

# Customer Shopping Behavior Analysis

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





# Dataset Overview

**3,900**

**Total Purchases**

Transactions analyzed

**18**

**Data Points**

Features per  
transaction

**4**

**Categories**

Product segments

**50**

**Locations**

Geographic coverage

Key features include customer demographics, purchase details, shopping behavior, and subscription status

# Data Preparation Journey

01

## Data Loading

Imported dataset using pandas

02

## Exploration

Analyzed structure and summary statistics

03

## Cleaning

Imputed 37 missing review ratings by category median

04

## Feature Engineering

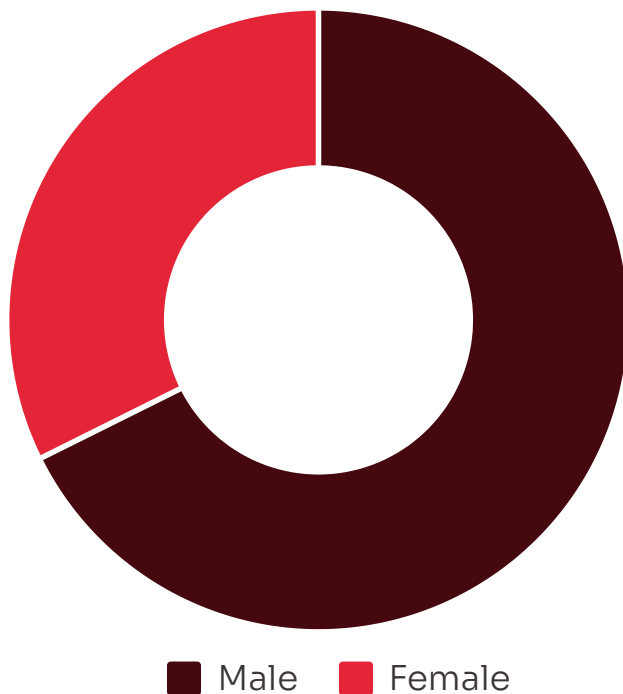
Created age groups and purchase frequency metrics

05

## Database Integration

Loaded cleaned data into PostgreSQL

# Revenue by Gender



## Key Insight

Male customers generate **68% of total revenue**, more than double female contribution

