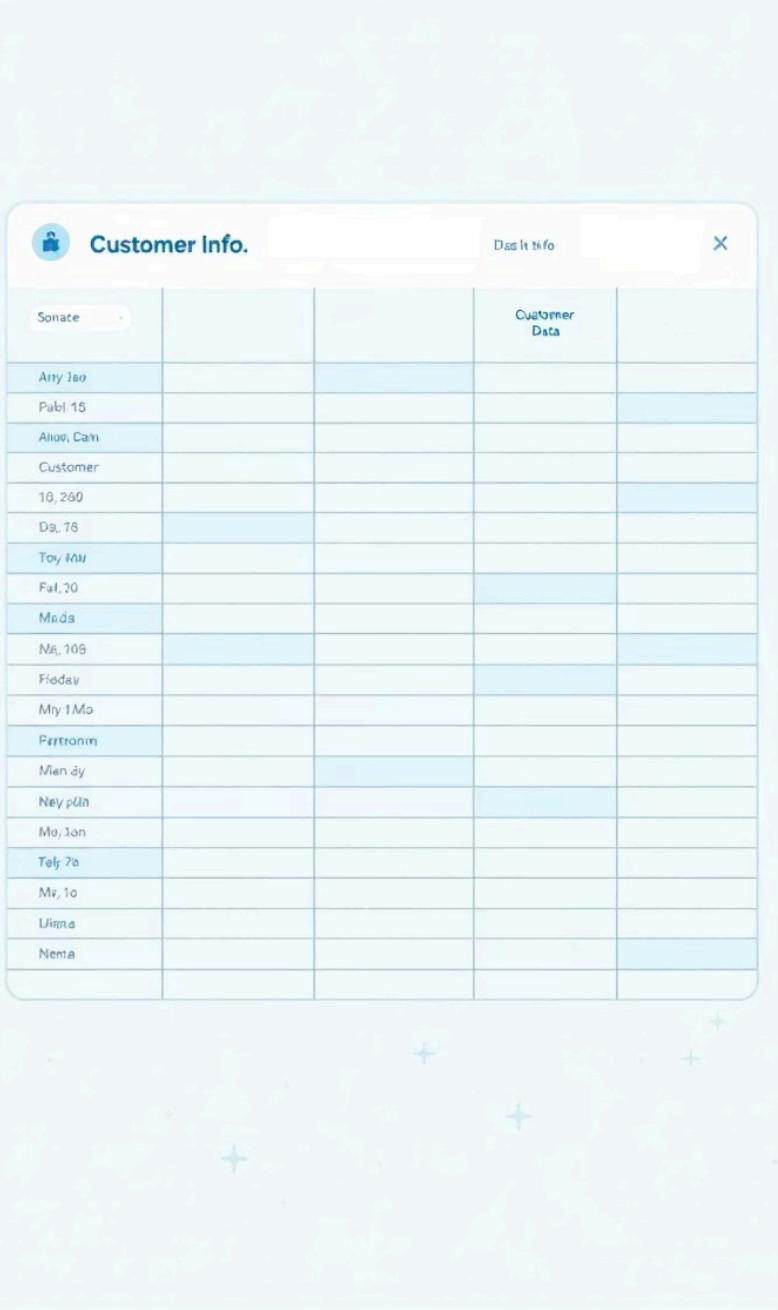




# Customer Shopping Behavior Analysis

Uncovering insights from 3,900 purchases to guide strategic decisions



**Customer Info.**

Dataset

Sonata			Customer Data	
Any Inc				
Pub/15				
Alios, Cam				
Customer				
18,260				
Dg, 78				
Toy Inc				
Fal, 20				
Mada				
Na, 108				
Freddy				
Miy 1Mo				
Pertronix				
Mien dy				
Ney pün				
Mo, 1on				
Telj Zö				
Mir, 1o				
Uirma				
Menta				



