

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

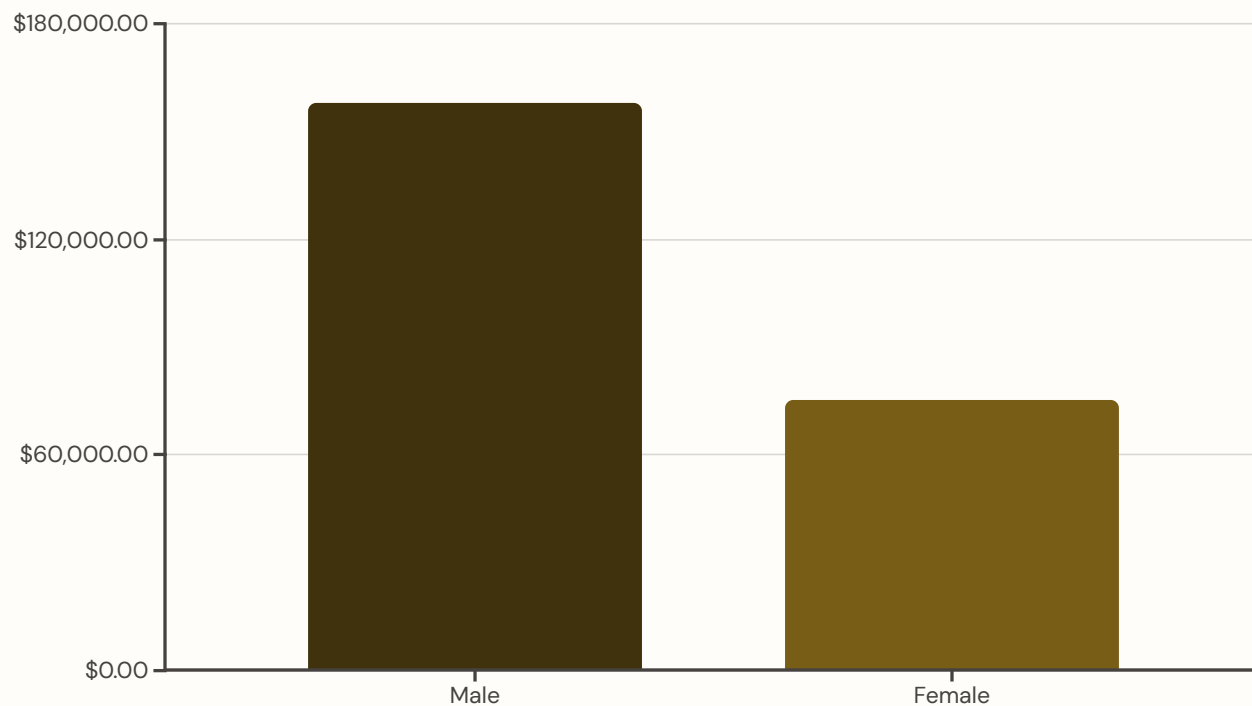
Created age groups and purchase frequency metrics.

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.



