



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 Columns

Comprehensive customer and purchase attributes

50

Locations

Geographic diversity in customer base

25

Product Types

Wide variety of items purchased

Data Preparation Journey

01

Data Loading & Exploration

Imported dataset using pandas, analyzed structure and statistics

02

Cleaning & Standardization

Handled missing values, standardized columns to snake case

03

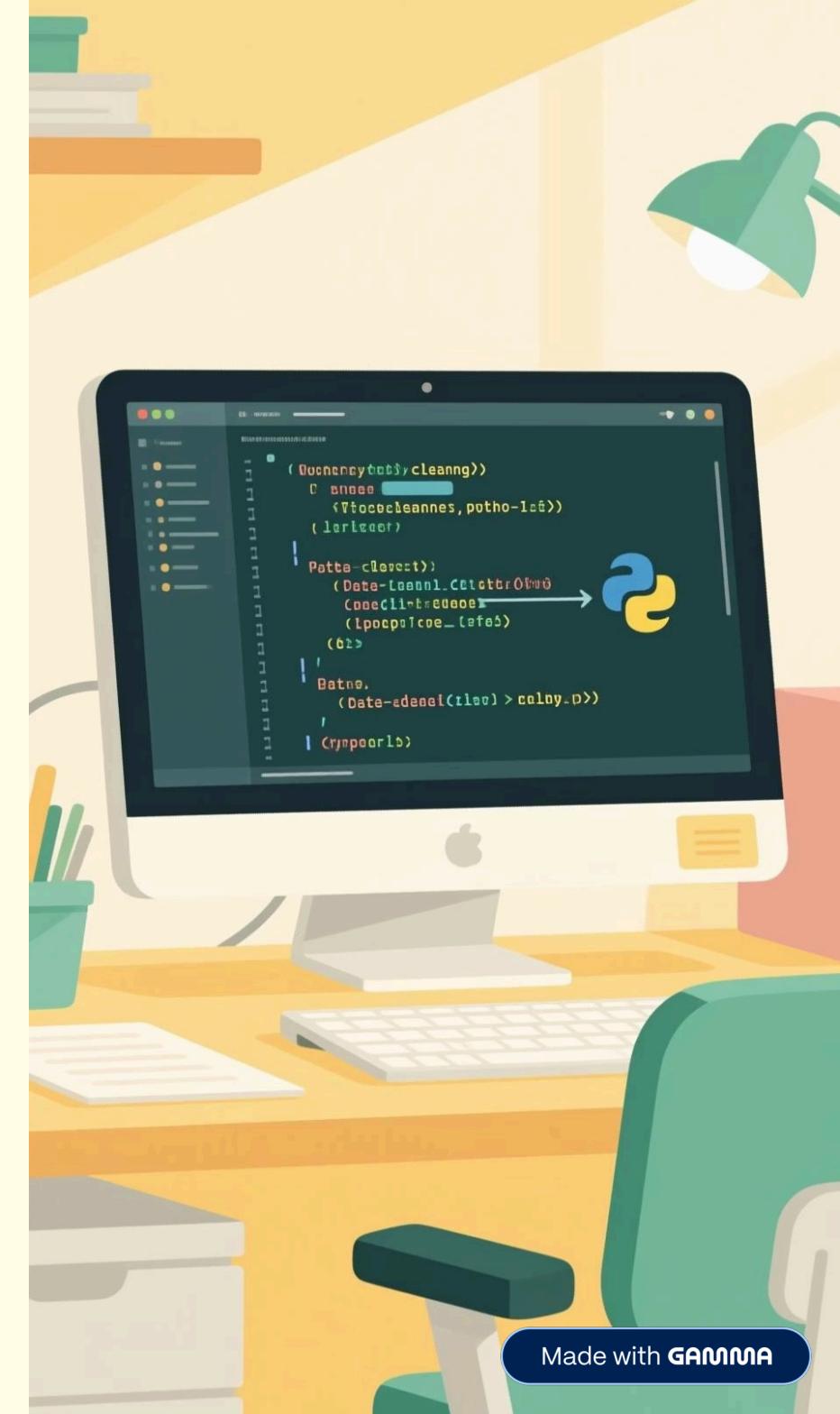
Feature Engineering

Created age groups and purchase frequency metrics

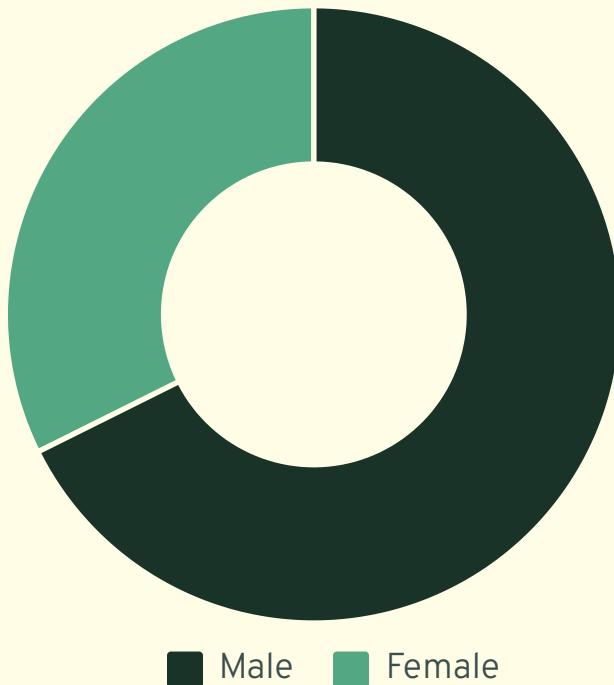
04

Database Integration

Connected to PostgreSQL for advanced SQL analysis



Revenue by Gender



Male Customers Drive Revenue

Male shoppers generate 68% of total revenue,
more than double female contribution

\$157,890 from male customers vs **\$75,191** from
female customers



Smart Spenders: Discount Users

839 Customers

Used discounts but spent above average

Strategic Shoppers

Combine savings with high-value purchases

Key Insight

Discounts don't always mean lower revenue

These customers represent a valuable segment: price-conscious yet willing to spend on quality

