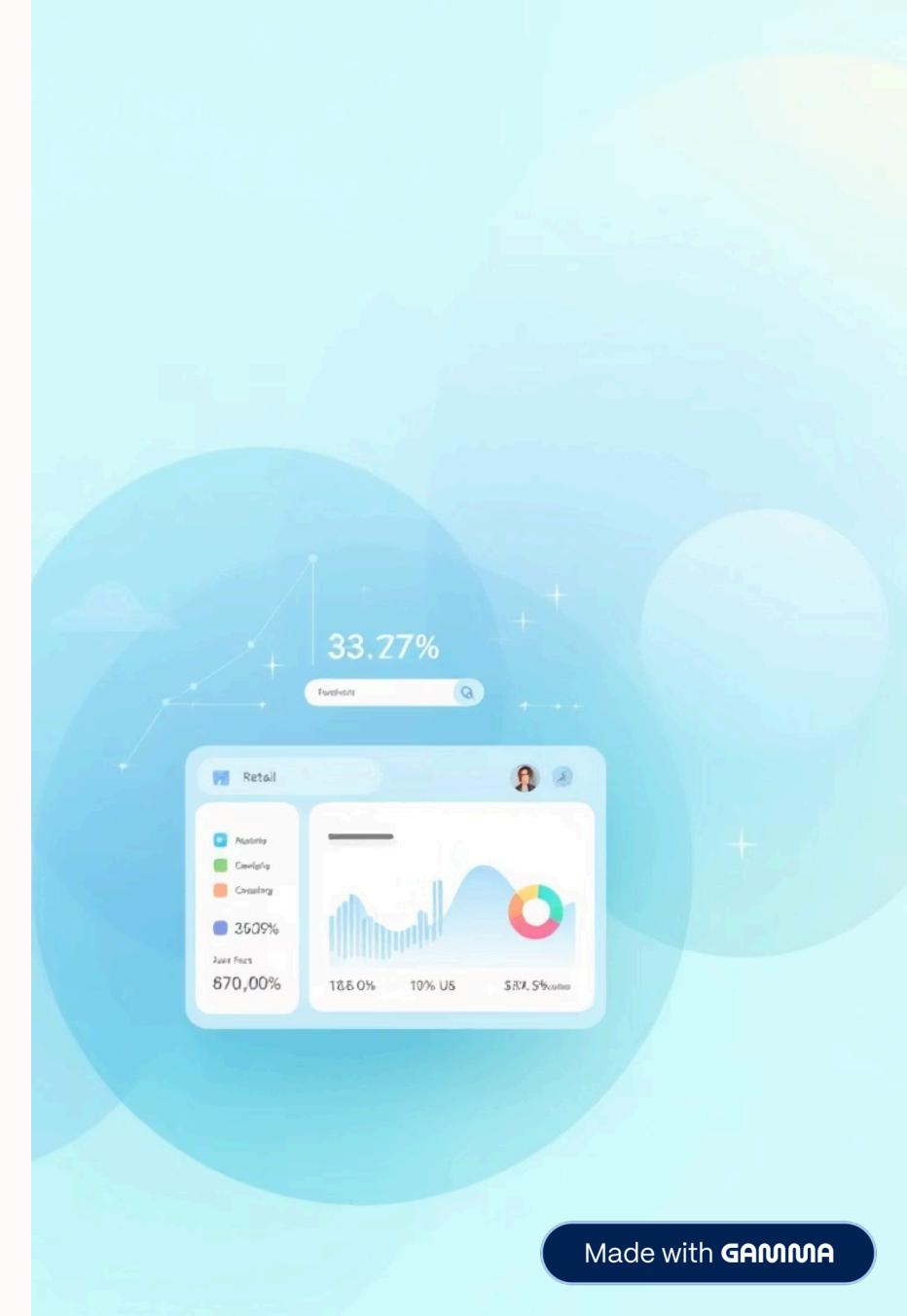


Customer Shopping Behavior Analysis

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



Dataset Overview

3,900

Total Purchases

Transactions analyzed across all categories

18

Data Columns

Comprehensive customer and purchase attributes

50

Locations

Geographic diversity in customer base

25

Product Types

Wide variety across four main categories

Key Features Tracked

- Customer demographics & location
- Purchase details & preferences
- Shopping behavior patterns
- Review ratings & shipping types

Data Quality

Clean dataset with minimal missing values

37 missing values in Review Rating column (handled via median imputation)

