

Customer Shopping Behavior Analysis

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





DATASET OVERVIEW

The Foundation

3,900

Total Purchases

Transactions analyzed across all categories

18

Data Points

Features per customer transaction

50

Locations

Geographic coverage

25

Products

Unique items tracked



Data Preparation & Cleaning

01

Data Loading

Imported dataset using pandas

02

Exploration

Analyzed structure and summary statistics

03

Missing Data

Imputed 37 missing review ratings using median

04

Feature Engineering

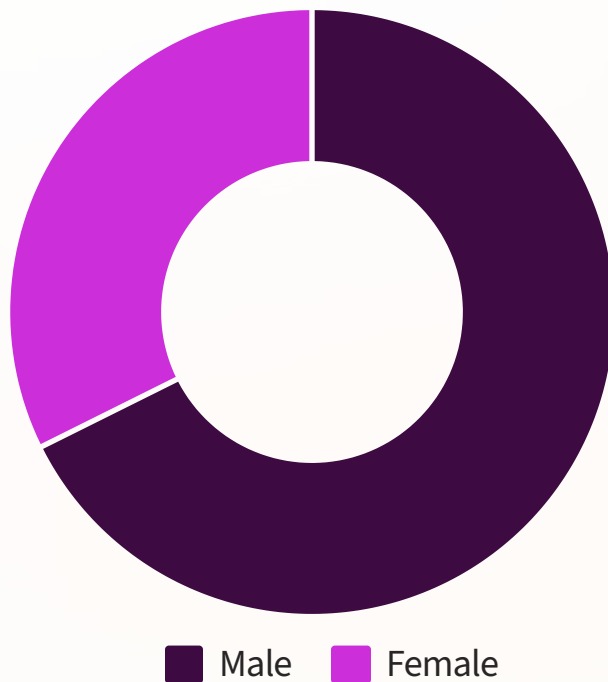
Created age groups and purchase frequency metrics

05

Database Integration

Loaded cleaned data into PostgreSQL

Revenue by Gender



Key Finding

Male customers generate 68% of total revenue

Female segment shows opportunity for targeted growth campaigns

Top Products by Rating



3.86/5

Gloves



3.84/5

Sandals



3.82/5

Boots



3.80/5

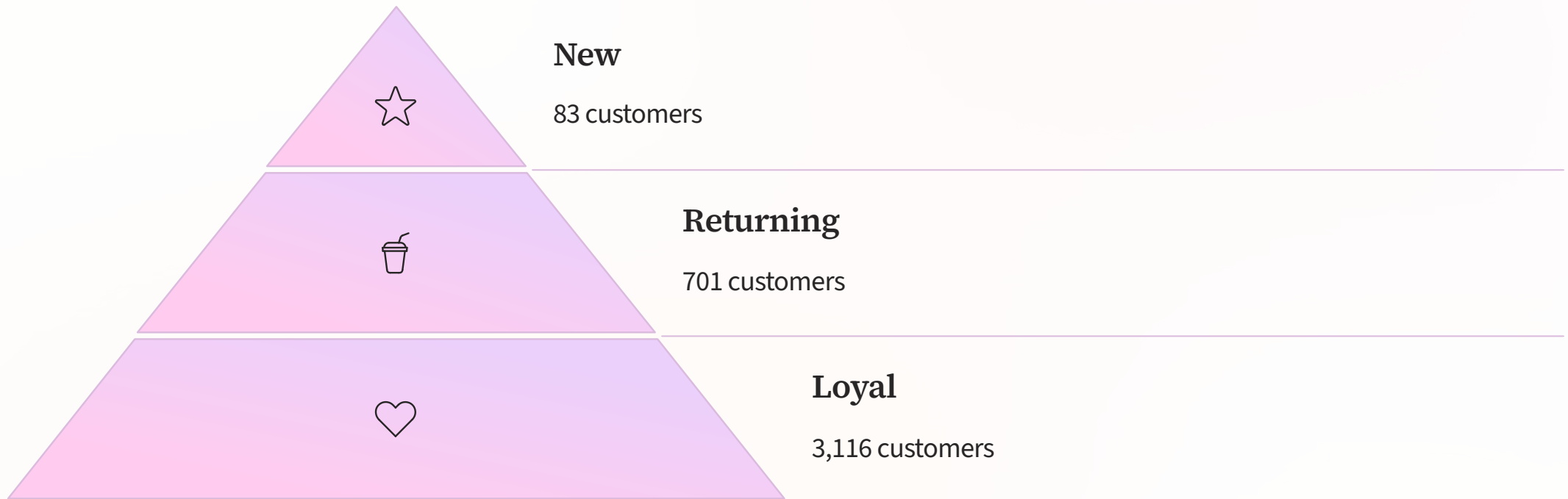
Hat



3.78/5

Skirt

Customer Segmentation Insights



80% of customer base classified as loyal - strong retention foundation

Subscribers vs. Non-Subscribers

Average Spend Comparison

- Subscribers: \$59.49
- Non-subscribers: \$59.87

Minimal spend difference suggests opportunity to enhance subscription value proposition