Top-Rated Products



96%

Gloves

Highest average rating: 3.86/5.0



95%

Sandals

Strong performance: 3.84/5.0



94%

Boots

Customer favorite: 3.82/5.0



93%

Hat

Solid ratings: 3.80/5.0

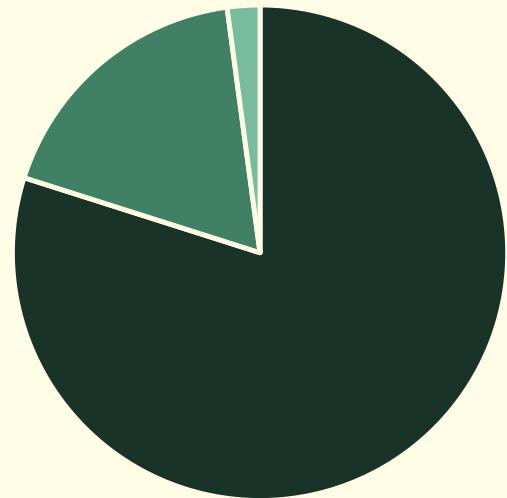


92%

Skirt

Consistent quality: 3.78/5.0

Customer Segmentation Breakdown



■ Loyal

■ Returning

■ New

Loyal: 80%

Strong repeat purchase behavior

Returning: 18%

Growth opportunity segment

New: 2%

Fresh customer acquisition

Subscription Impact Analysis

Subscribers

1,053 customers

Average spend: **\$59.49**

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