Data Preparation Journey

01

Data Loading & Exploration

Imported dataset, checked structure and summary statistics

02

Cleaning & Standardization

Handled missing values, renamed columns to snake_case

03

Feature Engineering

Created age_group and purchase_frequency_days columns

04

Consistency Check

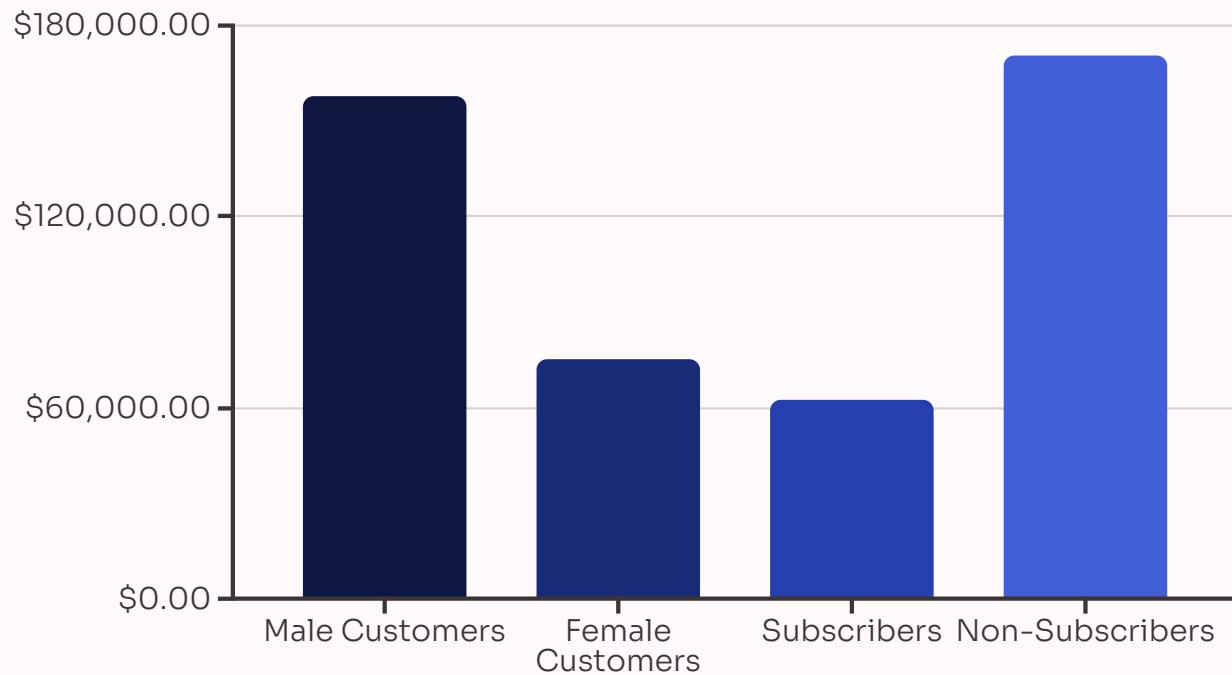
Verified redundant columns, dropped promo_code_used

05

Database Integration

Connected to PostgreSQL for advanced SQL analysis

Revenue Insights



Key Findings

Male customers drive 2x more revenue than female customers

Non-subscribers represent 73% of customer base and revenue

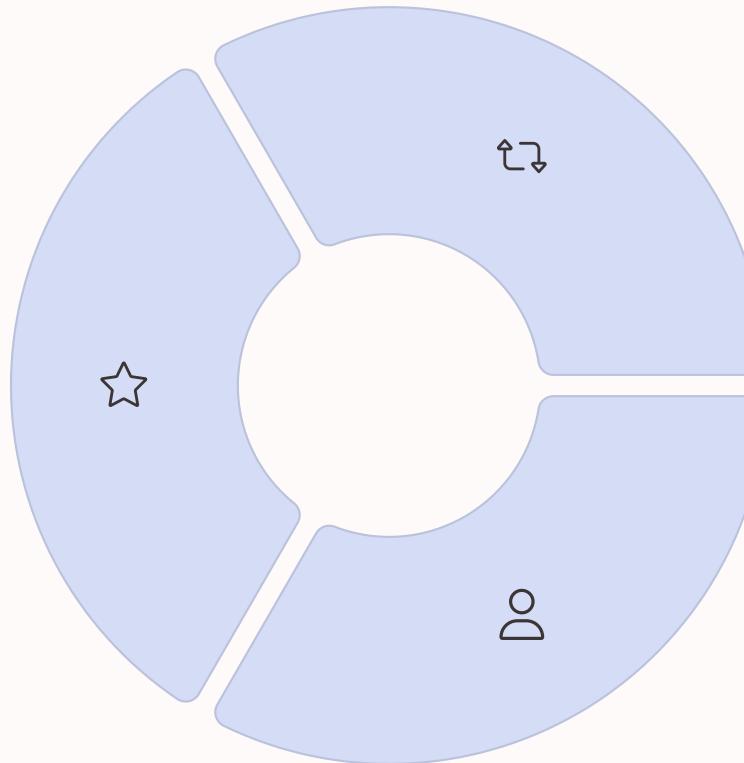
Average spend similar across subscription status: ~\$60