Gloves



Boots



Sandals



Hat

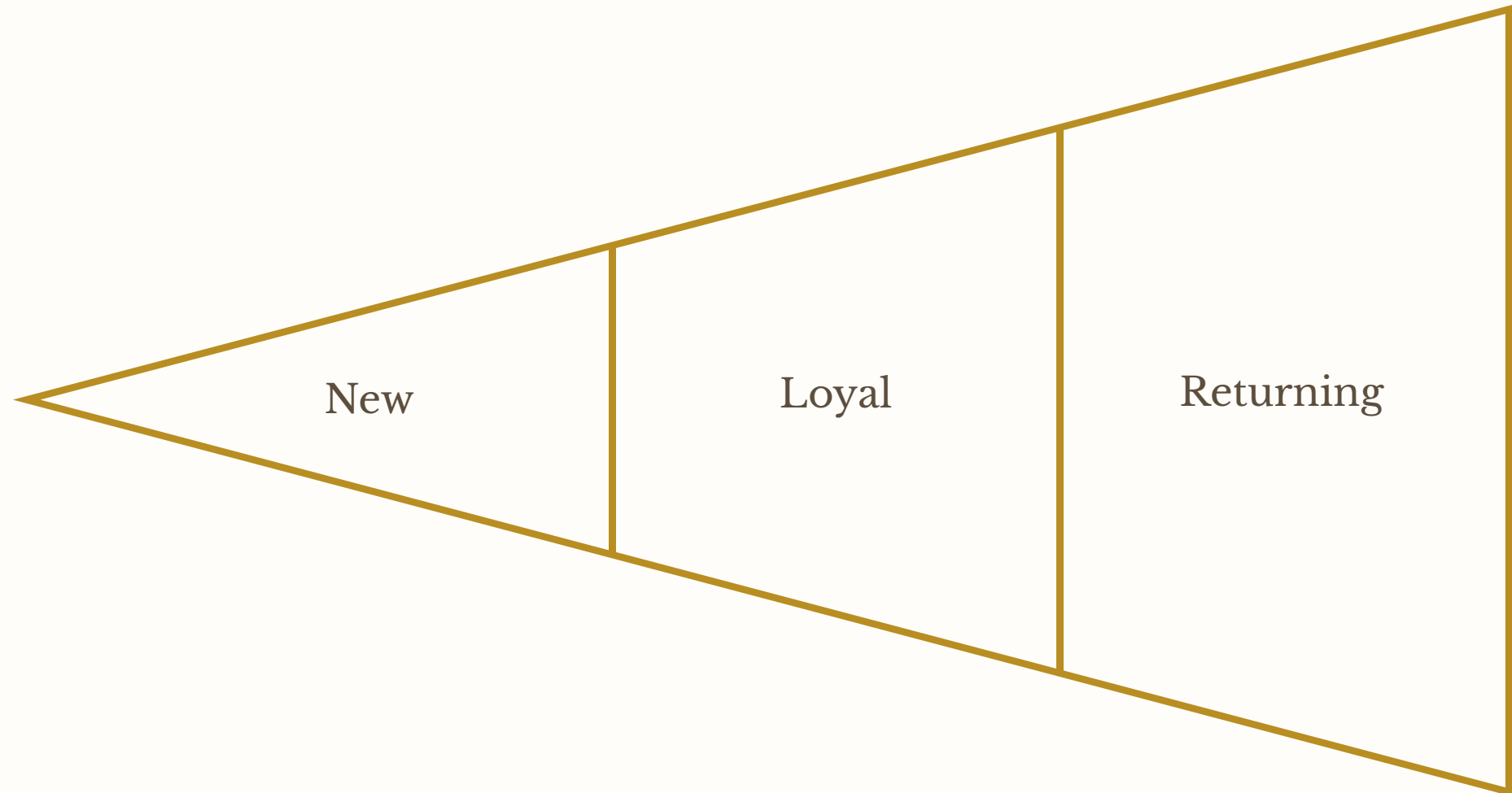
Subscription & Loyalty Analysis

Customer Segments

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

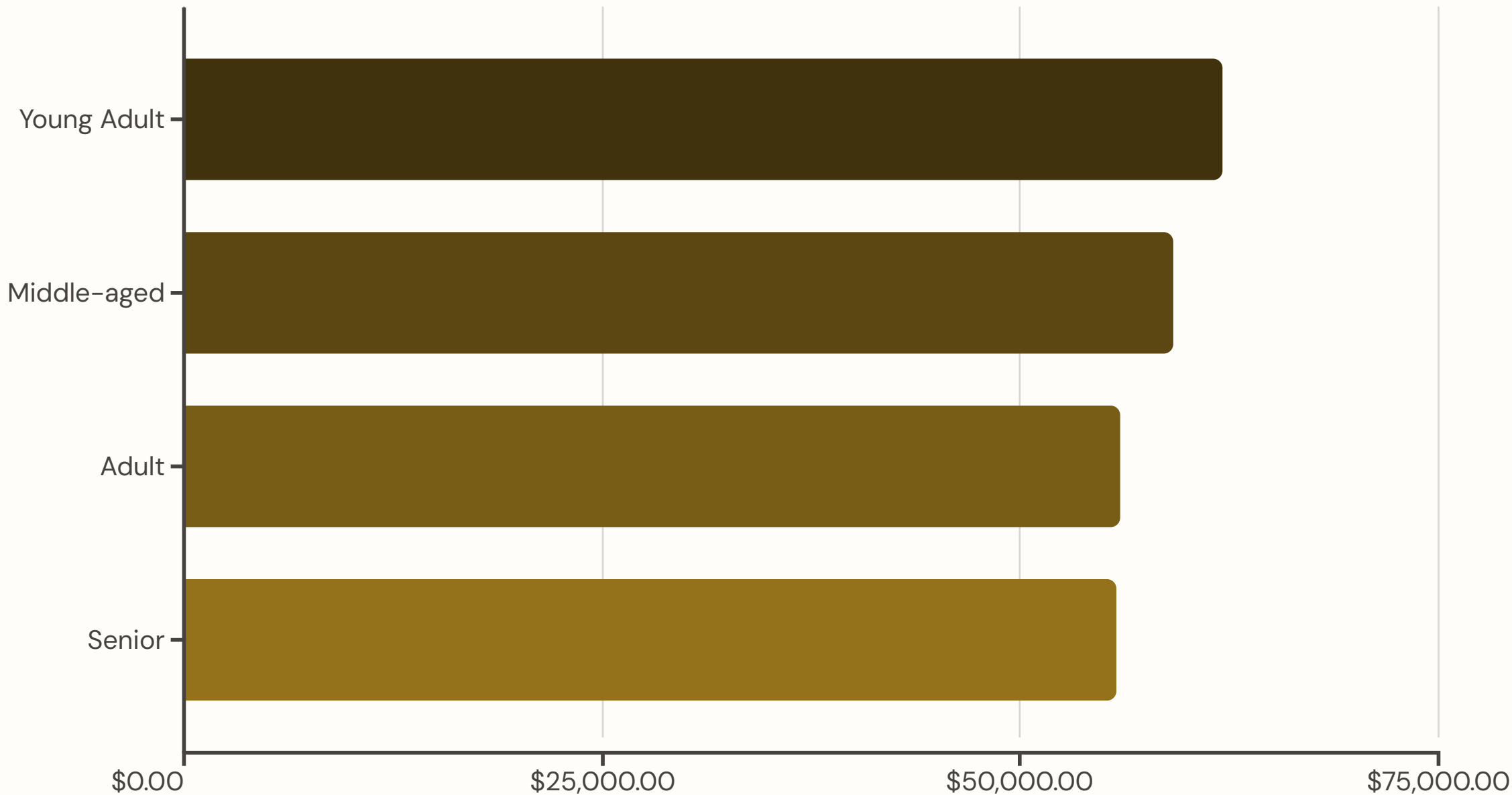
Subscription Impact

