Customer Shopping Behavior Analysis

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

Dataset Overview

3,900
Total Purchases
Transactions analyzed across all categories

18
Data Points
Customer demographics, purchase details, shopping behavior

50
Locations
Geographic distribution of customers

$59.76
Avg Purchase
Mean transaction value

Made with GAMMA

Data Preparation Process

01

Data Loading & Exploration

Imported dataset using pandas, checked structure and summary statistics

02

Missing Data Handling

Imputed 37 missing Review Rating values using median by category

03

Feature Engineering

Created age groups and purchase frequency metrics

04

Database Integration

Loaded cleaned data into PostgreSQL for analysis

Revenue by Gender

Key Finding

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

Total revenue: $233,081

Top Products by Rating

Gloves

3.86 avg rating

Sandals

3.84 avg rating

Boots

3.82 avg rating

Hat

3.80 avg rating

Skirt

3.78 avg rating

Shipping Insights

Standard Shipping
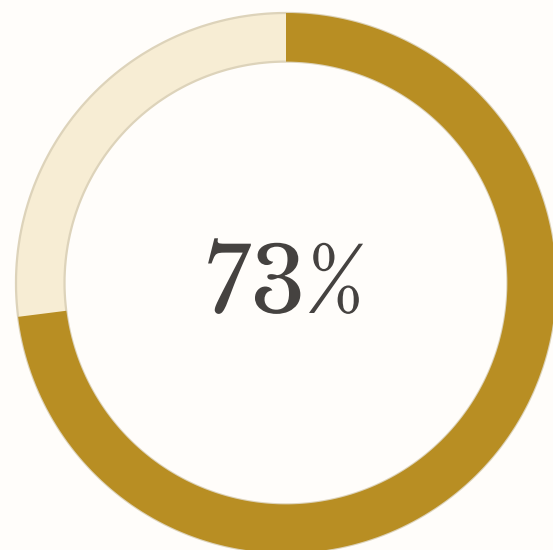
$58.46 average purchase
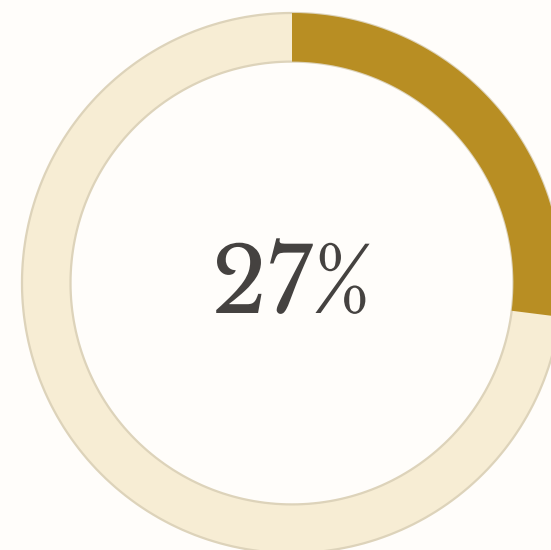

Express Shipping

$60.48 average purchase

Express shipping customers spend **3.5% more** on average

Subscription Analysis

73%

Non-Subscribers

2,847 customers | $59.87 avg spend

27%

Subscribers
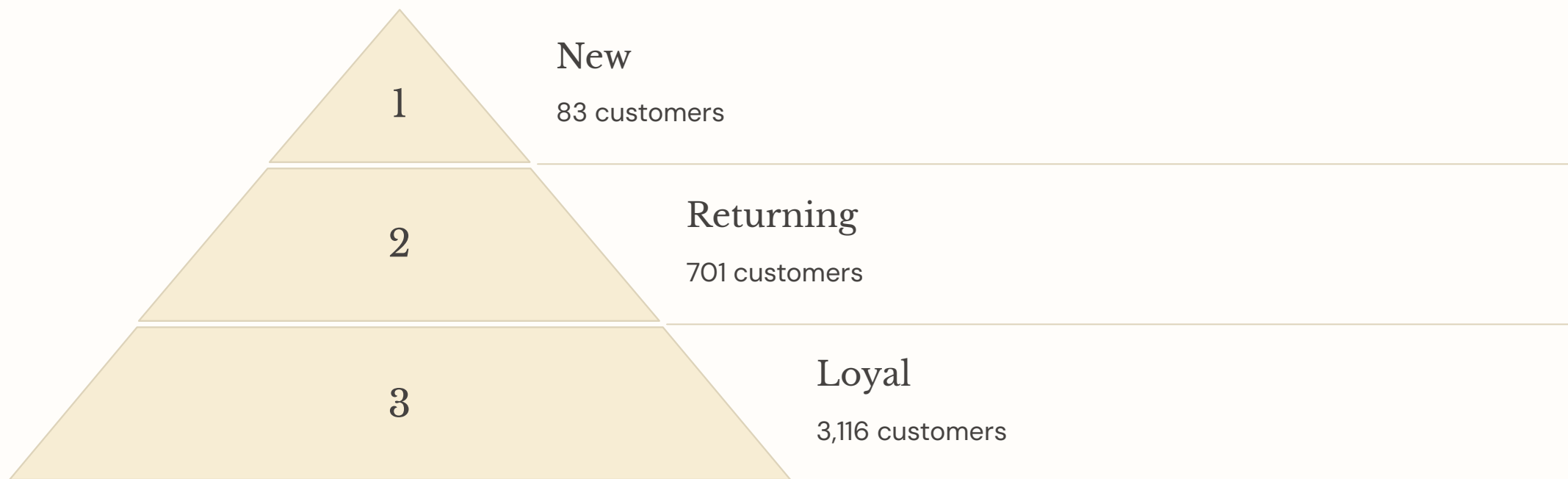
1,053 customers | $59.49 avg spend