Customer Segmentation

Loyal Customers

3,116 customers

Highest purchase frequency, core revenue drivers



Returning Buyers

701 customers

Growing engagement, conversion opportunity

New Customers

83 customers

Fresh acquisition, nurturing needed

- 958 repeat buyers** (>5 purchases) are subscribers, showing strong correlation between loyalty and subscription status

Product Performance

Top-Rated Products

- **Gloves**

3.86 average rating

- **Sandals**

3.84 average rating

- **Boots**

3.82 average rating

- **Hat**

3.80 average rating

- **Skirt**

3.78 average rating

Best Sellers by Category

Accessories: Jewelry (171 orders)

Clothing: Blouse & Pants (171 orders each)

Footwear: Sandals (160 orders)

Outerwear: Jacket (163 orders)

Discount & Shipping Analysis

High-Value Discount Users

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

Discounts drive volume without sacrificing revenue quality

Discount-Dependent Products

Hat (50%), Sneakers (49.66%), Coat (49.07%)

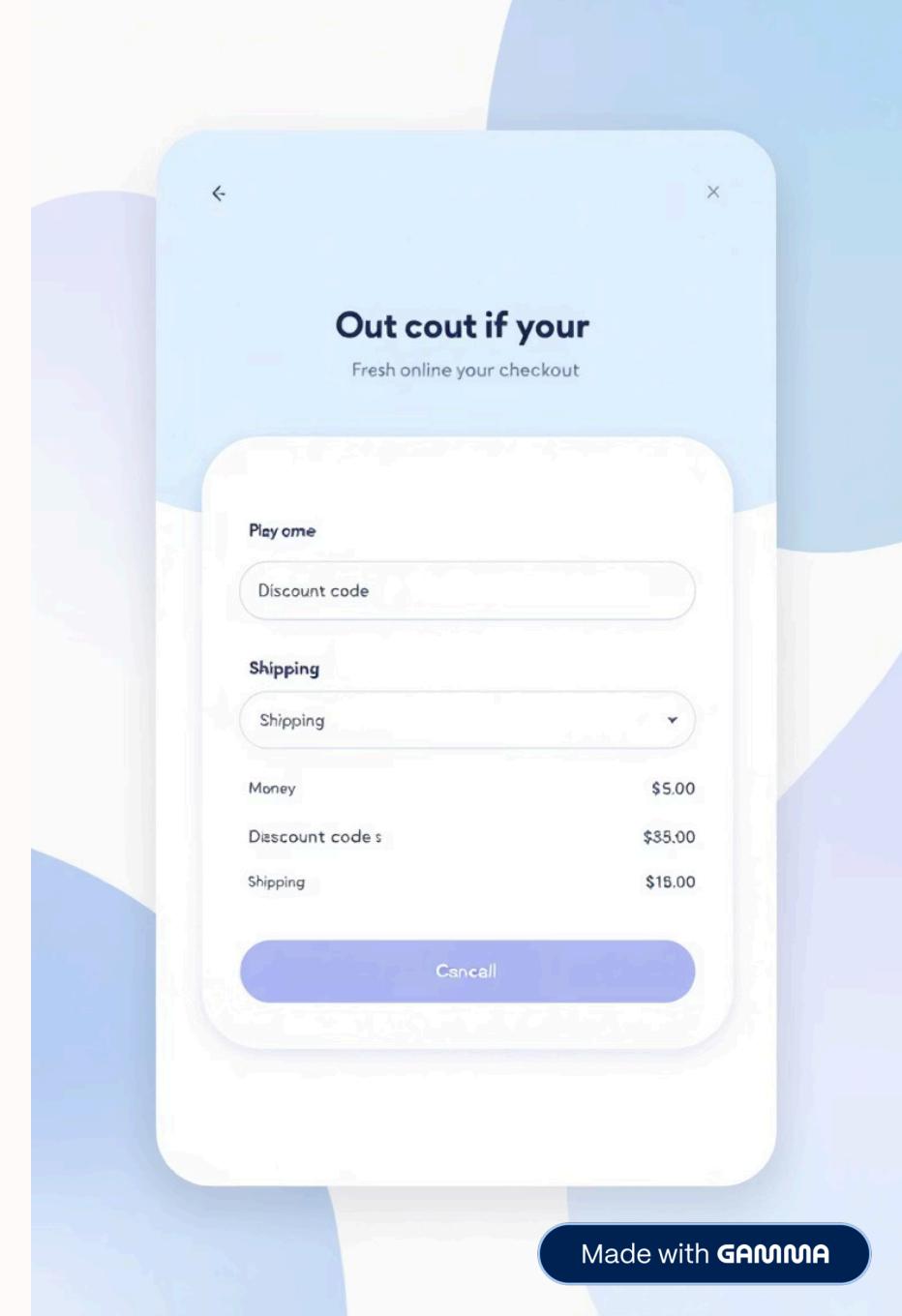
Nearly half of purchases use discounts

Shipping Preferences

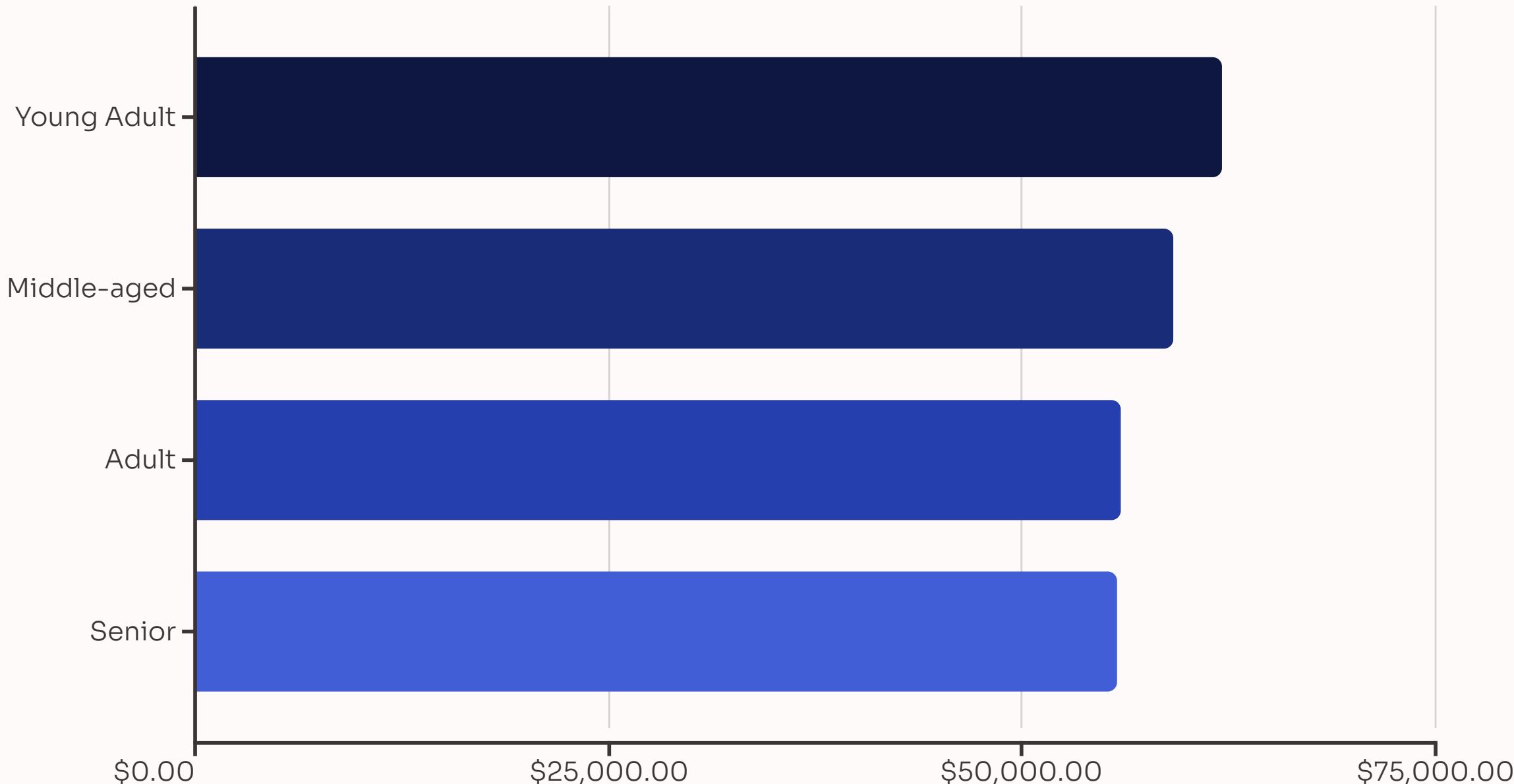
Express: \$60.48 avg spend

Standard: \$58.46 avg spend

Express users willing to pay premium



Age Group Revenue Distribution



Revenue relatively balanced across age groups, with **Young Adults** leading slightly. All segments represent valuable market opportunities.

Strategic Recommendations



Boost Subscriptions

Promote exclusive benefits to convert 73% non-subscriber base



Loyalty Programs

Reward repeat buyers to grow 3,116-strong loyal segment



Optimize Discounts

Balance sales boosts with margin control on high-discount products



Product Positioning

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



Targeted Marketing

Focus on Young Adults and express-shipping users for premium offerings