**Dataset**

# Project Scope

**3,900**

**Total Purchases**

Transactions analyzed

**18**

**Data Points**

Features per customer

**4**

**Categories**

Product segments

Demographics, purchase details, and shopping behavior tracked across all transactions

# Data Preparation & Cleaning

01

## Data Loading

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

02

## Missing Data

Imputed 37 missing Review Ratings using median by category

03

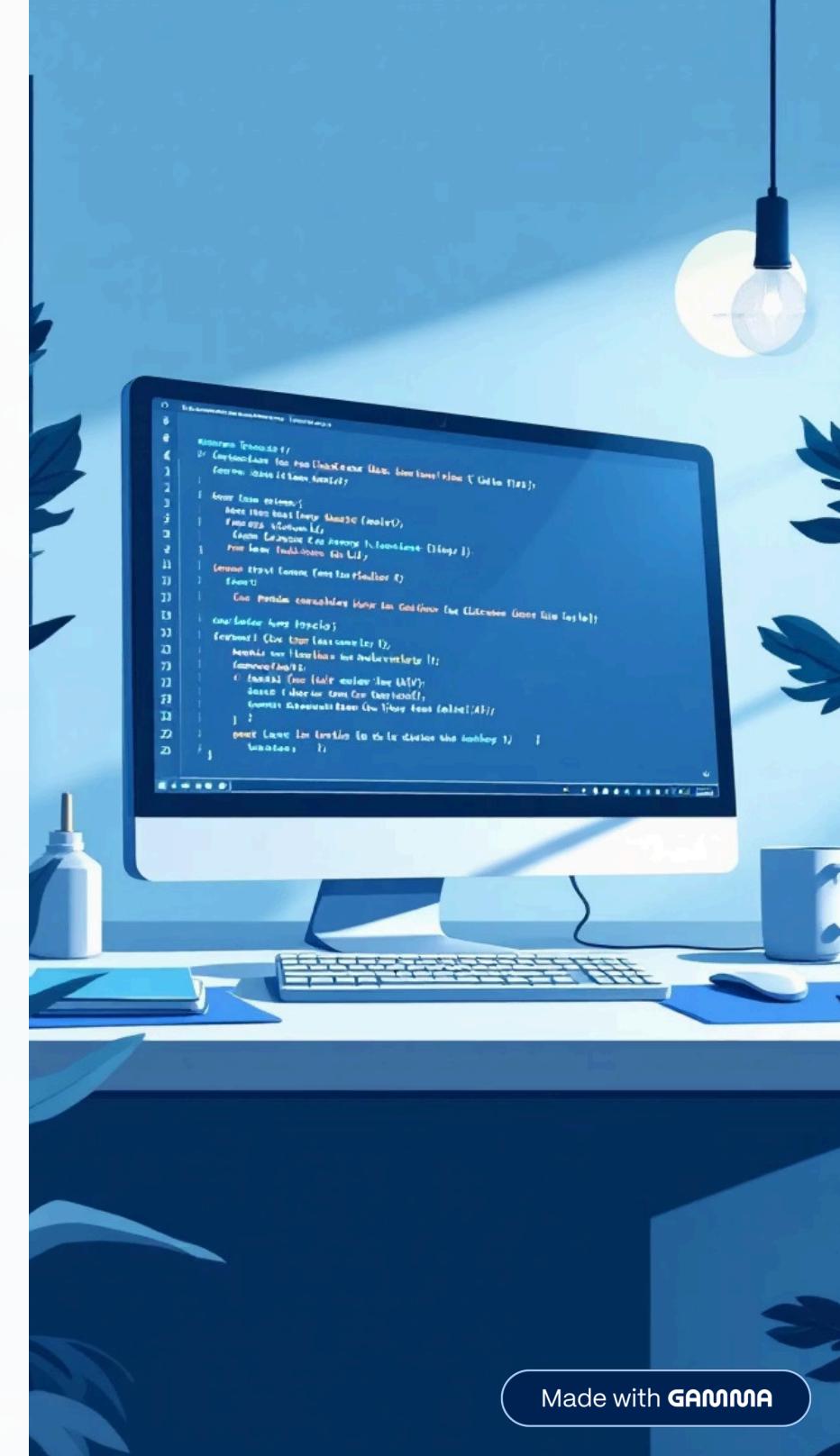
## Feature Engineering

Created age\_group bins and purchase\_frequency\_days columns

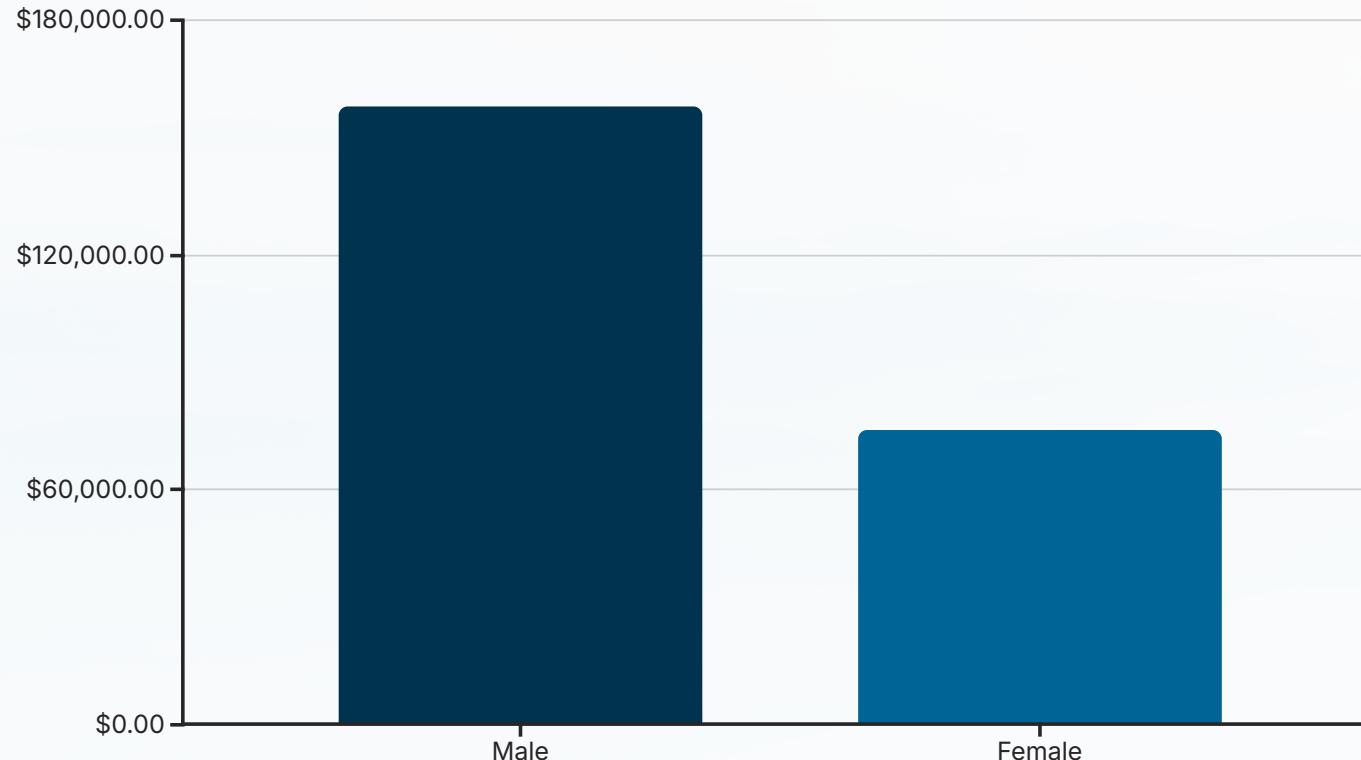
04

## Database Integration

Connected to PostgreSQL for advanced SQL analysis



