



# 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

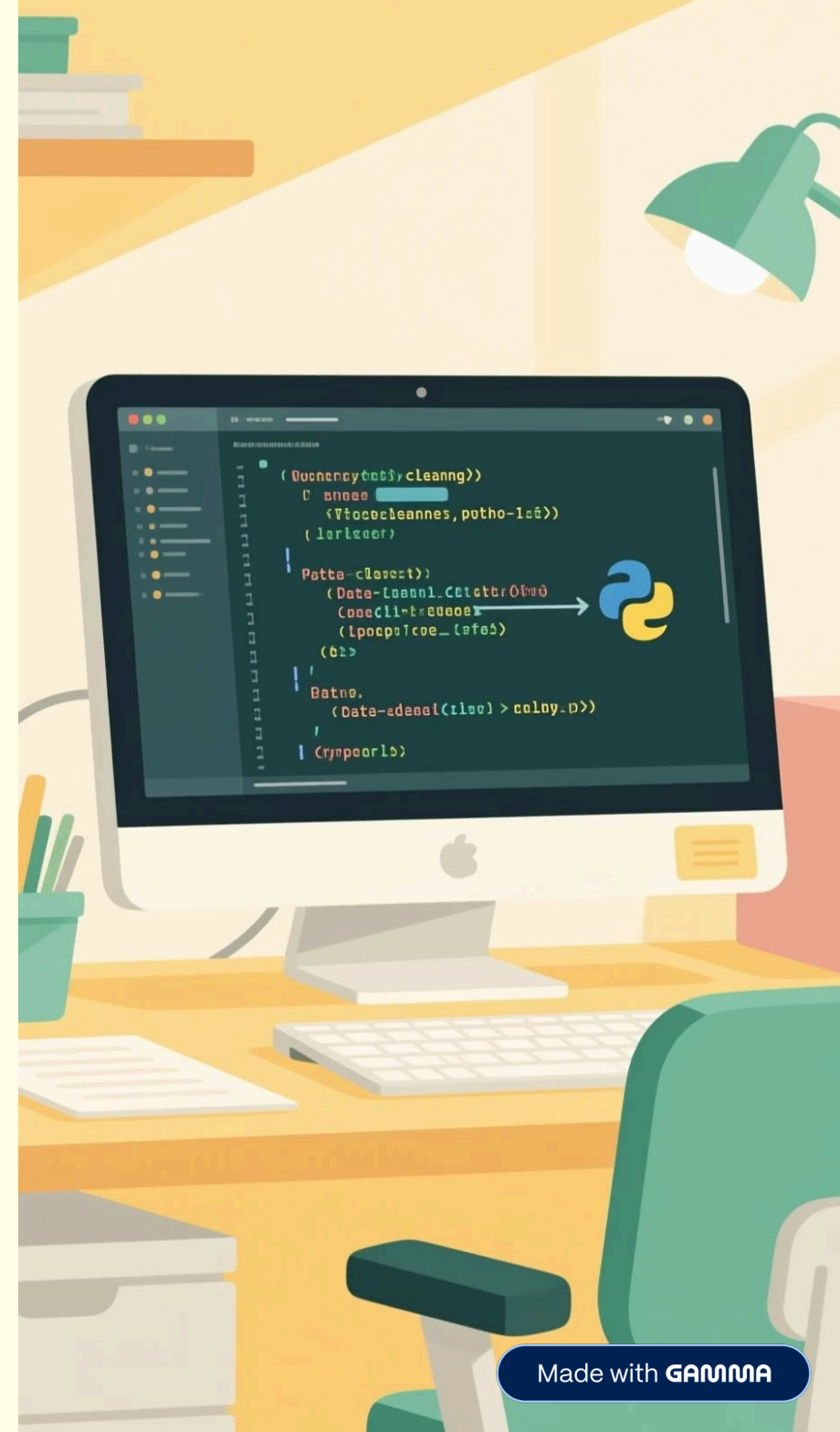
## Feature Engineering

Created age groups and purchase frequency metrics

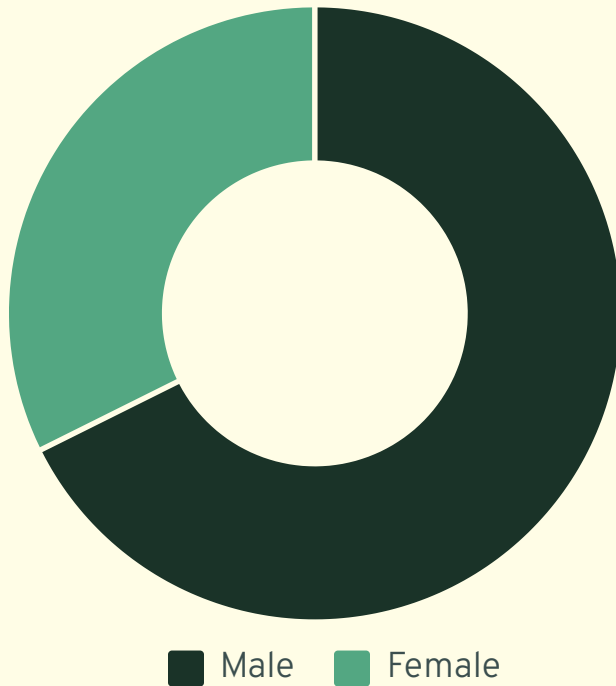
04

## 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

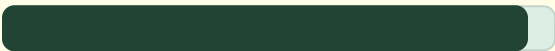
# Top-Rated Products



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