Consider targeted campaigns to increase female customer engagement

# Top Performing Products



## Gloves

Highest rated: **3.86** stars



## Sandals

Rating: **3.84** stars



## Boots

Rating: **3.82** stars



## Hat

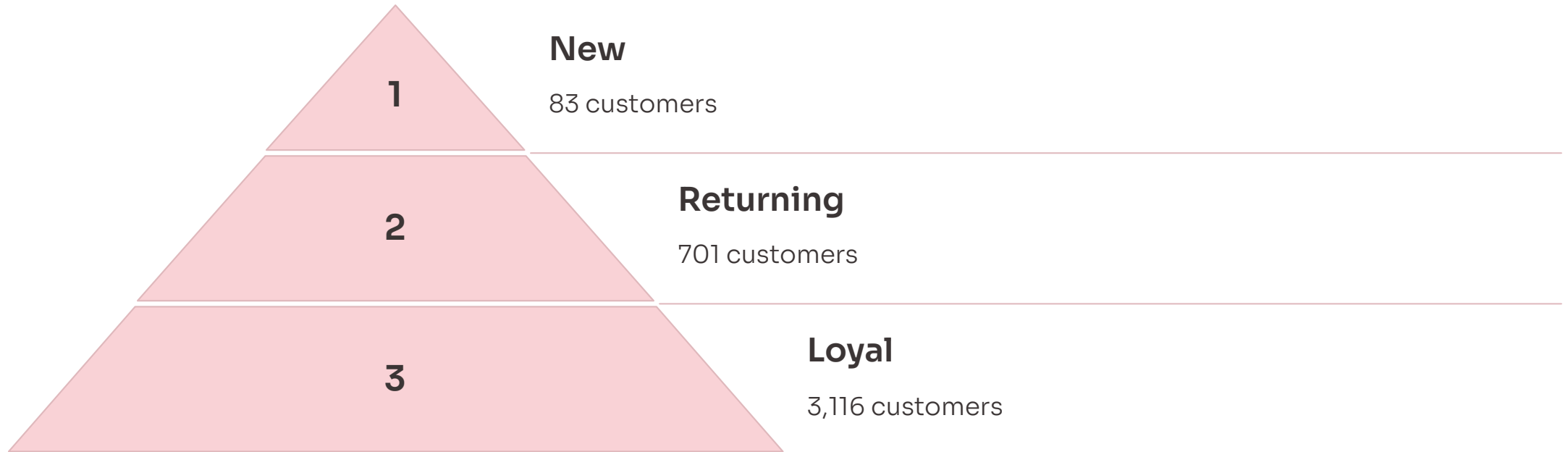
Rating: **3.80** stars



## Skirt

Rating: **3.78** stars

# Customer Segmentation Analysis



**80% of customers are loyal**, indicating strong retention but opportunity to convert new buyers

# Subscription Impact

## Subscribers

- 1,053 customers (27%)
- Average spend: **\$59.49**
- Total revenue: **\$62,645**

## Non-Subscribers

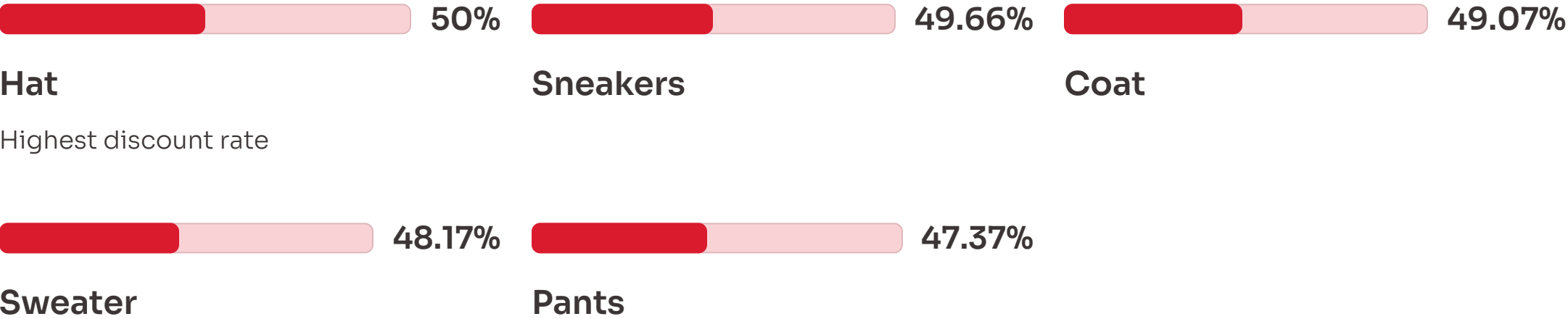
- 2,847 customers (73%)
- Average spend: **\$59.87**
- Total revenue: **\$170,436**

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Among repeat buyers (5+ purchases): **958 subscribed vs. 2,518 non-subscribed**