Total Revenue

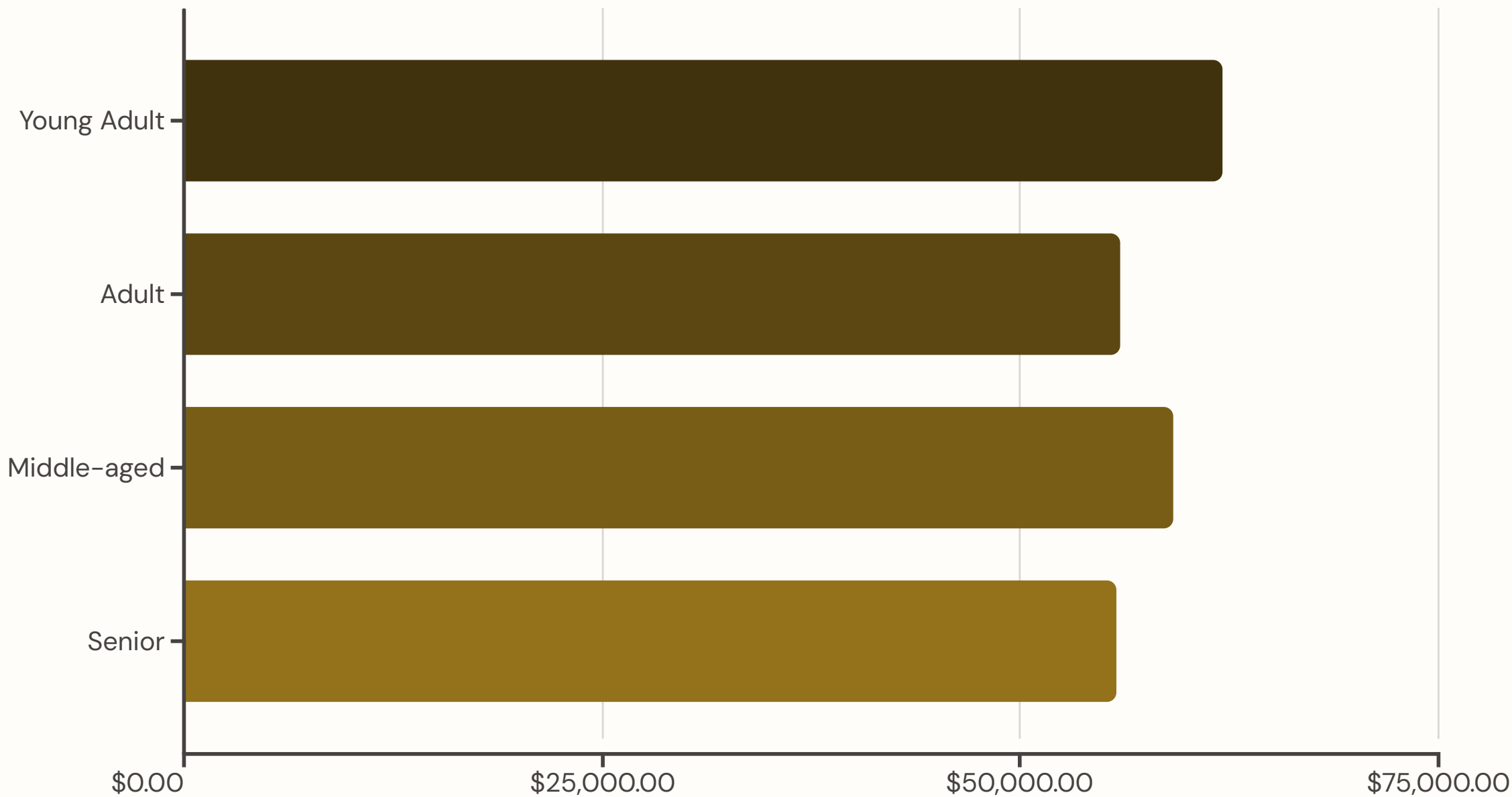- Non-subscribers: **$170,436**
- Subscribers: **$62,645**

Opportunity

Large untapped potential to convert non-subscribers

Customer Segmentation

1 New
83 customers

2 Returning
701 customers

3 Loyal
3,116 customers

80% of customers are loyal with repeat purchases, showing strong retention

Revenue by Age Group

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

Strategic Recommendations

Boost Subscriptions
Promote exclusive benefits to convert 73% non-subscriber base

Loyalty Programs
Reward repeat buyers to strengthen the 80% loyal customer segment

Review Discount Policy
Balance sales boosts with margin control for sustainable growth

Product Positioning
Highlight top-rated items like gloves and sandals in campaigns

Targeted Marketing
Focus on high-revenue young adults and express shipping users