

# Customer Shopping Behavior Analysis

A comprehensive data study of 3,900 transactions to uncover spending patterns, product preferences, and strategic growth opportunities.

# Dataset Overview

3.9K

Total Purchases

Rows of transactional data analyzed.

18

Key Features

Demographics, purchase details, and  
behavior metrics.

50

Locations

Unique geographic data points across  
the dataset.

# Data Preparation & Engineering

Transforming raw data into actionable insights using Python and Pandas.

01

## Cleaning

Imputed missing review ratings using category medians.

02

## Standardization

Converted columns to snake\_case for documentation.

03

## Feature Engineering

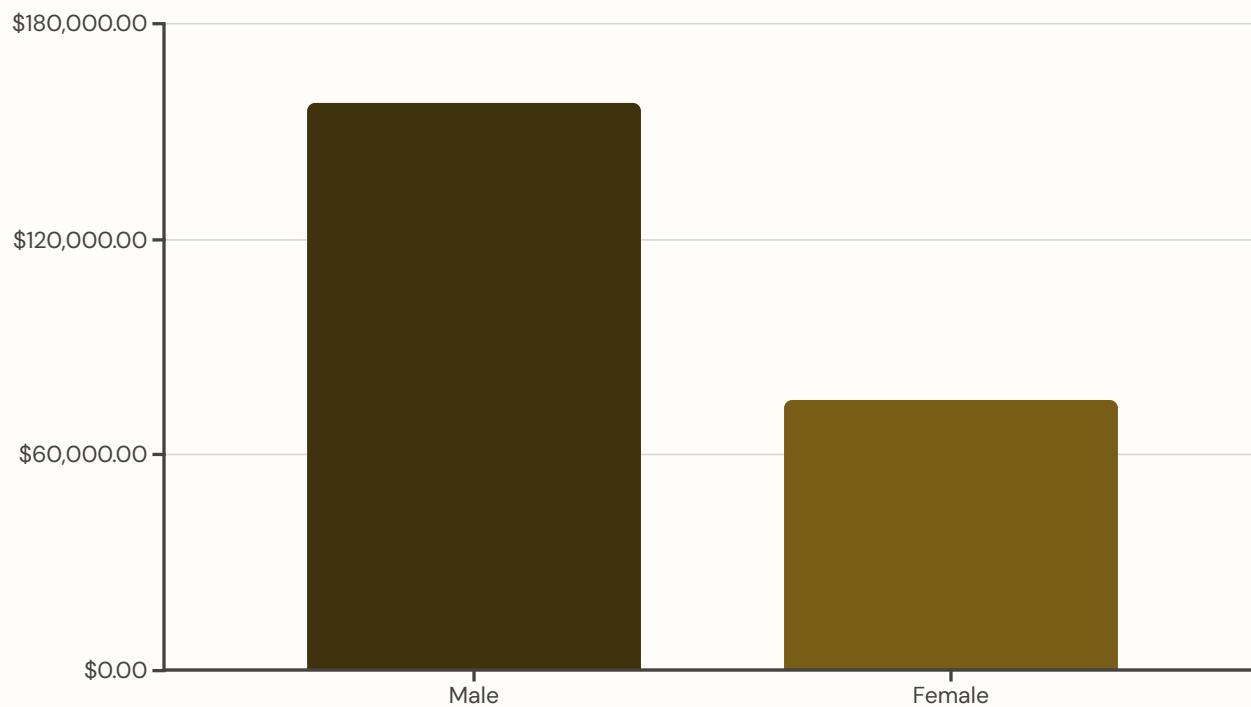
Created age groups and purchase frequency metrics.

04

## Integration

Loaded cleaned data into PostgreSQL for SQL analysis.

# Revenue & Demographics



## Gender Spending Gap

Male customers contribute significantly higher total revenue compared to female customers in this dataset.

# Top Rated Products

Identifying quality leaders based on average customer review ratings.