# Revenue Insights



## Gender Revenue Gap

Male customers generate 2.1x more revenue than female customers

### Opportunity

Expand female-focused product lines

# Top Performing Products



**Gloves**

3.86 avg rating



**Sandals**

3.84 avg rating



**Boots**

3.82 avg rating



**Hat**

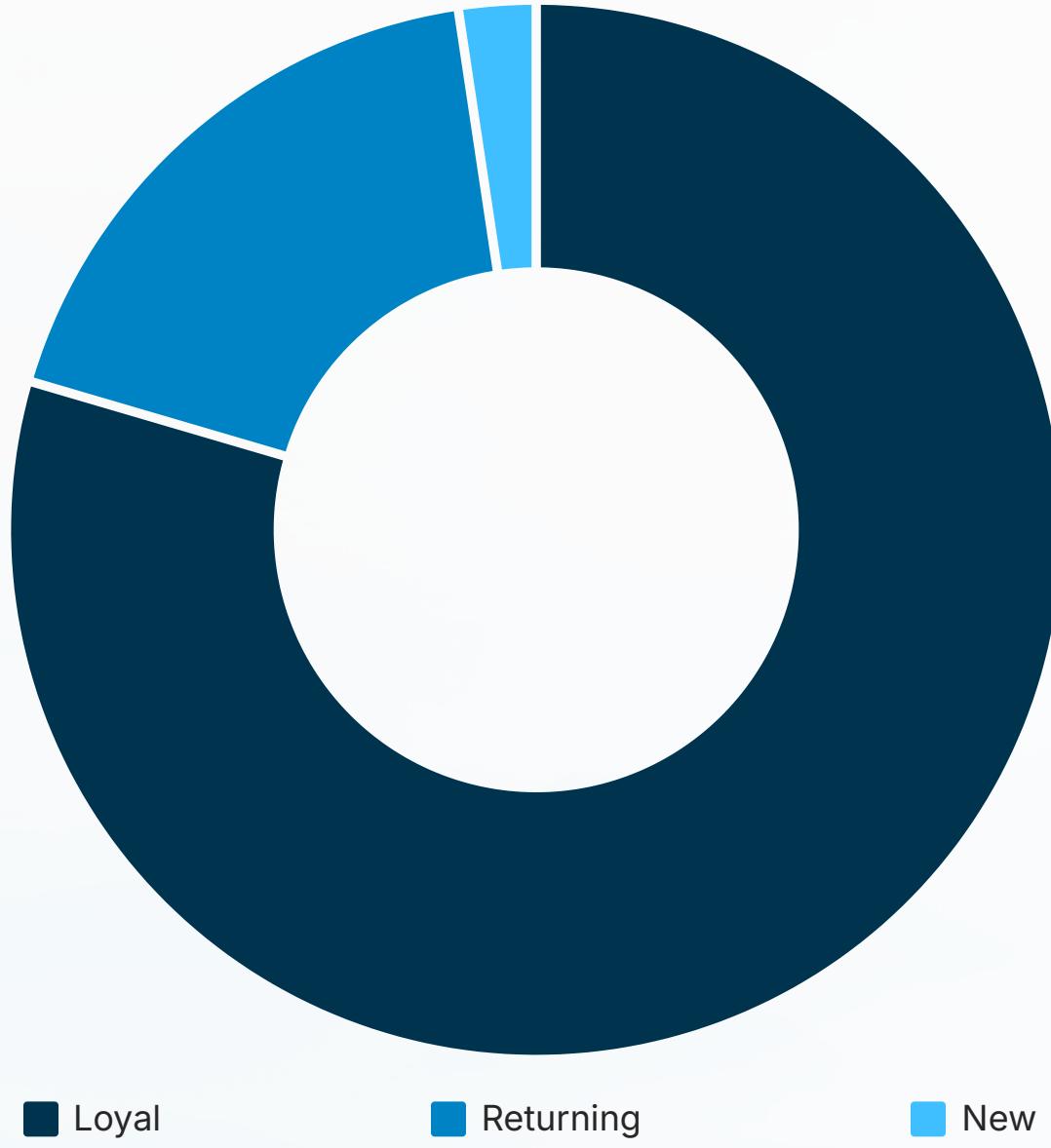
3.80 avg rating



**Skirt**

3.78 avg rating

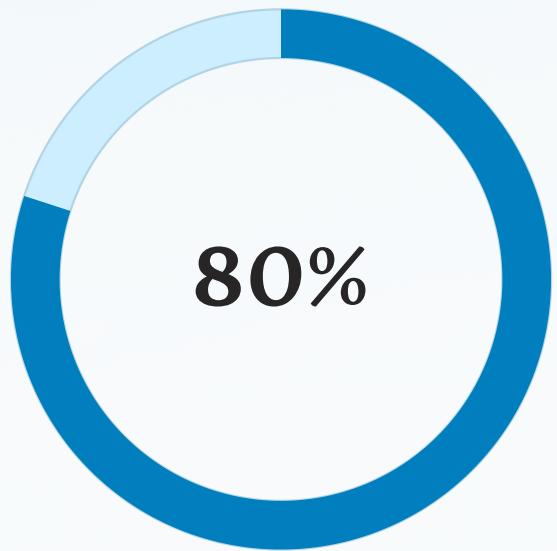
