

# 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 Points

Features tracked per  
customer

**25**

## Product Types

Items across 4 major  
categories

**50**

## Locations

Geographic markets  
covered

# Data Preparation Journey

01

## Data Loading & Exploration

Imported dataset, analyzed structure and summary statistics

03

## Feature Engineering

Created age groups and purchase frequency metrics

02

## Missing Data Handling

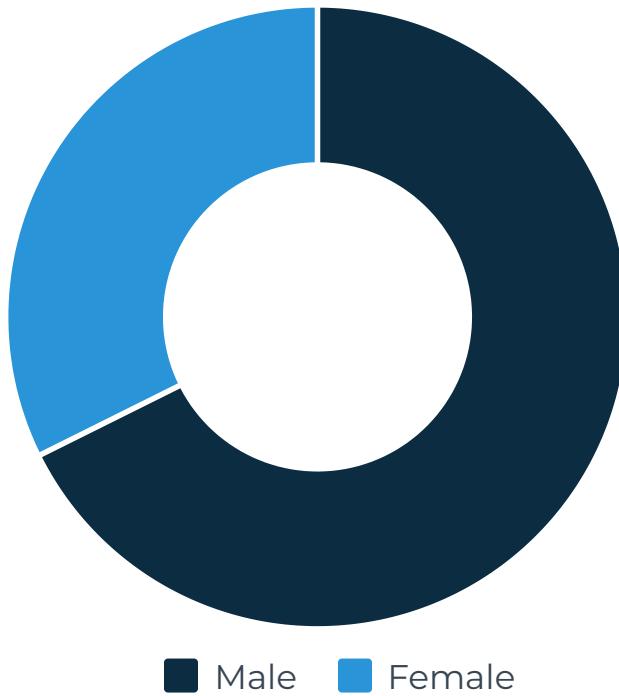
Imputed 37 missing review ratings using category medians

04

## Database Integration

Connected to PostgreSQL for advanced SQL analysis

# Revenue by Gender

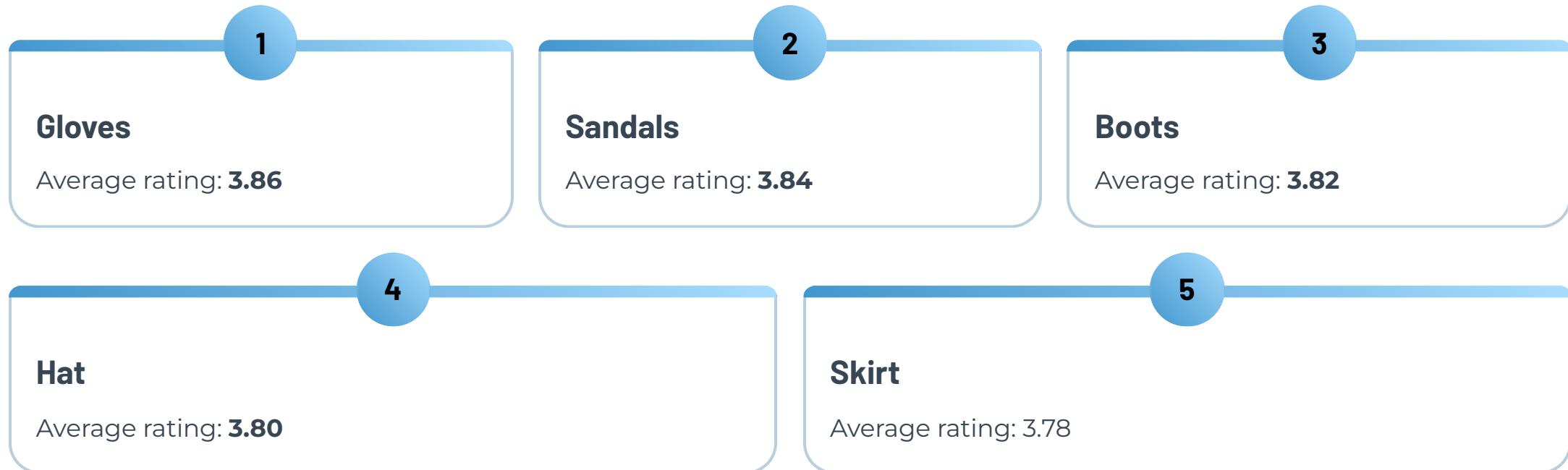


## Key Insight

Male customers generate 68% of total revenue, significantly outpacing female shoppers.

Strategic opportunity to boost female customer engagement and spending.

