

# 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 Points**

Features tracked per  
customer

**50**

**Locations**

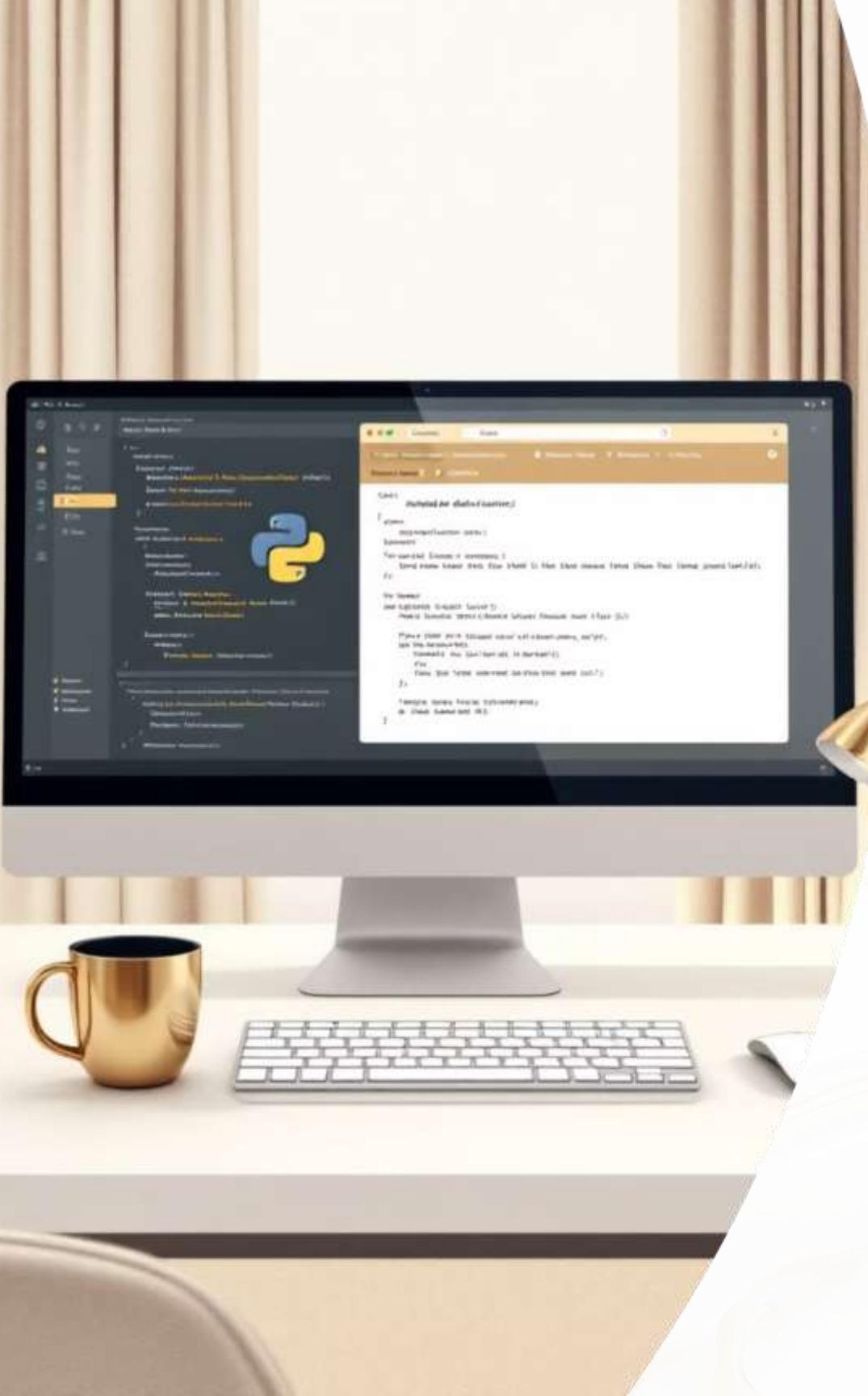
Geographic coverage

**25**

**Products**

Unique items purchased

Key features include customer demographics, purchase details, shopping behavior, and subscription status



# Data Preparation & Cleaning

01

## Data Loading

Imported dataset using pandas, explored structure with df.info()

