Users

839 Customers

Used discounts but spent above average

High-Value Segment

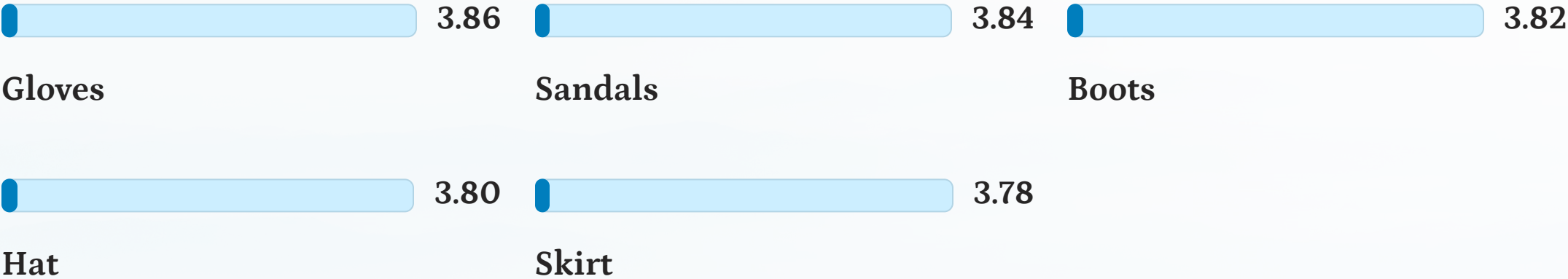
Discount-sensitive yet willing to spend more