27%

Subscribers

1,053 customers

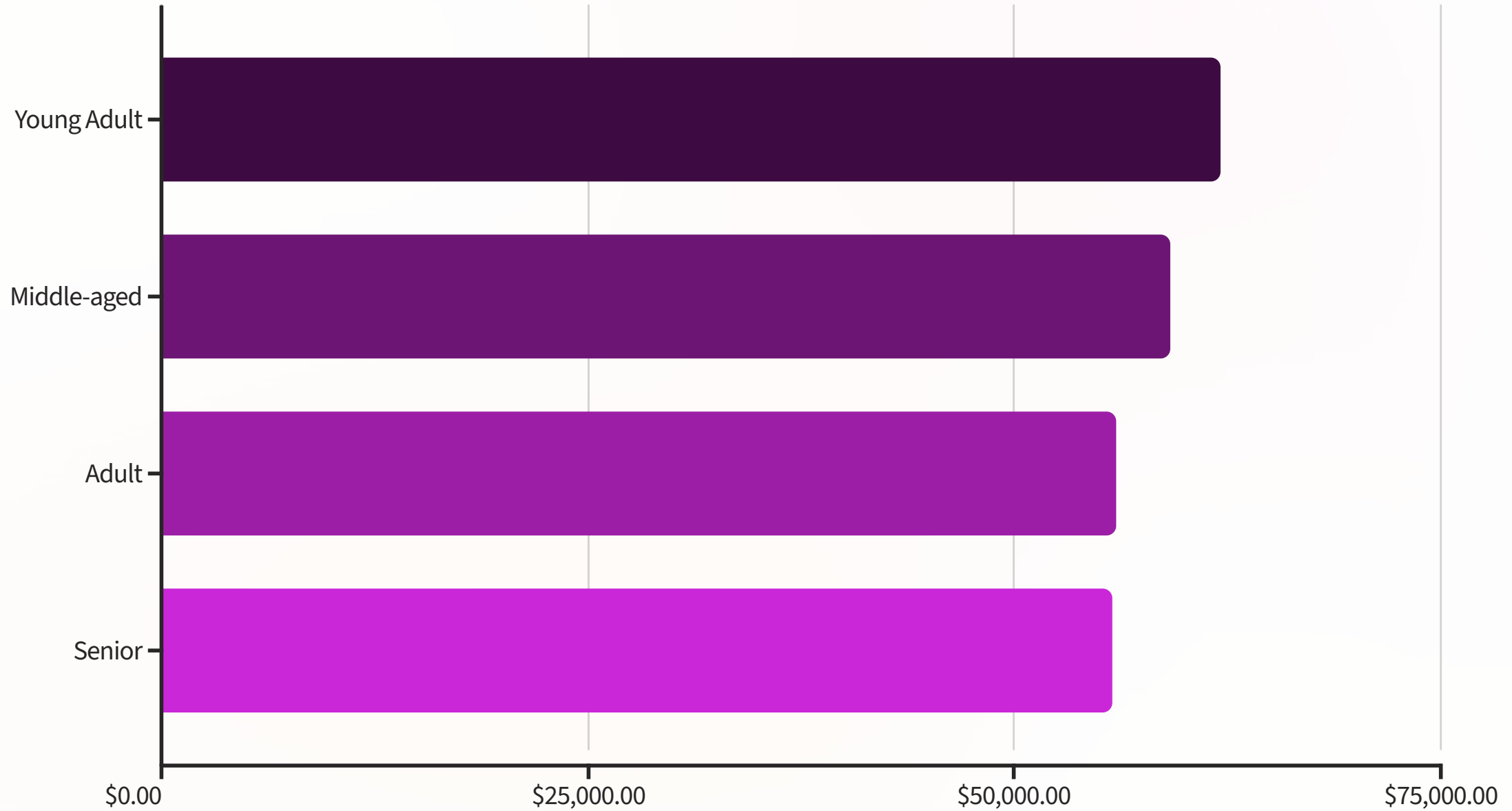
73%

Non-Subscribers

2,847 customers



Revenue by Age Group



Young adults lead revenue generation - prime target for marketing campaigns

Interactive Dashboard

3.9K Customers

Total analyzed

\$59.76 Average

Purchase amount

3.75 Rating

Average review

Customer Behavior Dashboard



Strategic Action Plan

1

Boost Subscriptions

Promote exclusive benefits to convert 73% non-subscriber base

2

Loyalty Programs

Reward repeat buyers to strengthen 80% loyal segment

3

Review Discount Policy

Balance sales boosts with margin control - 839 high-spending discount users identified

4

Product Positioning

Highlight top-rated items like gloves and sandals in campaigns

5

Targeted Marketing

Focus on young adults and express-shipping users for maximum ROI