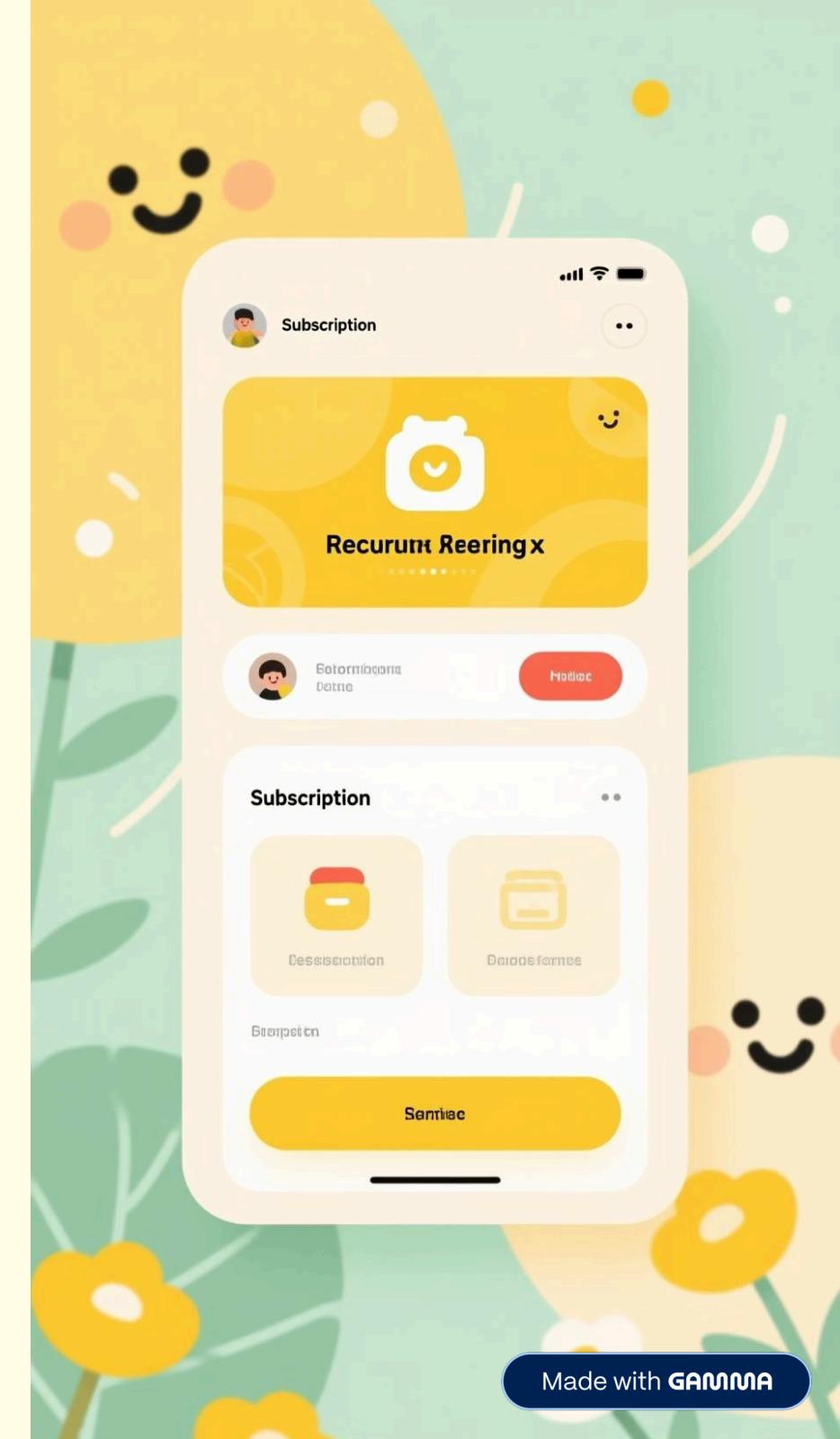
Non-Subscribers

2,847 customers

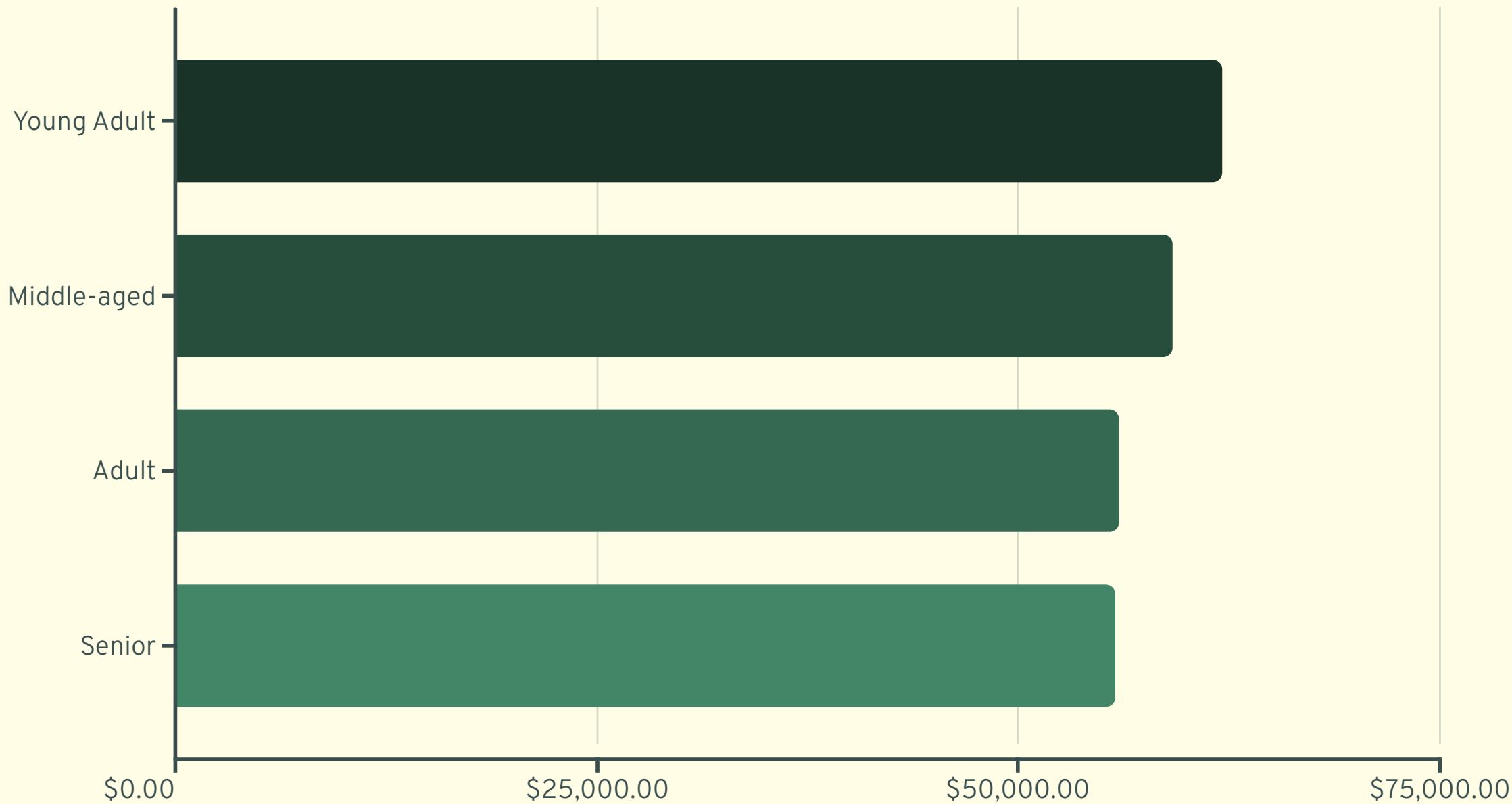
Average spend: **\$59.87**

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

- ❑ **Key Finding:** Similar spending patterns, but non-subscribers drive higher total revenue due to larger customer base. Subscription conversion represents major growth opportunity.



Revenue by Age Group



Young adults lead revenue generation, but all age groups show balanced contribution. Marketing should maintain broad appeal while optimizing for high-value segments.

Strategic Recommendations



Boost Subscriptions

Promote exclusive benefits to convert non-subscribers. Target repeat buyers with >5 purchases.



Optimize Discounts

Balance promotional sales with margin control. Focus on smart spenders.



Targeted Marketing

Focus on young adults and male customers who drive highest revenue.



Loyalty Programs

Reward returning customers to accelerate movement into loyal segment.



Highlight Top Products

Feature high-rated items like gloves and sandals in marketing campaigns.



Express Shipping

Promote premium shipping to customers willing to pay for faster delivery.