Strategic Insight

Discounts don't always mean lower revenue

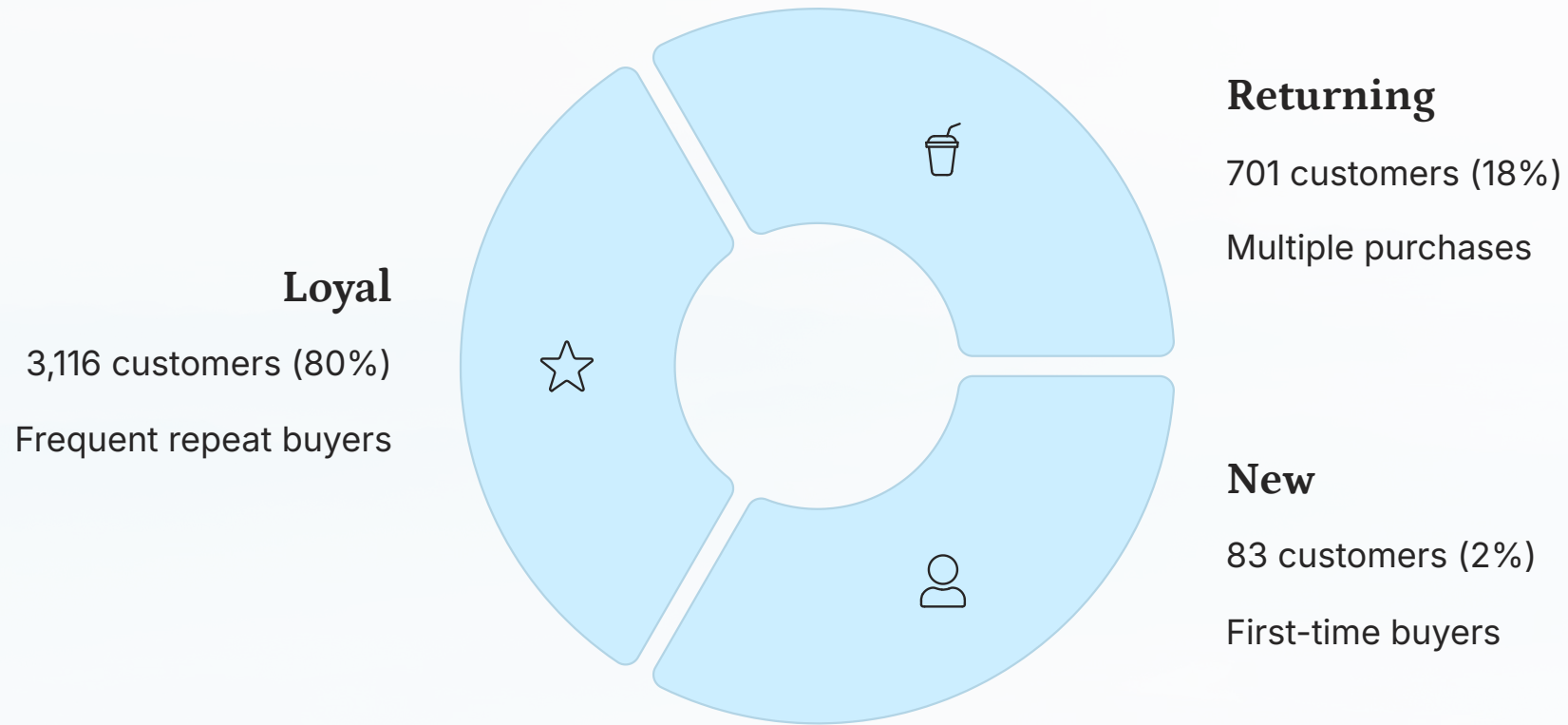


Top-Rated Products

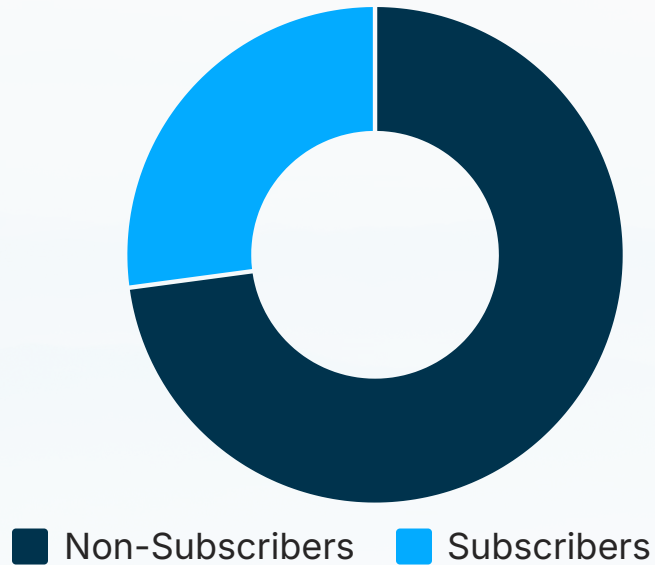


Highest average review ratings out of 5.0 stars

Customer Segmentation Analysis



Subscription Impact



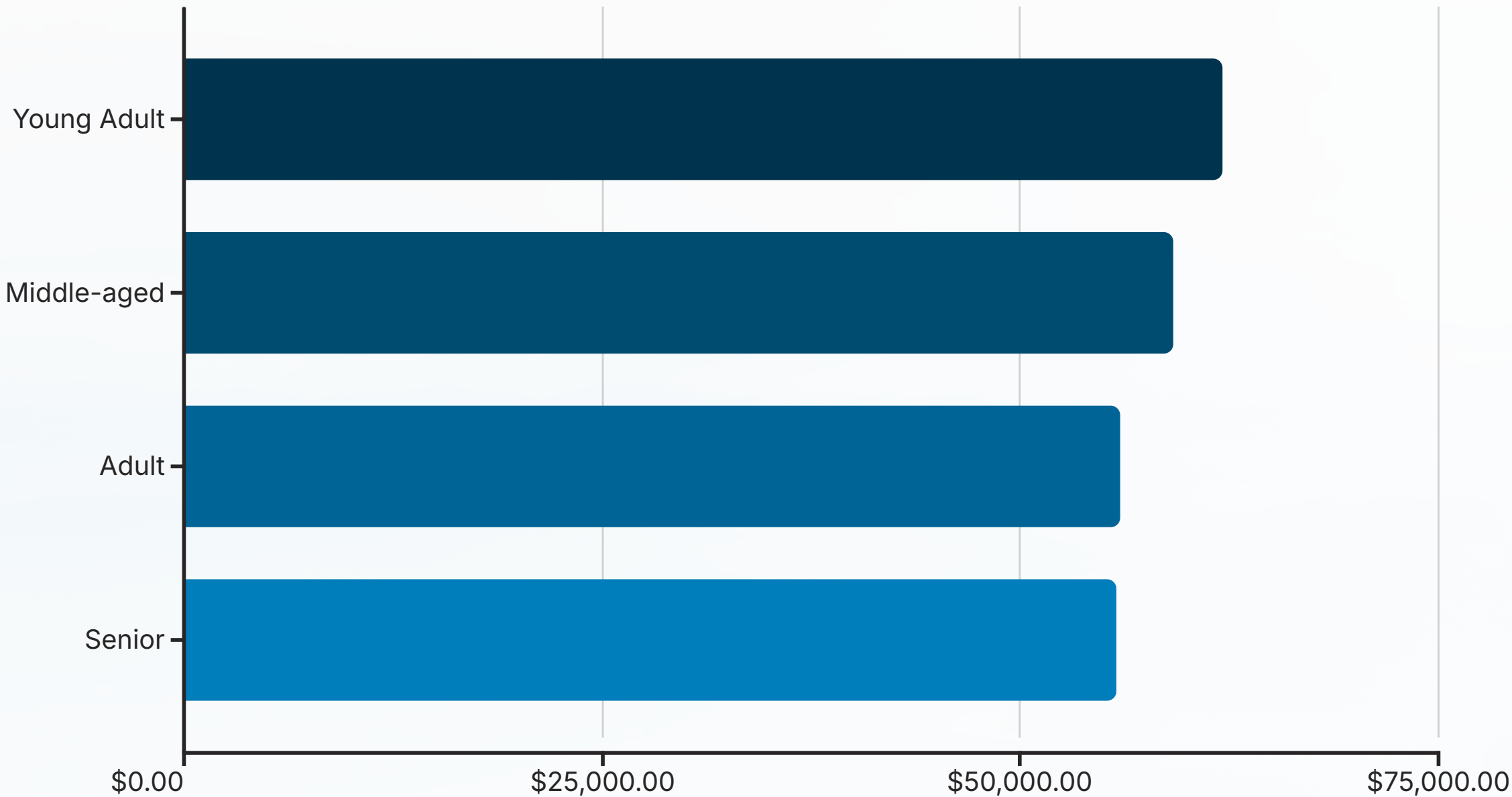
Subscription Status

Only 27% of customers are subscribers

Revenue Comparison

- Subscribers: \$62,645 total
- Non-subscribers: \$170,436 total
- Similar avg spend: ~\$60

Revenue by Age Group



Young adults lead revenue generation, followed closely by middle-aged customers

Strategic Recommendations

1

Boost Subscriptions

Promote exclusive benefits to convert 73% non-subscribers

2

Loyalty Programs

Reward repeat buyers to grow the 80% loyal segment

3

Review Discount Policy

Balance sales boosts with margin control for profitability

4

Product Positioning

Highlight top-rated items like Gloves and Sandals in campaigns

5

Targeted Marketing

Focus on young adults and express-shipping users