Customer Shopping Behavior Analysis

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

Dataset at a Glance

3,900

Total Purchases

Comprehensive transaction data

18

Data Points

Customer demographics to purchase details

50

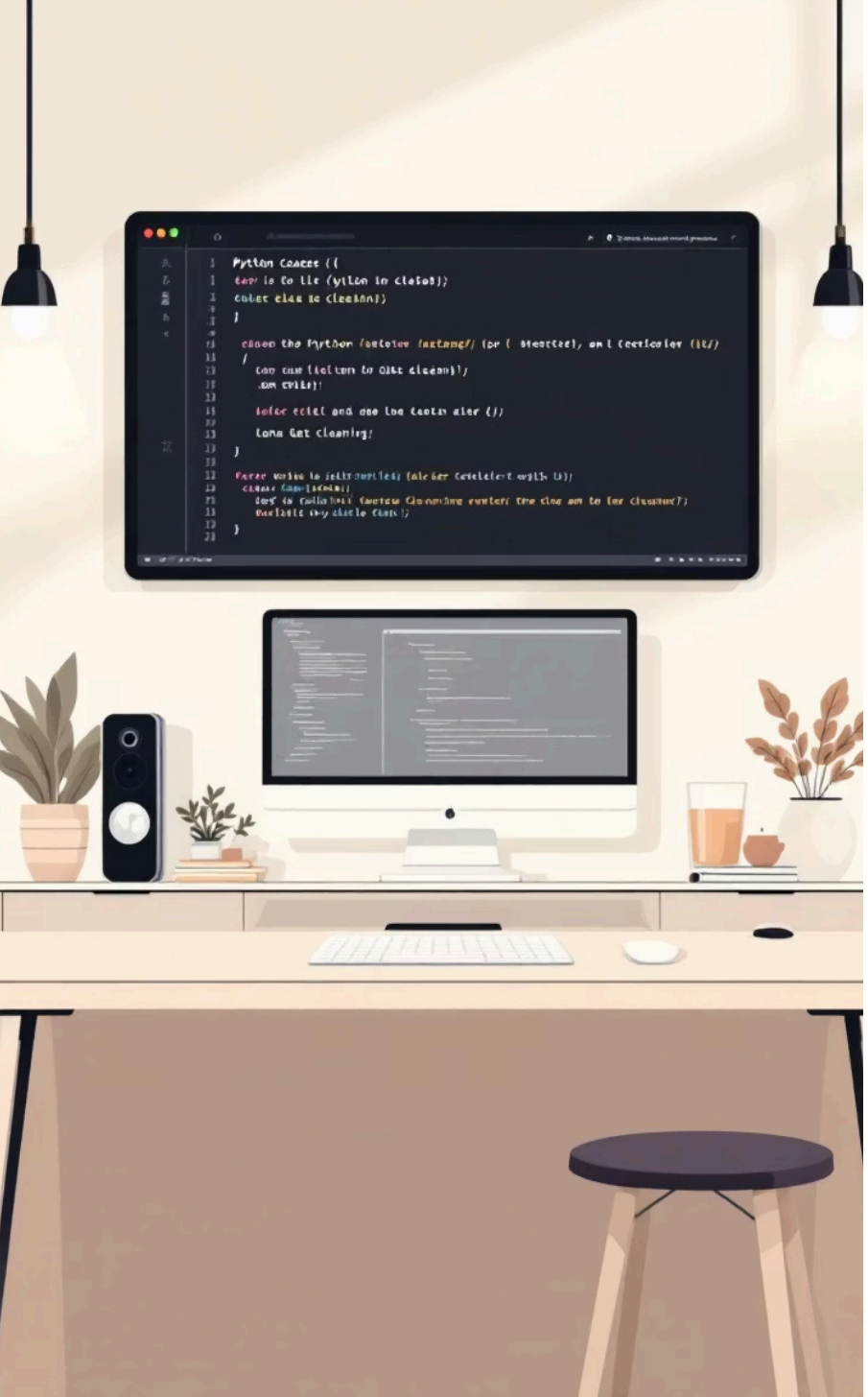