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

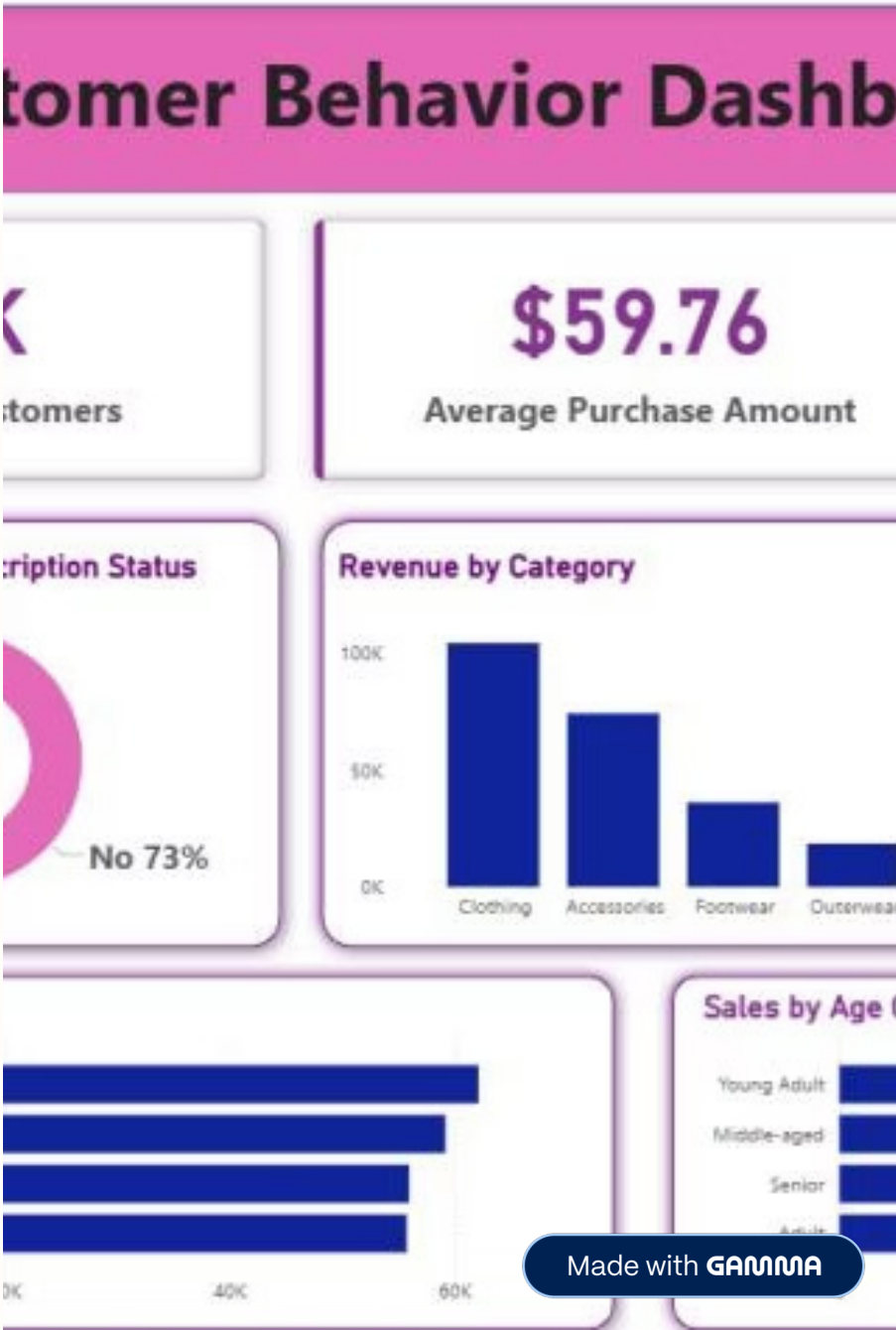
Average Purchase Amount

27%

Subscription Rate

3.75

Average Review Rating



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.