Significant opportunity to convert loyal customers into subscribers

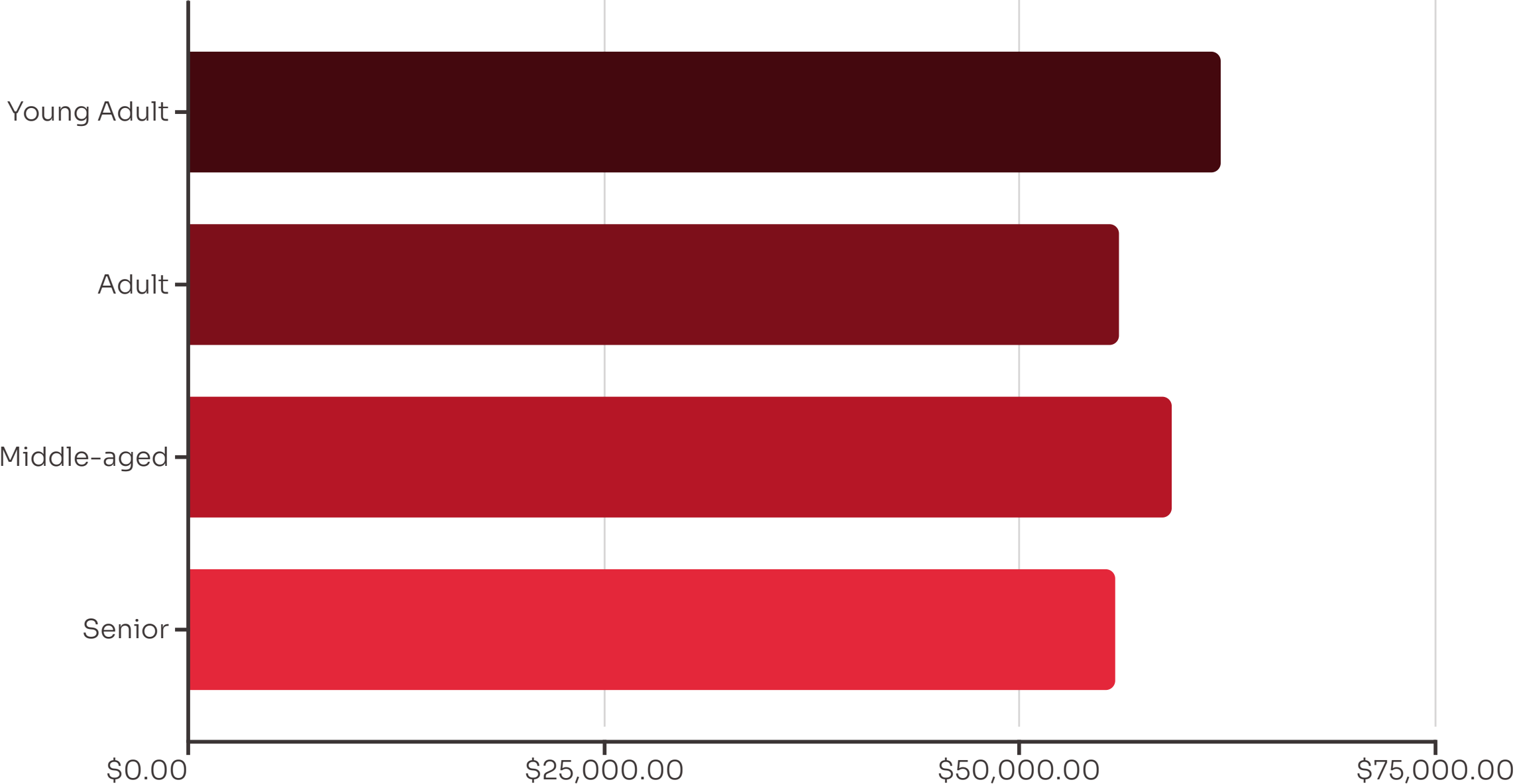
# Discount Strategy Insights



📌 **839 customers** used discounts but still spent above average (\$59.76), indicating price isn't the only driver



# Revenue by Age Group



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

# Strategic Recommendations

## Boost Subscriptions

Promote exclusive benefits to convert 2,518 repeat non-subscribers

## Loyalty Programs

Reward repeat buyers to strengthen the 80% loyal customer base

## Review Discount Policy

Balance sales boosts with margin control—839 customers spend high without discounts

## Product Positioning

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

## Targeted Marketing

Focus on high-revenue segments: young adults and express shipping users