Locations

Geographic diversity

$59.76

Avg Purchase

Typical transaction value



Data Preparation Journey

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

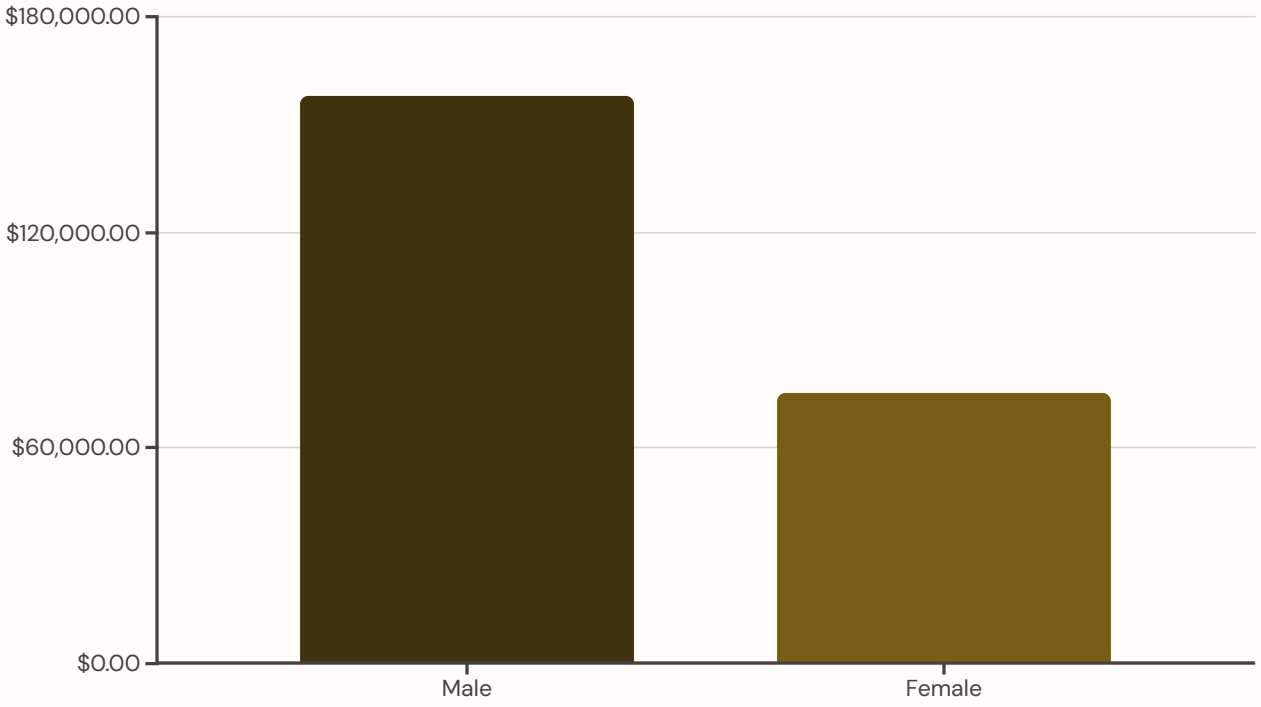
Created age groups and purchase frequency metrics

