

# Customer Shopping Behavior Analysis

Uncovering insights from transactional data to guide strategic business decisions.





# Project Overview

1

## Data Analysis

3,900 purchases analyzed across categories.

2

## Key Insights

Spending patterns, customer segments, product preferences.

3

## Strategic Goals

Optimize operations, reduce costs, improve forecasting.

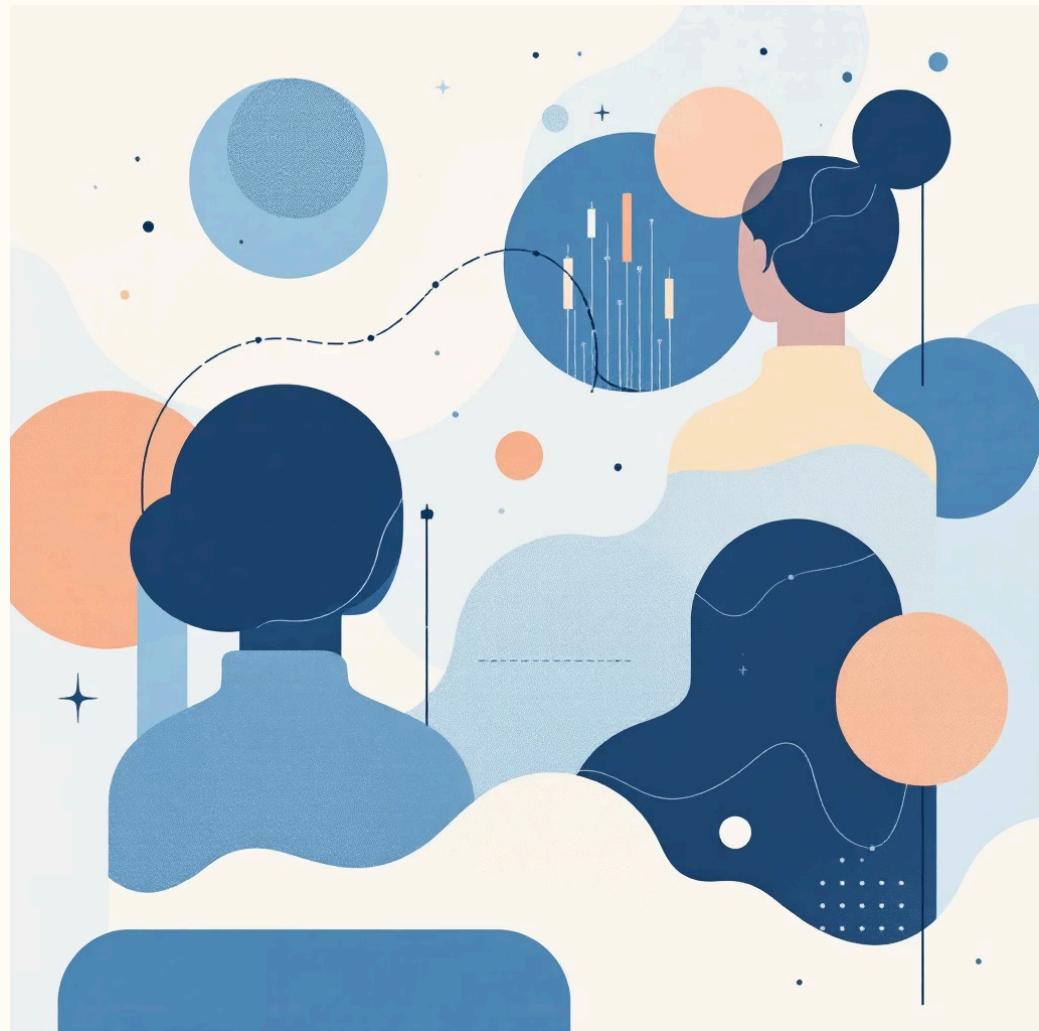
# Dataset Summary

## Data Points

- 3,900 Rows
- 18 Columns

## Key Features

- Customer Demographics
- Purchase Details
- Shopping Behavior



## Missing Data

37 values in Review Rating column.

# Exploratory Data Analysis (Python)

01

## Data Loading & Exploration

Imported with pandas, checked structure and statistics.

02

## Data Cleaning

Imputed missing 'Review Rating' with median, standardized column names.

