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 Features

Comprehensive customer and purchase attributes
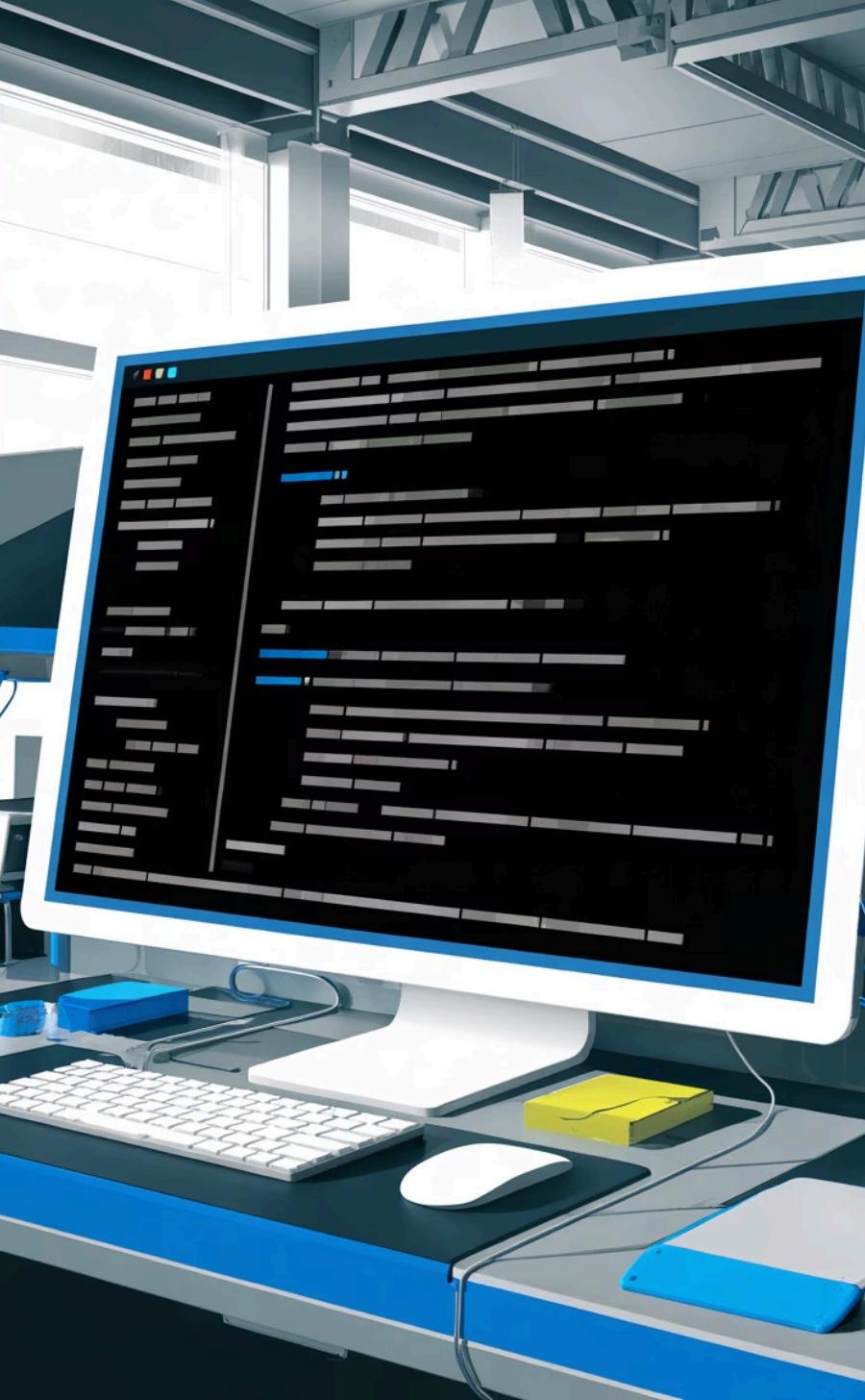
4
Product Categories

Clothing, Footwear, Accessories, Outerwear

50
Locations

Geographic diversity across customer base

Data Preparation Journey

01

Data Loading & Exploration

Imported dataset using pandas, analyzed structure and statistics

02

Cleaning & Standardization

Handled missing values, standardized column names to snake_case

03

Feature Engineering
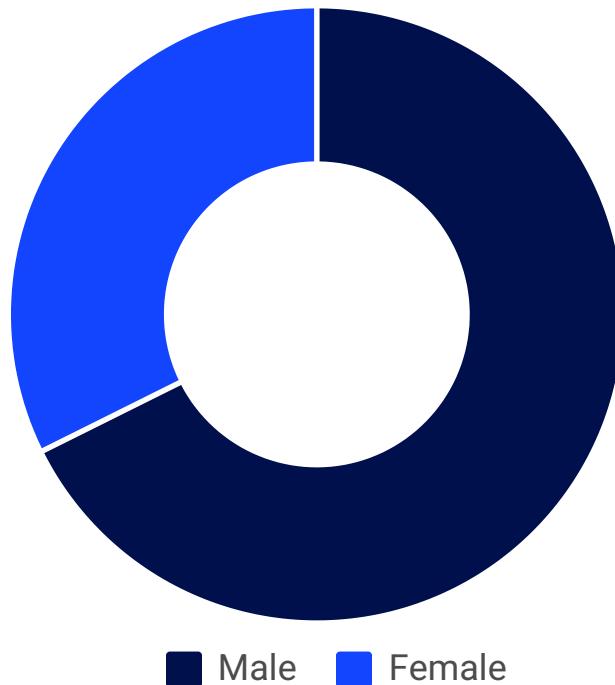
Created age_group and purchase_frequency_days columns

