

Customer Shopping Behavior Analysis

Deep dive into 3,900 transactions to uncover spending patterns, customer segments, and strategic growth opportunities.

Dataset Summary



Scale

3,900 rows across 18 key features including demographics and purchase details.



Demographics

Tracking Age, Gender, Location, and Subscription Status.



Purchase Data

Analysis of Category, Amount, Season, and Review Ratings.



Data Preparation & Engineering

Cleaning and transforming raw data using Python and Pandas for robust analysis.

01

Imputation

Filled 37 missing Review Ratings using category medians.

02

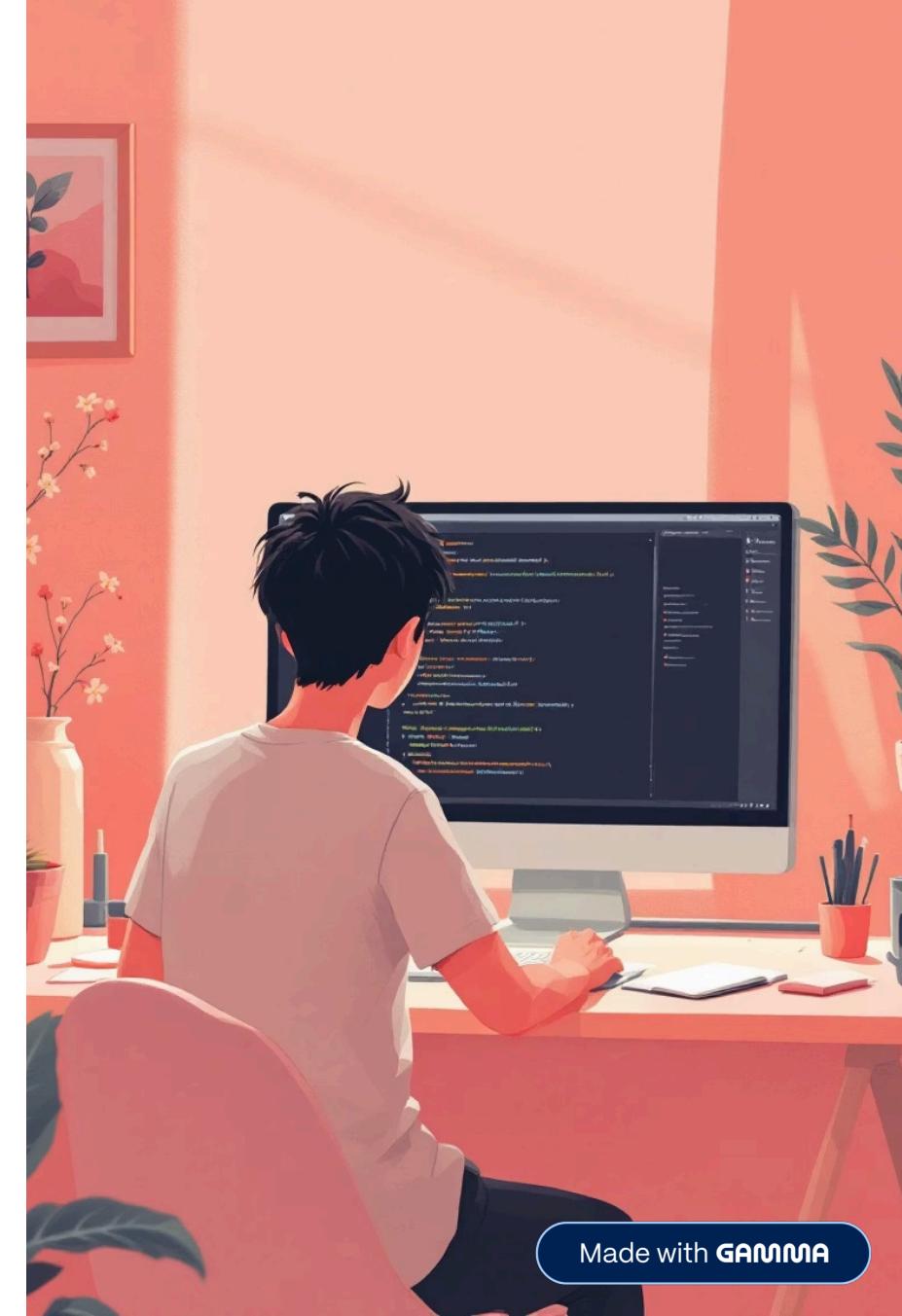
Standardization

Renamed columns to snake_case and dropped redundant promo codes.