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

Total revenue: $233,081

Top-Rated Products

1

Gloves

Rating: 3.86

2

Sandals

Rating: 3.84

3

Boots

Rating: 3.82

4

Hat

Rating: 3.80

5

Skirt

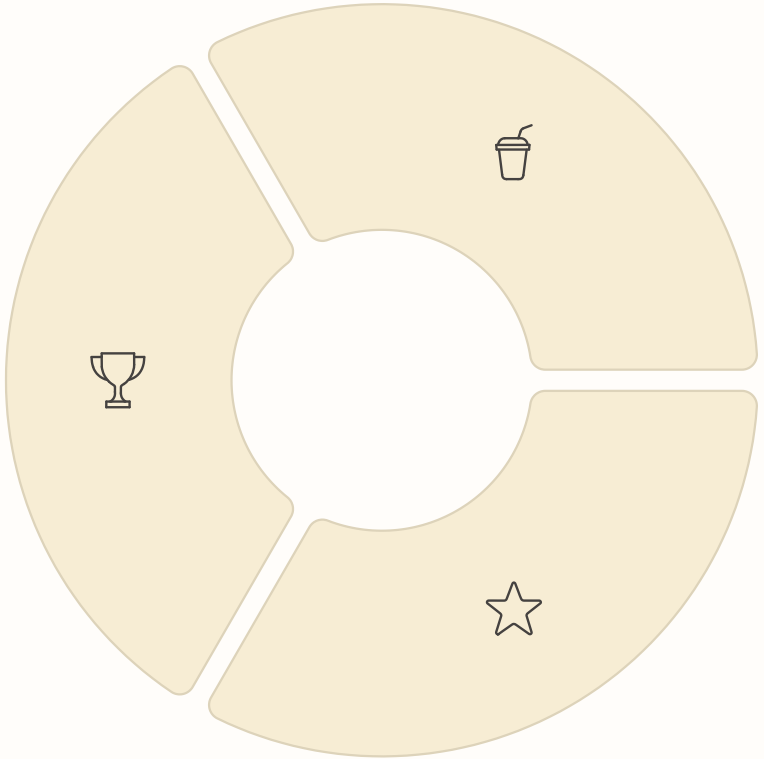
Rating: 3.78

Customer Segmentation

Loyal

3,116 customers

80% of customer base



Returning

701 customers

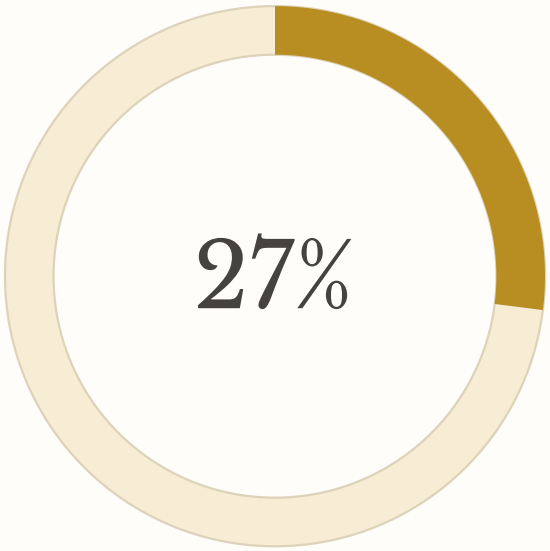
18% of customer base

New

83 customers

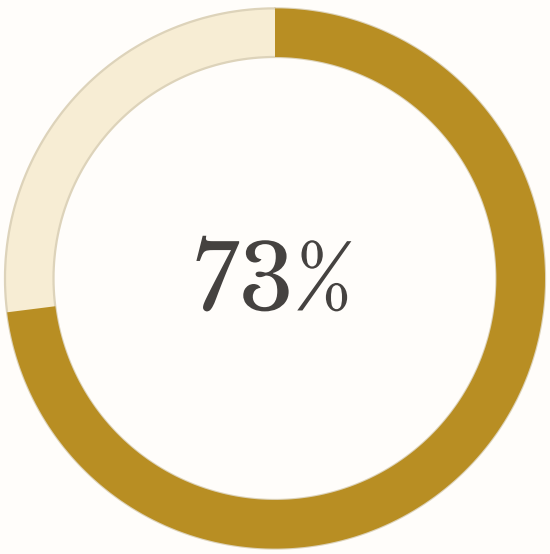
2% of customer base

Subscription Analysis



Subscribers

1,053 customers



Non-Subscribers

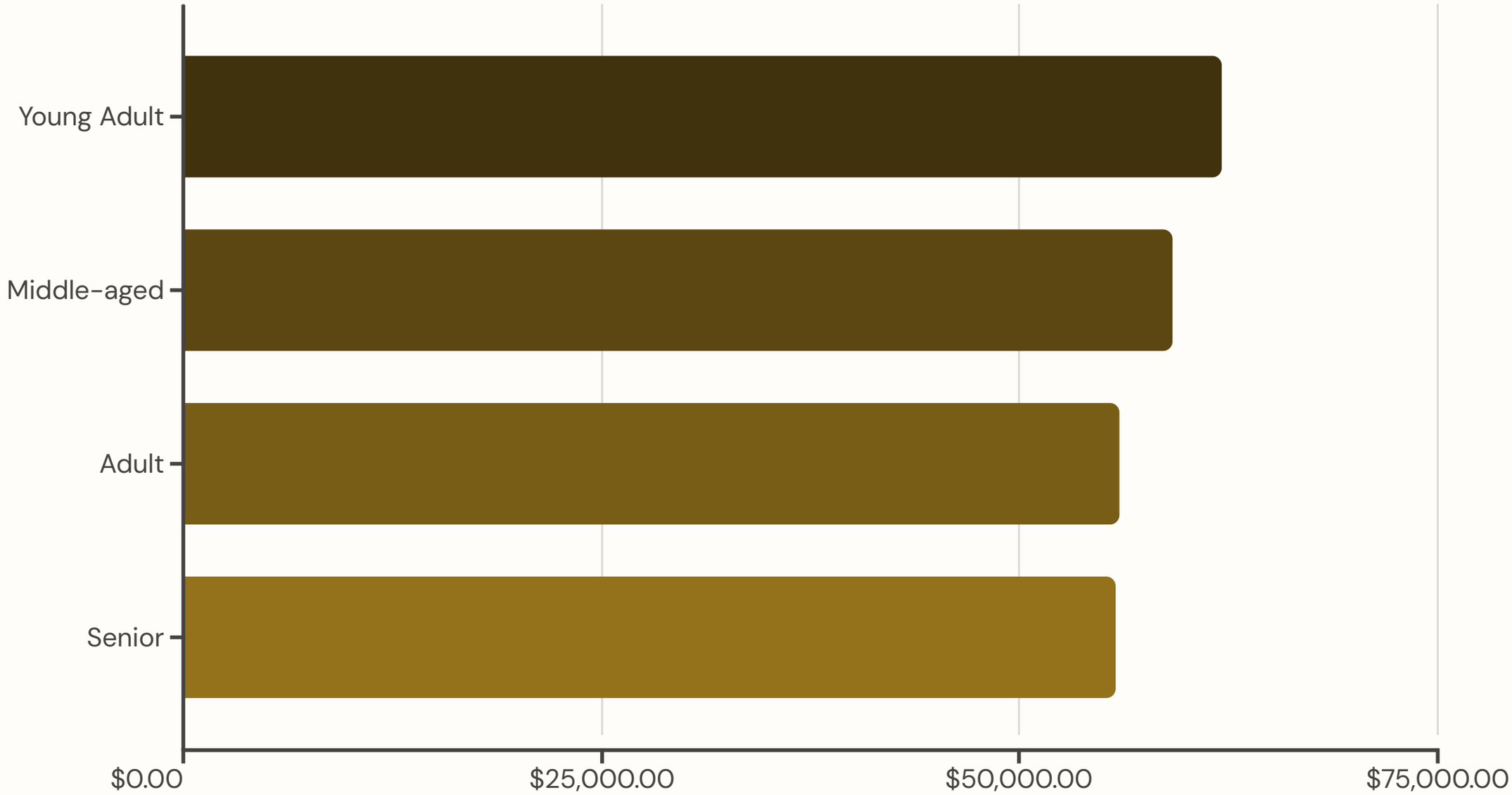
2,847 customers

Spending Patterns

- Subscribers: $59.49 avg spend
- Non-subscribers: $59.87 avg spend
- Minimal spending difference

958 repeat buyers with 5+ purchases have subscriptions

Revenue by Age Group



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

Interactive Dashboard

- Real-time filtering by subscription, gender, category, and shipping
- Visual breakdown of revenue and sales across categories
- Age group performance tracking for targeted marketing

Strategic Recommendations

Boost Subscriptions

Promote exclusive benefits to convert non-subscribers

Loyalty Programs

Reward repeat buyers to increase retention

Review Discounts

Balance sales boosts with margin control

Targeted Marketing

Focus on high-revenue age groups and express shipping users