**04**

Database Integration

Connected to PostgreSQL for advanced SQL analysis

Revenue Insights by Gender

Male Female
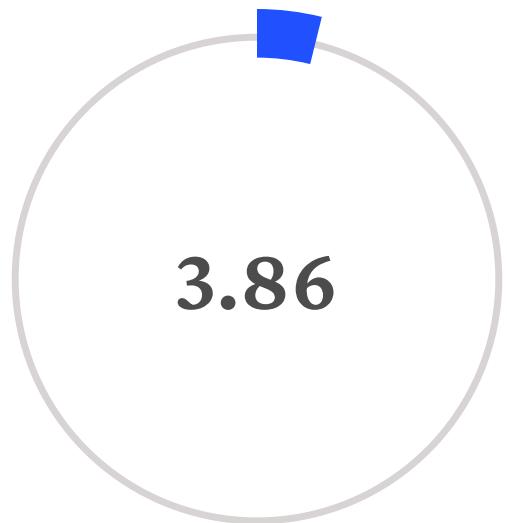
Male Customers Drive Revenue

Male customers generate **$157,890** compared to **$75,191** from female customers

This represents a **2.1x** revenue difference

Made with GAMMA

Top-Rated Products

3.86

Gloves

Highest customer satisfaction

3.84

Sandals

Strong summer performer

3.82

Boots

Quality footwear choice

3.80

Hat
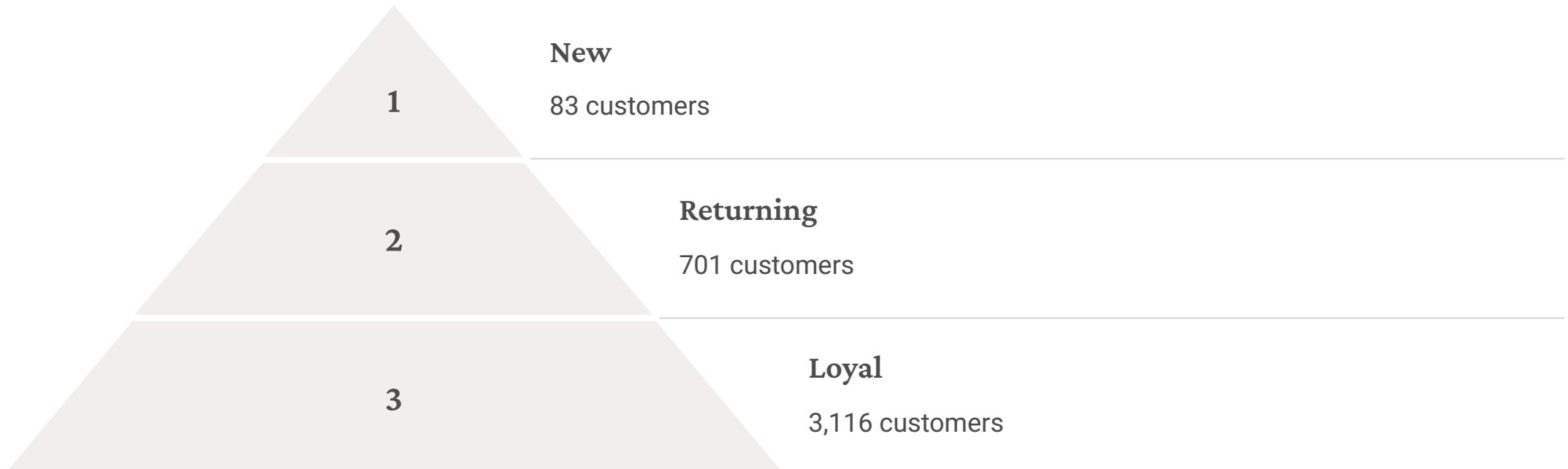
Popular accessory item

3.78

Skirt

Top clothing category

Customer Segmentation Analysis

New

1

83 customers

Returning

2

701 customers

Loyal

3

3,116 customers

80% of customers are classified as loyal, representing strong retention and repeat purchase behavior