# Customer Segmentation



■ Loyal

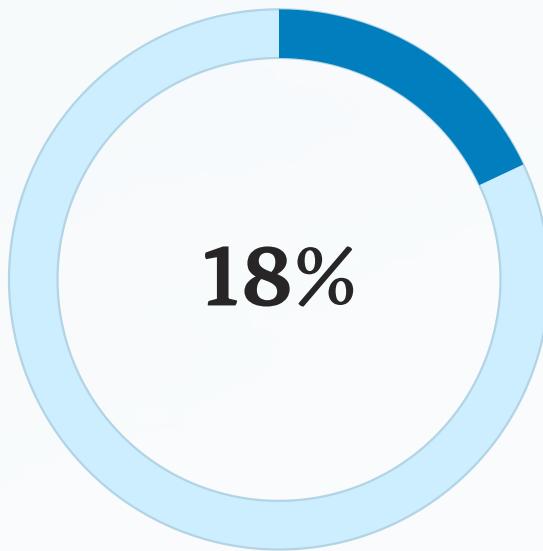
■ Returning

■ New



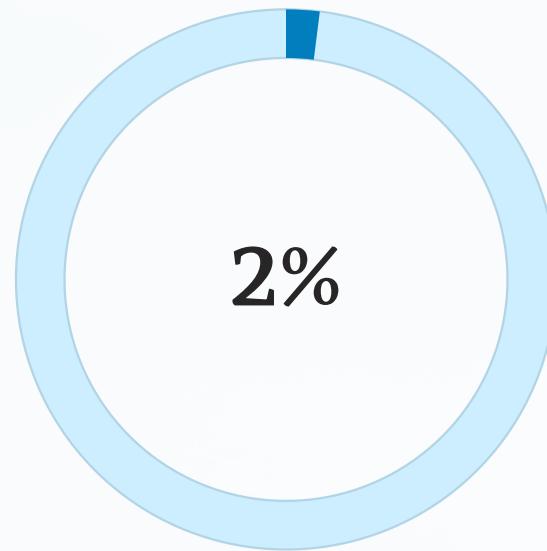
**Loyal Base**

Strong retention foundation



**Returning**

Growth opportunity



**New**

Acquisition focus needed

# Discount Strategy Analysis

## High-Value Discounters

839 customers used discounts but spent above average (\$59.76)