03

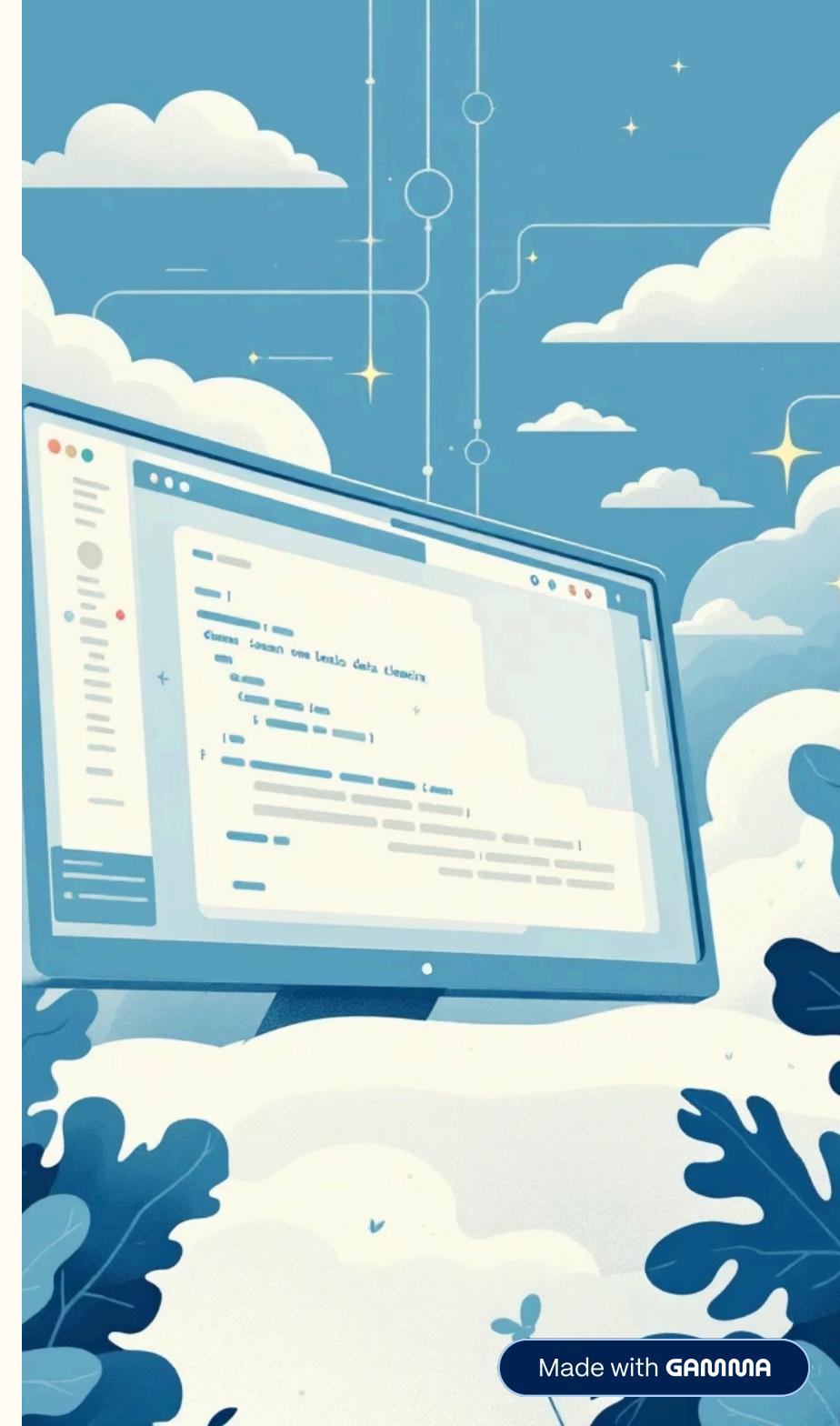
## Feature Engineering

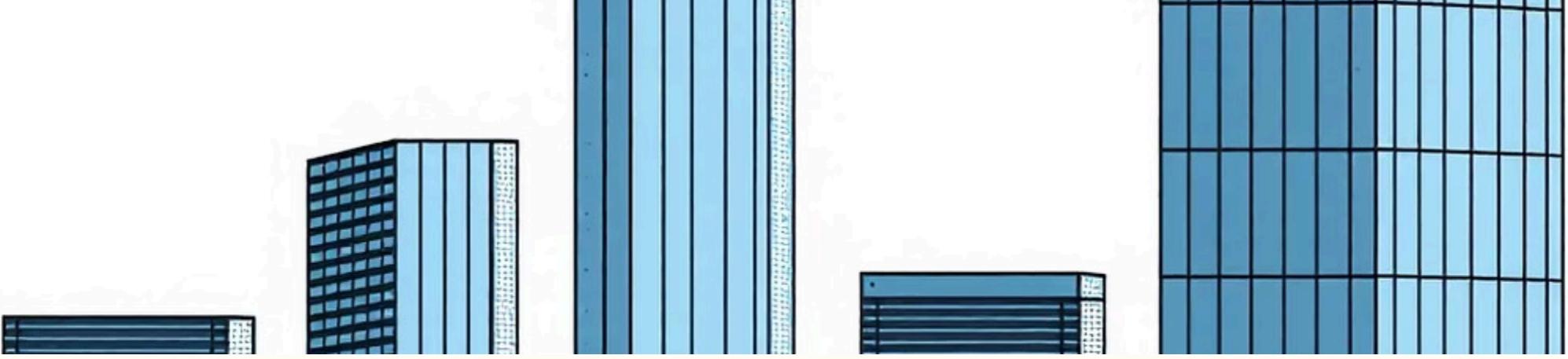
Created 'age\_group' and 'purchase\_frequency\_days'!

04

## Python-Based Data Analysis

Python for further analysis using data manipulation and analytical techniques.





# Key Python Analysis Findings

1

## Revenue by Gender

Male: \$157,890

Female: \$75,191

2

## Top 5 Products by Rating

Gloves, Sandals, Boots, Hat, Skirt.

3

## Shipping Type Comparison

Express: \$60.48 avg.

Standard: \$58.46 avg.