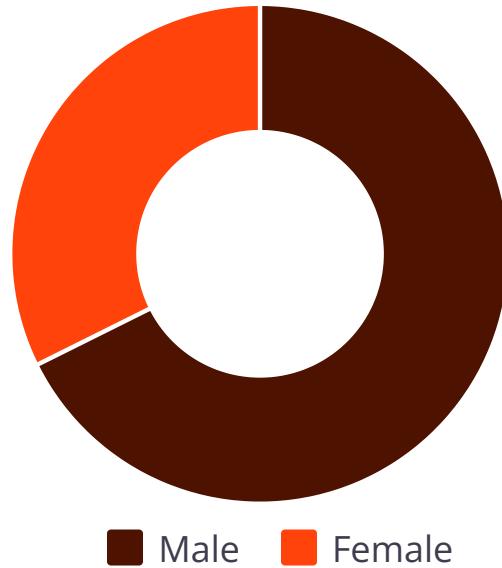
03

Feature Engineering

Created age_group bins and purchase_frequency metrics.



Revenue Insights by Gender



Market Dominance

Male customers contribute significantly higher total revenue (\$157.9K) compared to Female customers (\$75.2K).



Subscription & Shipping Impact

Shipping Premium

Express shipping users spend more (\$60.48 avg) than Standard users (\$58.46).



Subscription Spend

Subscribers spend an average of \$59.49, contributing \$62.6K in total revenue.



Top Rated Products

Identifying quality leaders based on average customer review ratings.