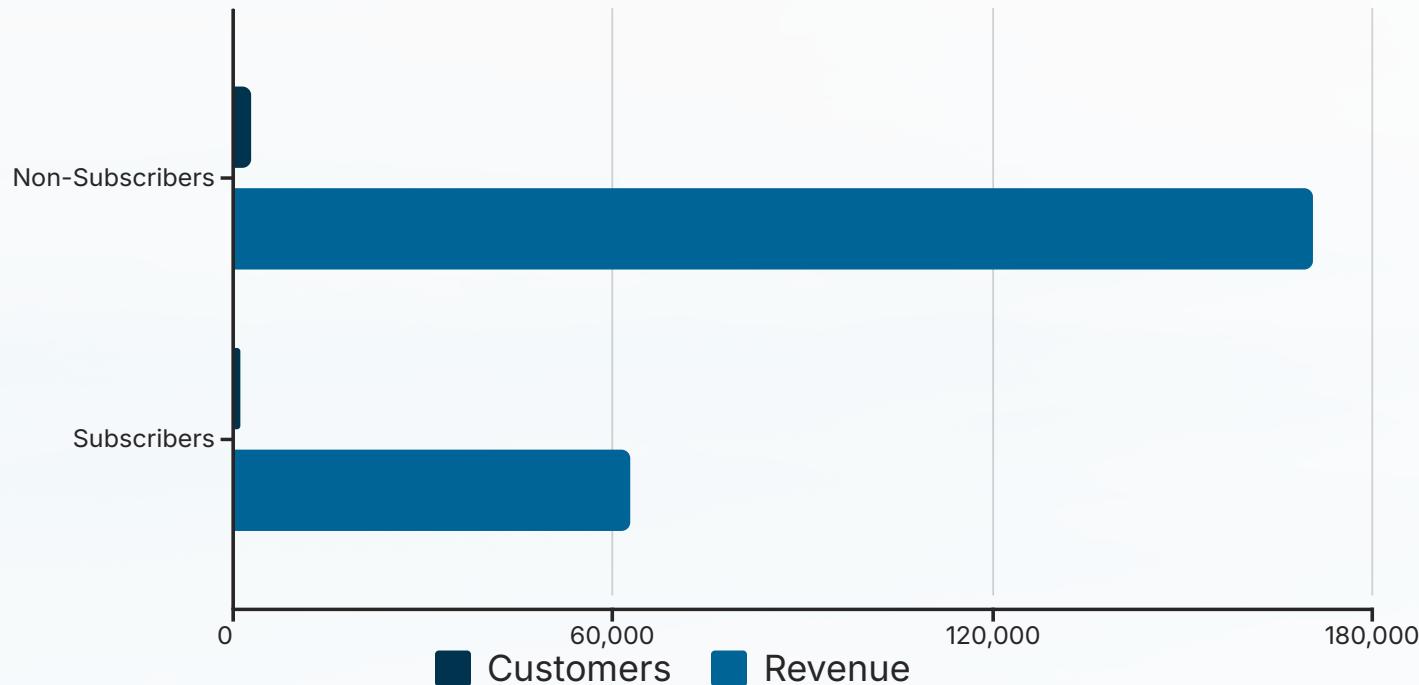
## Discount-Dependent Items

Hat (50%), Sneakers (49.7%), Coat (49.1%)



- Balance promotional strategy: discounts drive volume but may impact margins on certain products

# Subscription vs Non-Subscription



## Key Finding

Only 27% subscribe despite similar avg spend (\$59.49 vs \$59.87)

**958 Repeat Buyers**

Subscribe after 5+ purchases



# Power BI Dashboard



## Revenue by Category

Clothing leads at \$100K, followed by Accessories at \$75K



## Age Group Performance

Young Adults generate highest revenue at \$50K



## Quality Metrics

3.75 average review rating across all products



RECOMMENDATIONS

# Strategic Action Plan



## Boost Subscriptions

Promote exclusive benefits to convert 73% non-subscribers



## Loyalty Programs

Reward repeat buyers to grow loyal segment



## Targeted Marketing

Focus on Young Adults and express shipping users