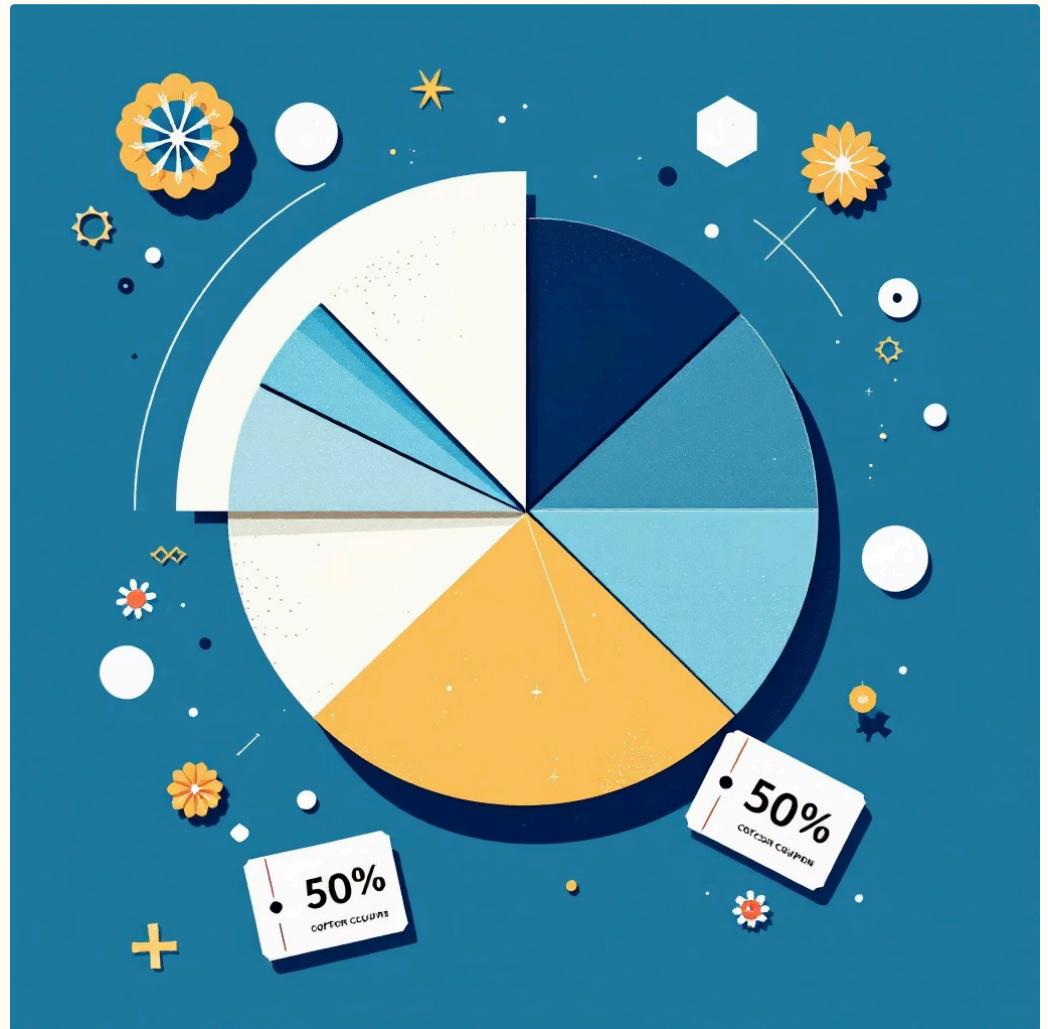
# Subscription & Discount Insights

## Subscribers vs. Non-Subscribers

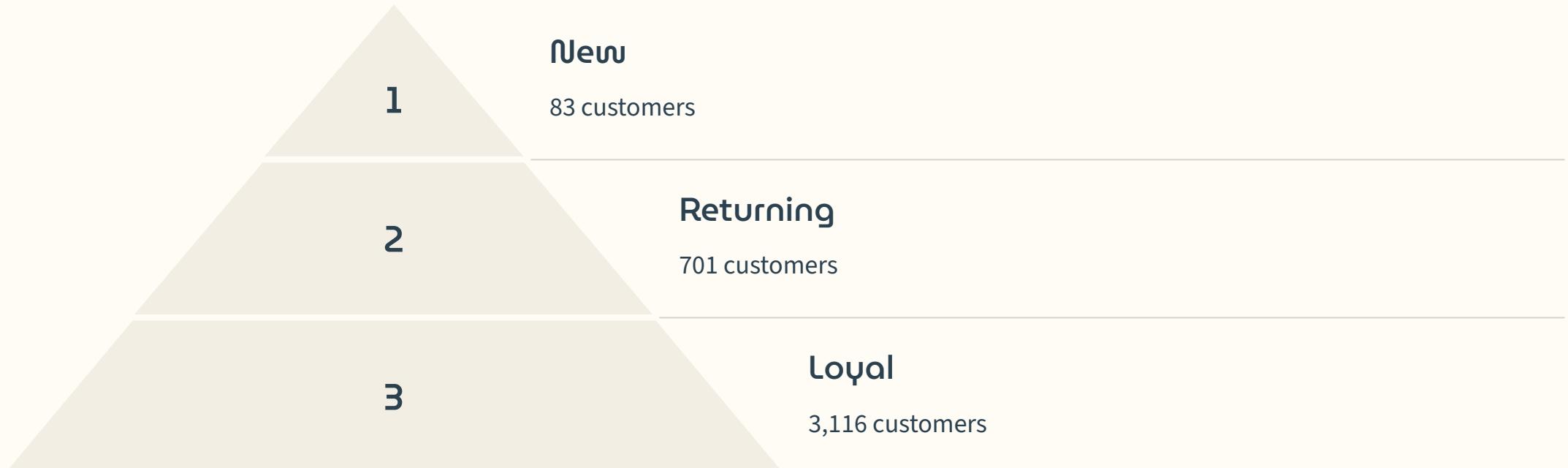
- Avg Spend: Similar
- Total Revenue: Non-Subscribers higher (\$170,436 vs \$62,645)

## Discount-Dependent Products

- Hat (50%)
- Sneakers (49.66%)
- Coat (49.07%)



# Customer Segmentation



# Top Products & Age Group Revenue

## Top 3 Products per Category

- Accessories: Jewelry, Belt, Sunglasses
- Clothing: Blouse, Pants, Shirt
- Footwear: Sandals, Shoes, Sneakers
- Outerwear: Jacket, Coat

## Revenue by Age Group

- Young Adult: \$62,143
- Middle-Aged: \$59,197
- Adult: \$55,978
- Senior: \$55,763



# Customer Behavior Dashboard



## Power BI Dashboard

Interactive visualizations for key insights.

# Business Recommendations



## Boost Subscriptions

Promote exclusive benefits.



## Customer Loyalty

Reward repeat buyers.



## Review Discount Policy

Balance sales with margins.



## Targeted Marketing

Focus on high-revenue groups.