# Top-Rated Products





## Shipping & Spending Patterns

Express Shipping

\$60.48

Average purchase amount

Express shipping customers spend **3.5% more** per transaction—target this segment for premium offerings.

Standard Shipping

\$58.46

Average purchase amount

# Subscription Analysis

## Subscribers

**1,053 customers**

Avg spend: **\$59.49**

Total revenue: **\$62,645**

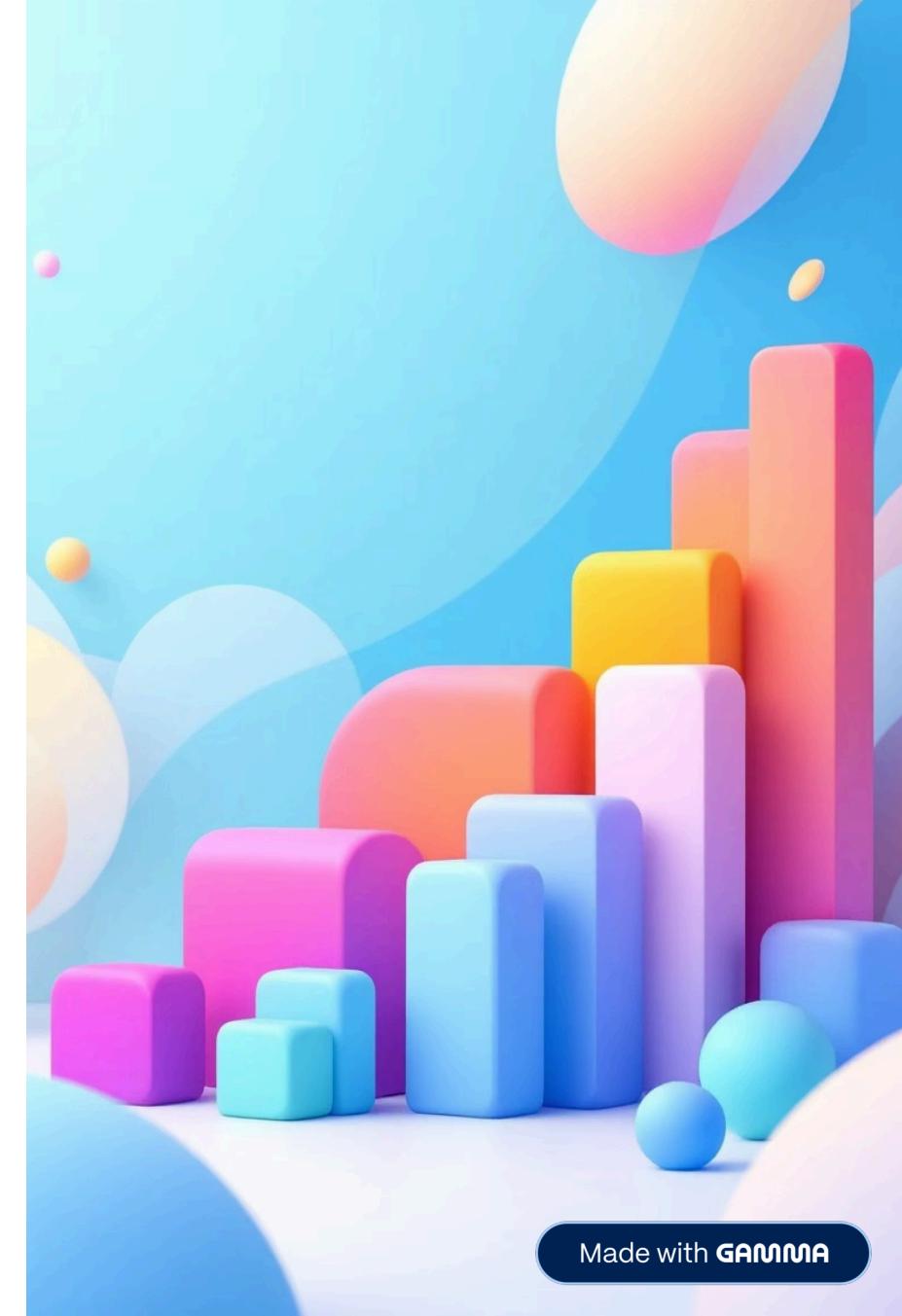
## Non-Subscribers

**2,847 customers**

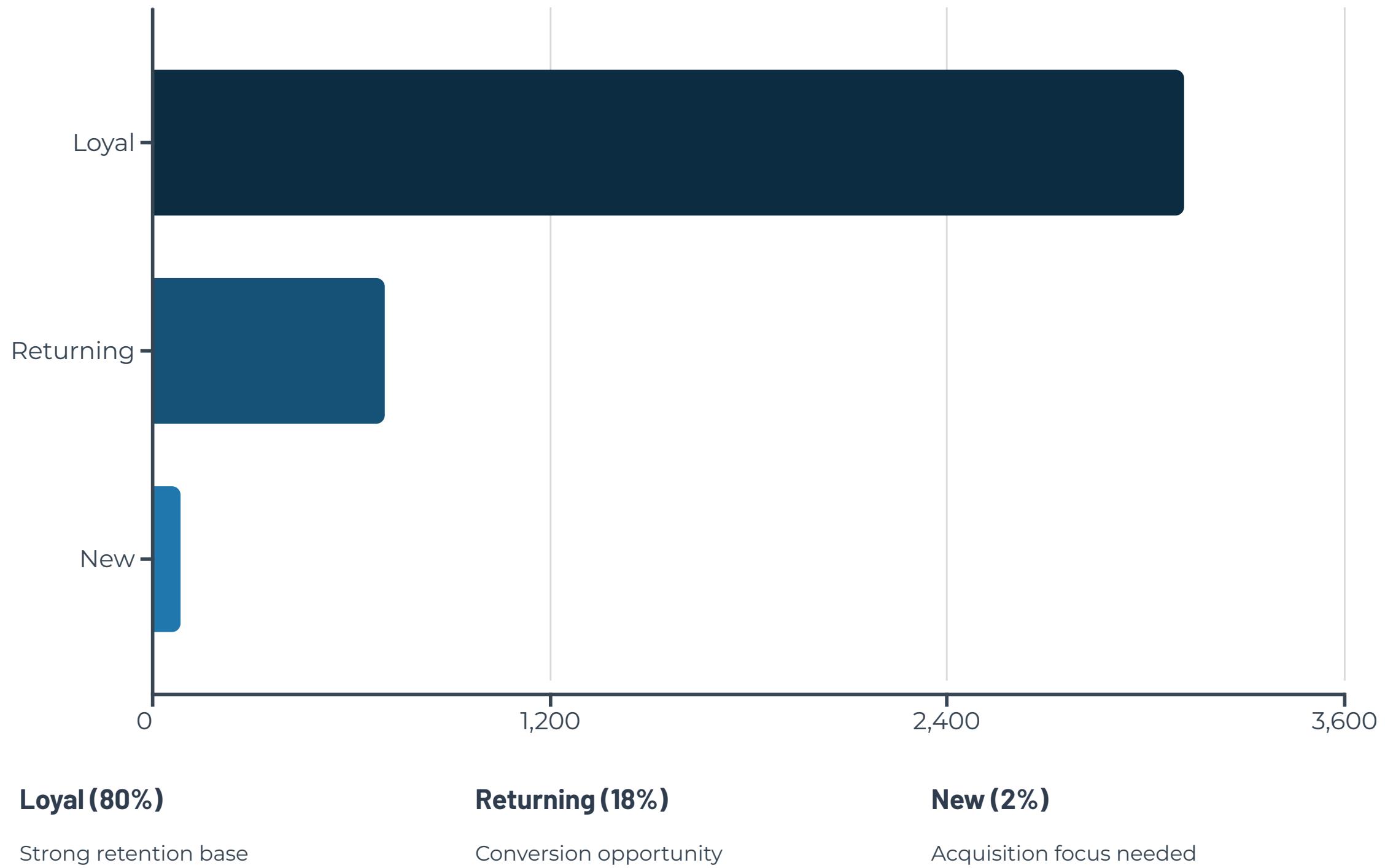
Avg spend: **\$59.87**

Total revenue: **\$170,436**

- Subscribers represent only **27% of customers** but maintain comparable spending levels—huge growth opportunity!



# Customer Segmentation



# Revenue by Age Group



## Young Adult

\$62,143 total revenue

## Middle-aged

\$59,197 total revenue

## Adult

\$55,978 total revenue

## Senior

\$55,763 total revenue

Revenue distribution is **remarkably balanced** across age groups—multi-generational appeal confirmed.

# Strategic Recommendations



## Boost Subscriptions

Promote exclusive benefits to convert non-subscribers



## Loyalty Programs

Reward repeat buyers to strengthen retention



## Review Discounts

Balance sales boosts with margin control



## Targeted Marketing

Focus on high-revenue segments and express shippers