Gloves



Sandals

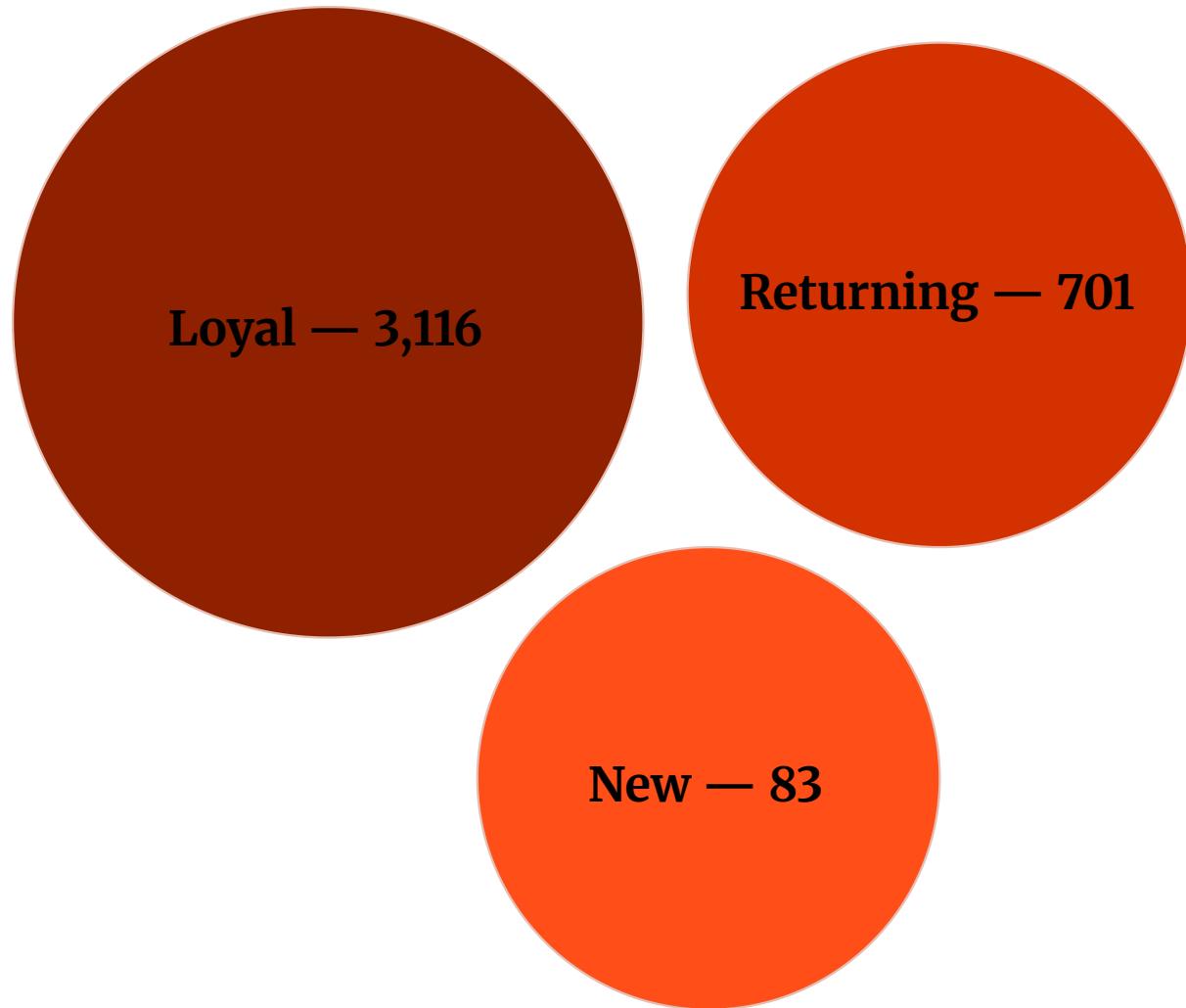


Boots



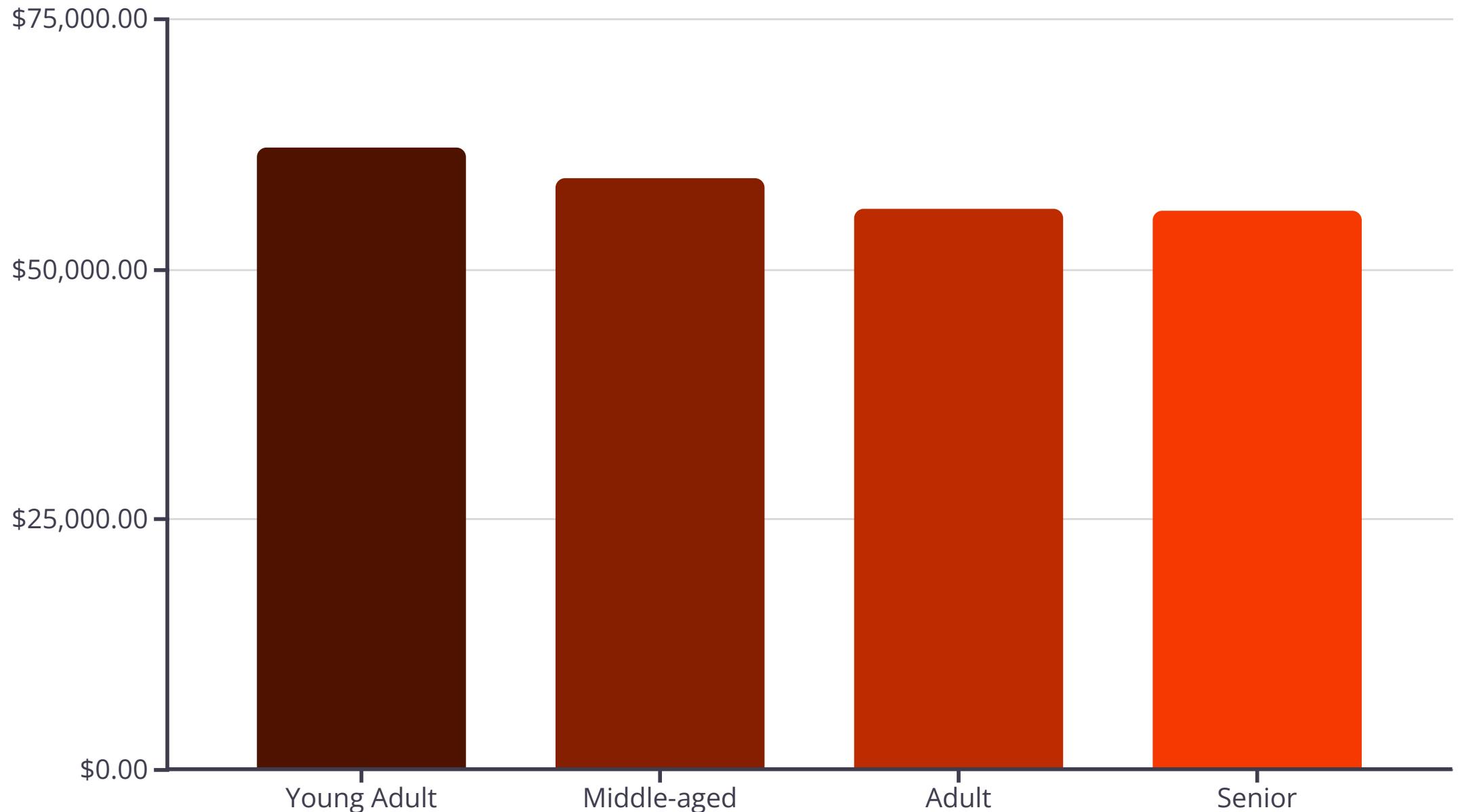
Hats

Customer Segmentation



- ❑ The vast majority of the database consists of **Loyal** customers, indicating high retention but a need for new acquisition.

Revenue by Age Group



Young Adults are the highest revenue contributors at \$62.1K.

Interactive Dashboard

Visualizing key metrics and trends through Power BI integration.

Real-time tracking of sales, discounts, and category performance.



Strategic Recommendations



Boost Subscriptions

Promote exclusive benefits to convert non-subscribers.



Loyalty Programs

Reward repeat buyers to solidify the "Loyal" segment.



Targeted Marketing

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