02

## Missing Data

Imputed 37 missing Review Ratings using median by category

03

## Feature Engineering

Created age\_group and purchase\_frequency\_days columns

04

## Database Integration

Connected to PostgreSQL for SQL analysis

# Revenue Insights by Gender



## Male Customers Drive Revenue

Male customers generate **\$157,890** in total revenue

Female customers contribute **\$75,191**

Male segment represents **68%** of total revenue

# Top-Rated Products



Gloves

Sandals

Boots

Hat

Skirt

Highlight these top-rated products in marketing campaigns to boost conversions

# Customer Segmentation Analysis

## Loyal Customers

3,116 customers

80% of customer base

## Returning

701 customers

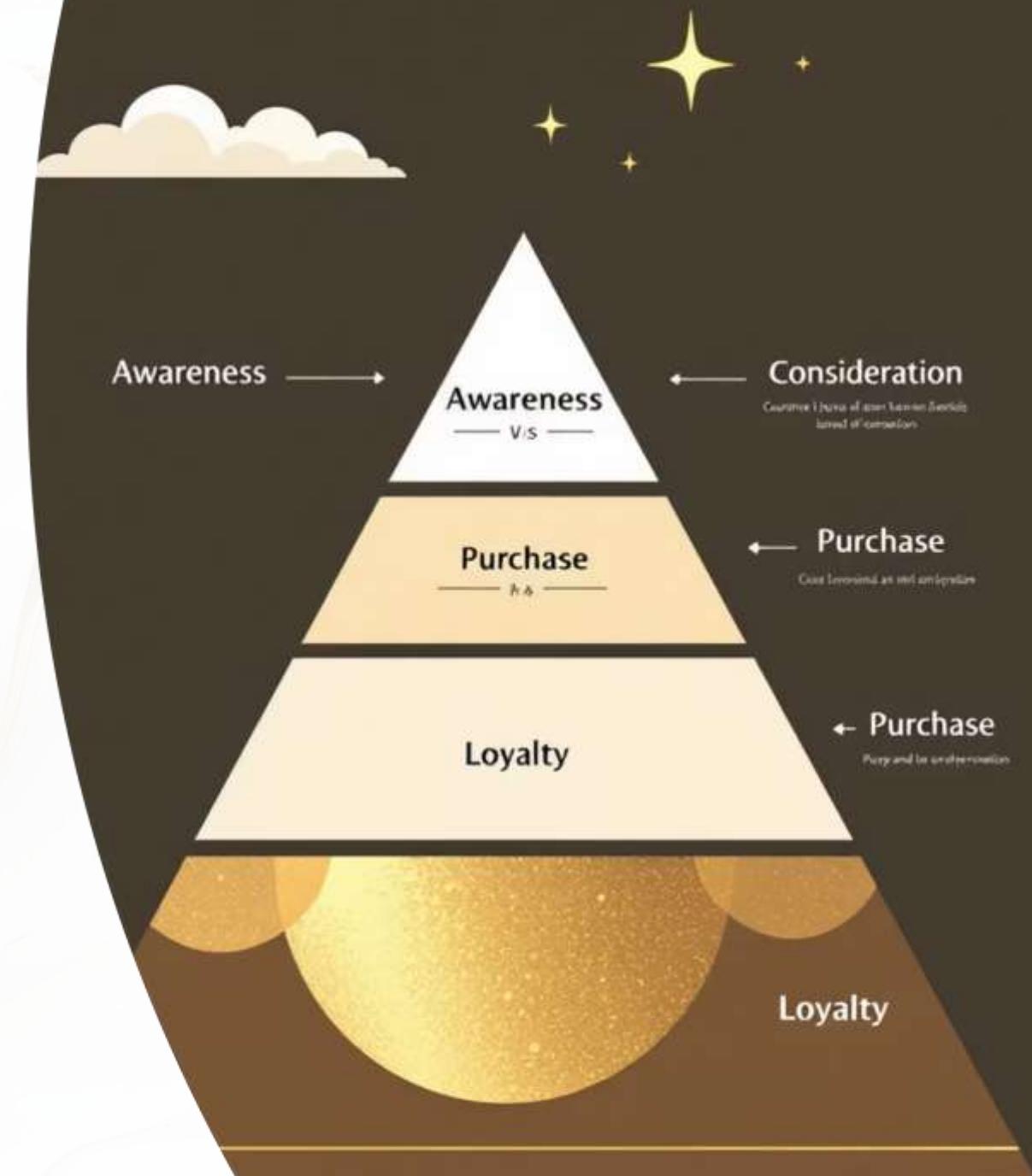
18% of customer base

## New Customers

83 customers

2% of customer base

Strong loyal customer base indicates successful retention strategies



# Subscription vs. Non-Subscription Performance

## Subscribers

- 1,053 total customers
- Average spend: \$59.49
- Total revenue: \$62,645

## Non-Subscribers

- 2,847 total customers
- Average spend: \$59.87
- Total revenue: \$170,436

Similar average spend suggests subscription benefits need enhancement to drive conversions

## Subscription Service

Our subscription service offers automated recurring payments for all your purchases.

|                       | GOLD   | MEMBERSHIP   | BENEFITS  |
|-----------------------|--|--|---|
| GLY<br>MUIITLITY      | \$54.000<br>Membership   | \$5.00<br>Membership   | \$500<br>Membership   |
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# Revenue by Age Group





20%  
OFF

# Discount Strategy Insights

## High-Value Discount Users

839 customers used discounts but spent above average

Discounts don't always mean lower revenue

## Discount-Dependent Products

Hat: 50% discount rate

Sneakers: 49.66% discount rate

Coat: 49.07% discount rate

## Shipping Impact

Express shipping: \$60.48 avg

Standard shipping: \$58.46 avg

Premium shipping correlates with higher spend

# Strategic Recommendations



## Boost Subscriptions

Promote exclusive benefits to convert non-subscribers



## Loyalty Programs

Reward repeat buyers to strengthen retention



## Review Discounts

Balance sales boosts with margin control



## Product Positioning

Highlight top-rated items in campaigns



## Targeted Marketing

Focus on high-revenue age groups and express shipping users