3.86

Gloves



3.84

Sandals



3.82

Boots



3.80

Hat

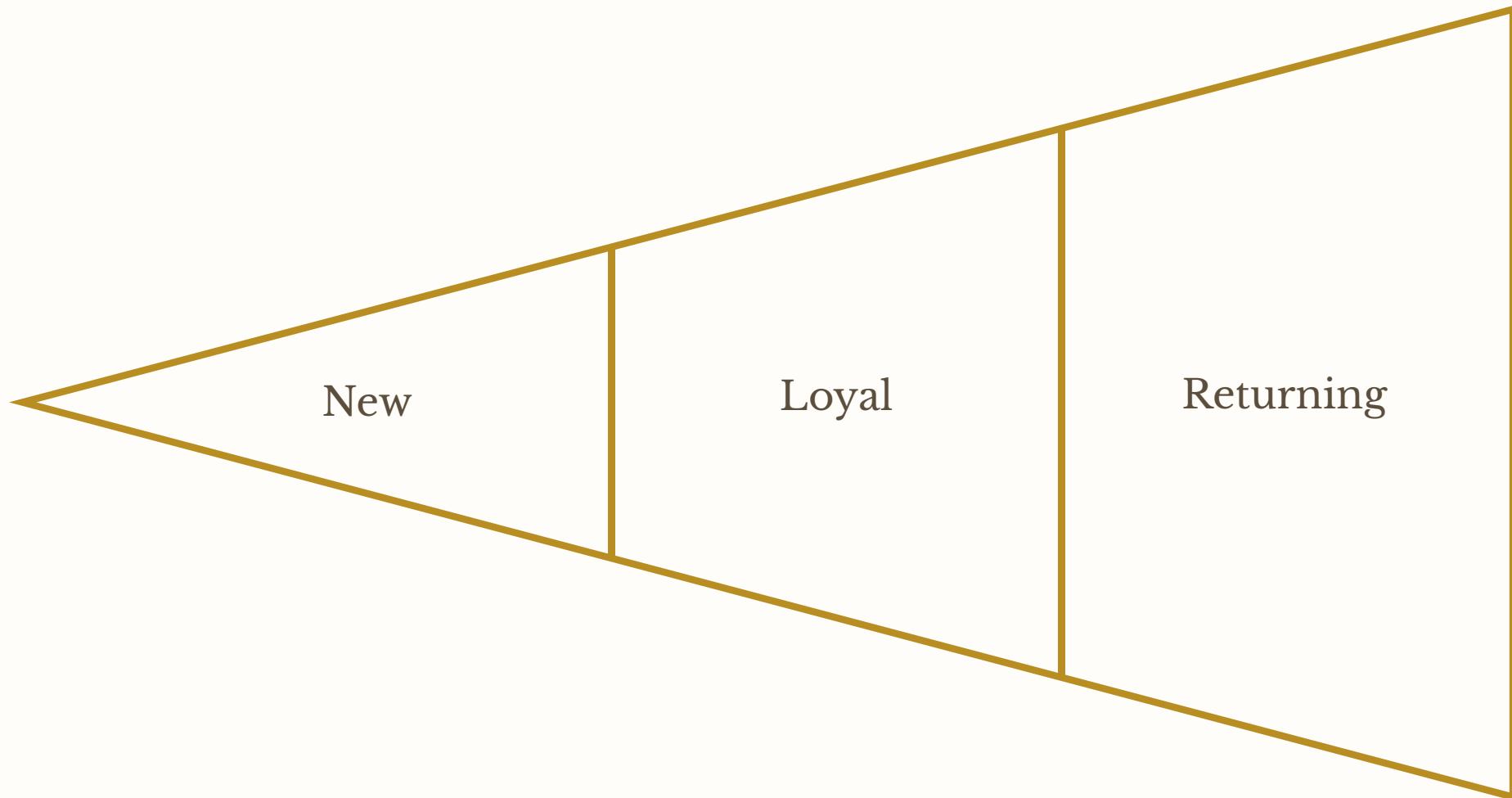
# Subscription & Loyalty Analysis

## Customer Segments

- **Loyal:** 3,116 customers
- **Returning:** 701 customers
- **New:** 83 customers