Made with GAMMA

Shipping & Spending Patterns

Express vs Standard

Express shipping customers spend **$60.48** on average

Standard shipping customers spend **$58.46** on average

Express users show **3.5% higher** purchase amounts
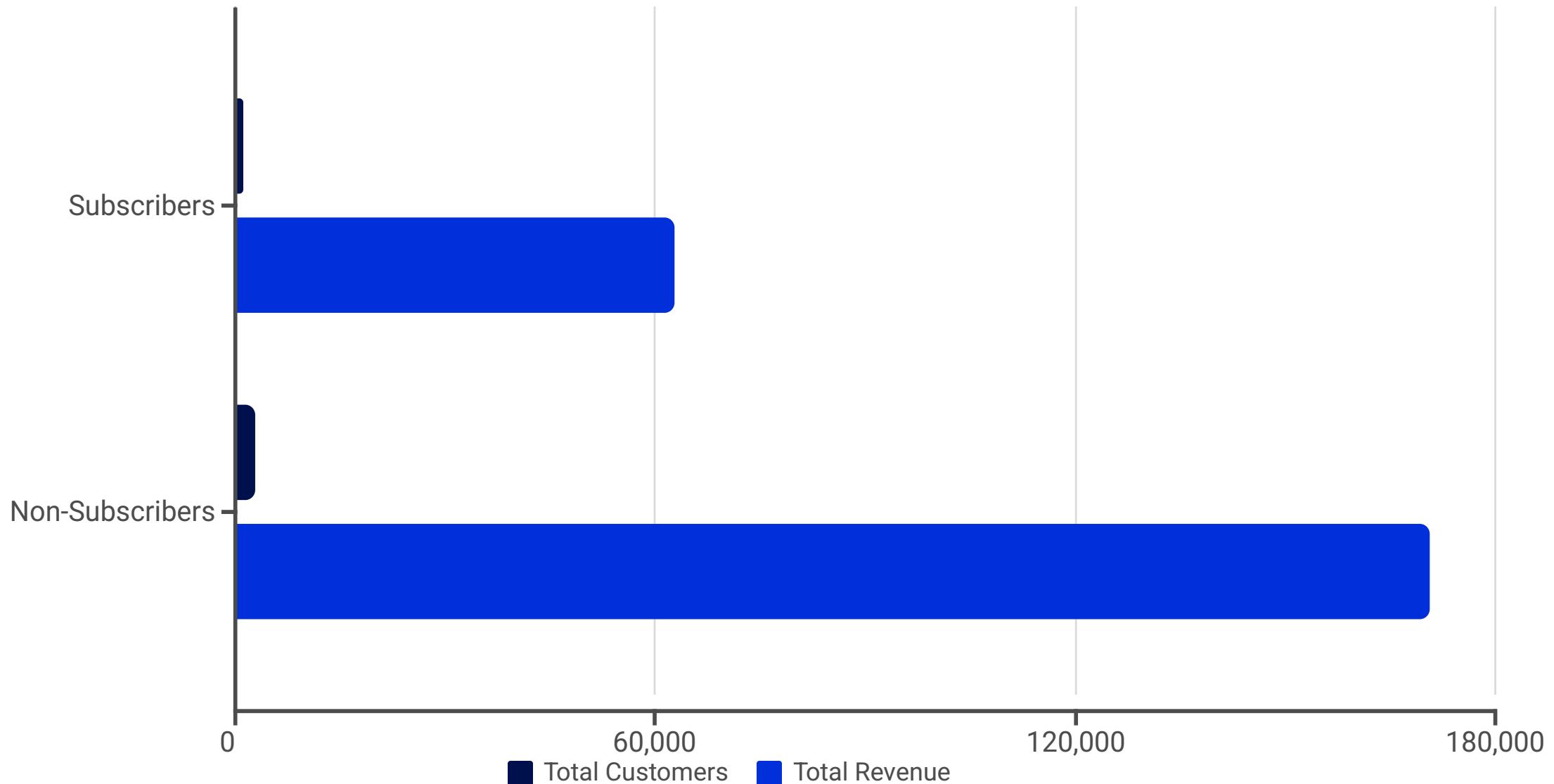
High-Spending Discount Users

839 customers used discounts but still spent above average

Discount-Dependent Products

Hats lead at 50% discount rate, followed by Sneakers at 49.66%

Subscription Status Comparison

Subscribers

Non-Subscribers

| 0 | 60,000 | 120,000 | 180,000 |

■ Total Customers ■ Total Revenue

Average spend nearly identical: **$59.49** (subscribers) vs **$59.87** (non-subscribers)

Repeat buyers with 5+ purchases: **958 subscribers** vs 2,518 non-subscribers

Revenue by Age Group

Young Adult

$62,143 total revenue

Highest contributing segment

Middle-aged

$59,197 total revenue

Strong purchasing power

Adult

$55,978 total revenue

Consistent buyer segment

Senior

$55,763 total revenue

Stable customer base

Strategic Recommendations

1

Boost Subscriptions

Promote exclusive benefits to convert high-value repeat buyers

2

Customer Loyalty Programs

Reward repeat buyers to accelerate movement into loyal segment

3

Review Discount Policy

Balance promotional sales with margin control for profitability

4

Product Positioning

Highlight top-rated items like Gloves and Sandals in campaigns

5

Targeted Marketing

Focus on young adults and express-shipping users for maximum ROI