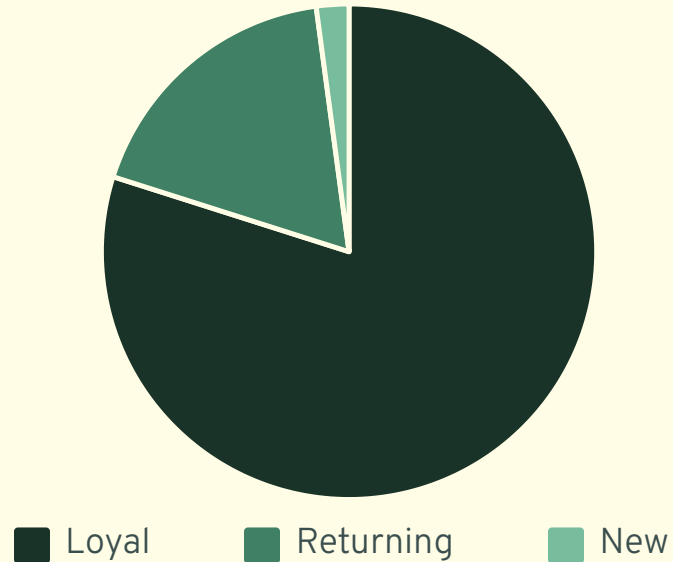


92%

Skirt

Consistent quality: 3.78/5.0

# Customer Segmentation Breakdown



**Loyal: 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**

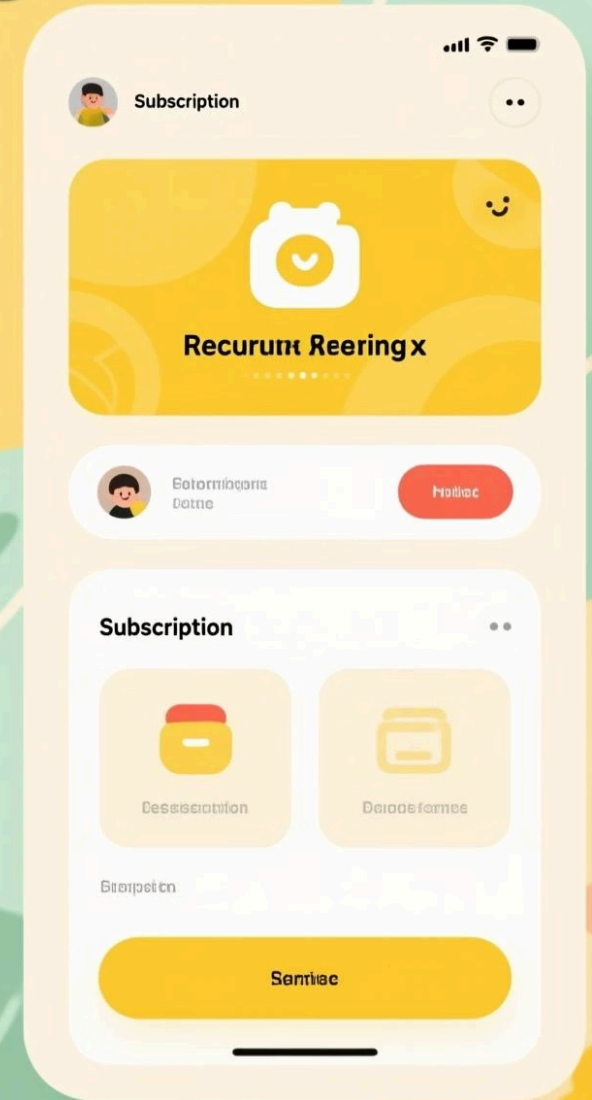
## Non-Subscribers

2,847 customers

Average spend: **\$59.87**

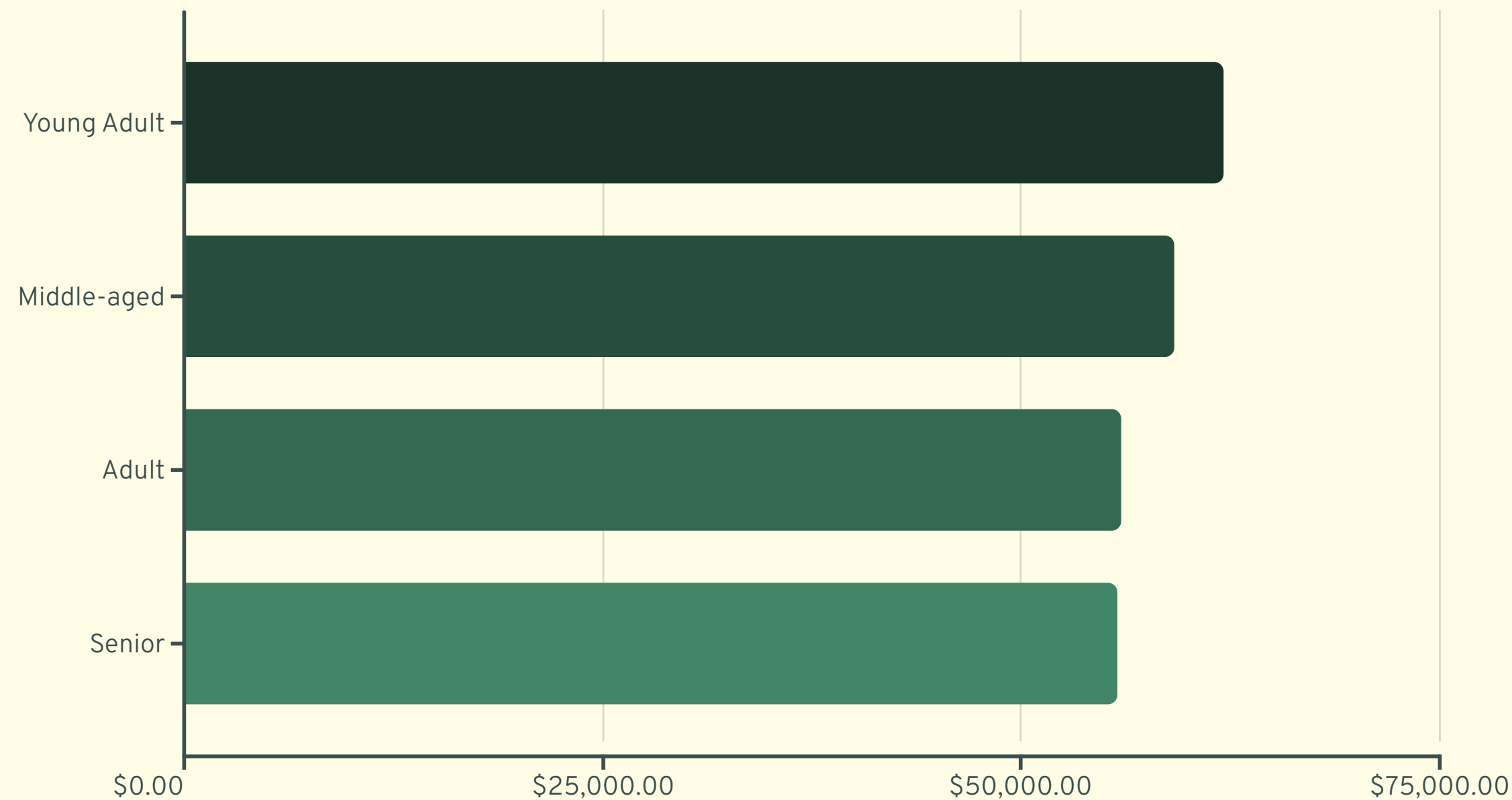
Total revenue: **\$170,436**

- 📌 **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.



## Loyalty Programs

Reward returning customers to accelerate movement into loyal segment.



## Optimize Discounts

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



## Highlight Top Products

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



## Targeted Marketing

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



## Express Shipping

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