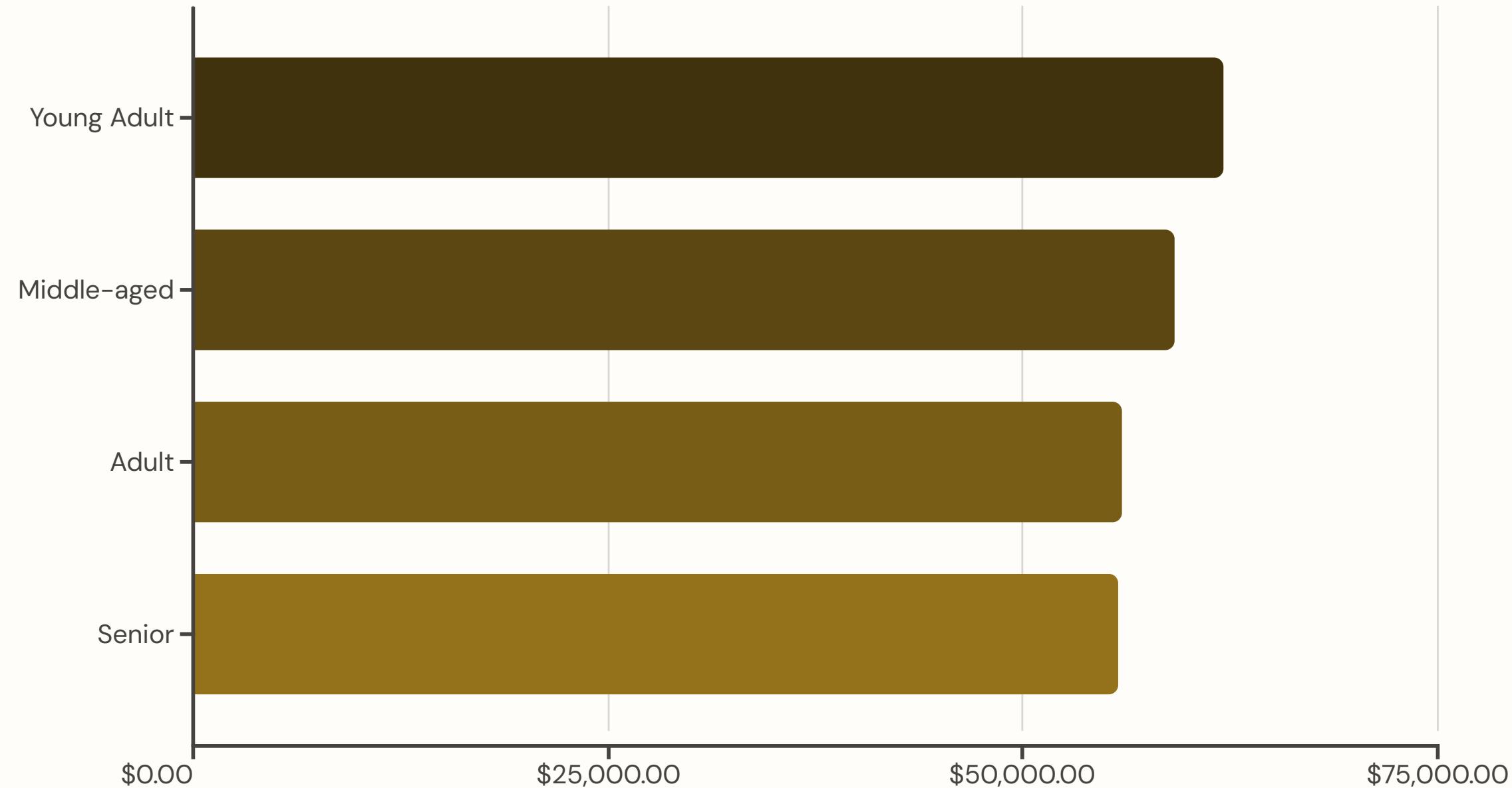
## Subscription Impact

Non-subscribers actually show a slightly higher average spend (\$59.87) than subscribers (\$59.49).



# Revenue by Age Group

Spending is remarkably balanced across different life stages.



# Interactive Dashboard Insights

\$59.76

Average Purchase Amount

27%

Subscription Rate

3.75

Average Review Rating

## Customer Behavior Dashboard



Customers

\$59.76

Average Purchase Amount

Subscription Status



No 73%

Revenue by Category



Sales by Age

Young Adult

Middle-aged

Senior

Senior+

Made with GAMMA

# Category Performance

Top products driving volume within each major category.

Category	Top Item	Orders
Clothing	Blouse	171
Accessories	Jewelry	171
Footwear	Sandals	160
Outerwear	Jacket	163

# Strategic Recommendations

## Boost Subscriptions

Promote exclusive benefits to increase the 27% subscriber base.

## Loyalty Rewards

Target "Returning" customers to convert them to the "Loyal" segment.

## Targeted Marketing

Focus on high-revenue Young Adults and Express shipping users.

## Product Focus

Highlight top-rated items like Gloves and Sandals in campaigns.