

Customer Shopping Behavior Analysis

Uncovering insights from 3,900 purchases to guide strategic decisions



DATASET OVERVIEW

The Foundation

3.9K

Total Purchases

Transactions analyzed

18

Data Points

Features per customer

4

Categories

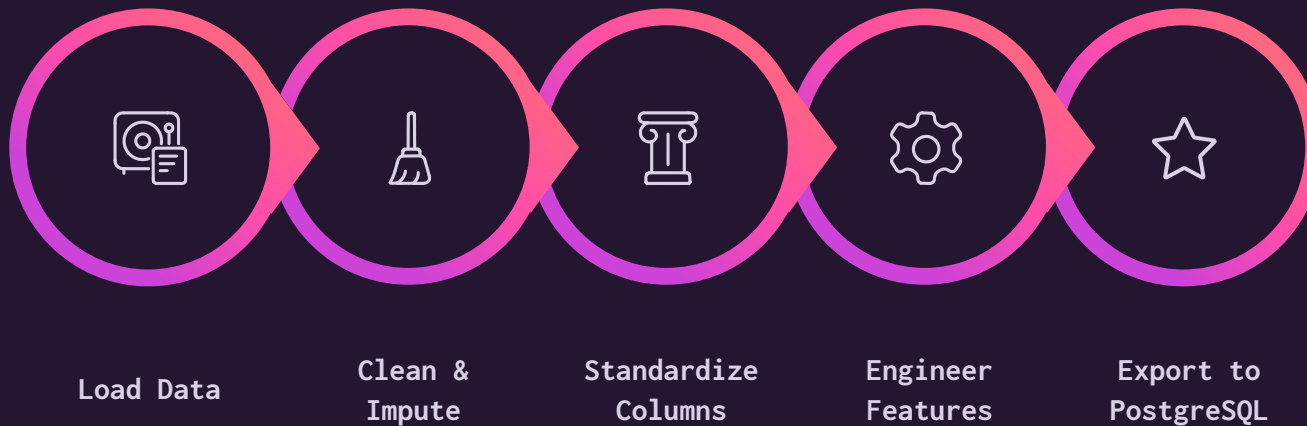
Product segments

50

Locations

Geographic spread

Python Analysis Pipeline



Systematic approach to ensure data quality and consistency

Missing Data

37 review ratings imputed using category medians

Feature Engineering

Created age groups and purchase frequency metrics

Consistency Check

Removed redundant promo code column

Key Business Questions

01

Revenue by Gender

Compare spending patterns

02

Discount Behavior

High spenders using discounts

03

Product Performance

Top-rated items identified

04

Shipping Preferences

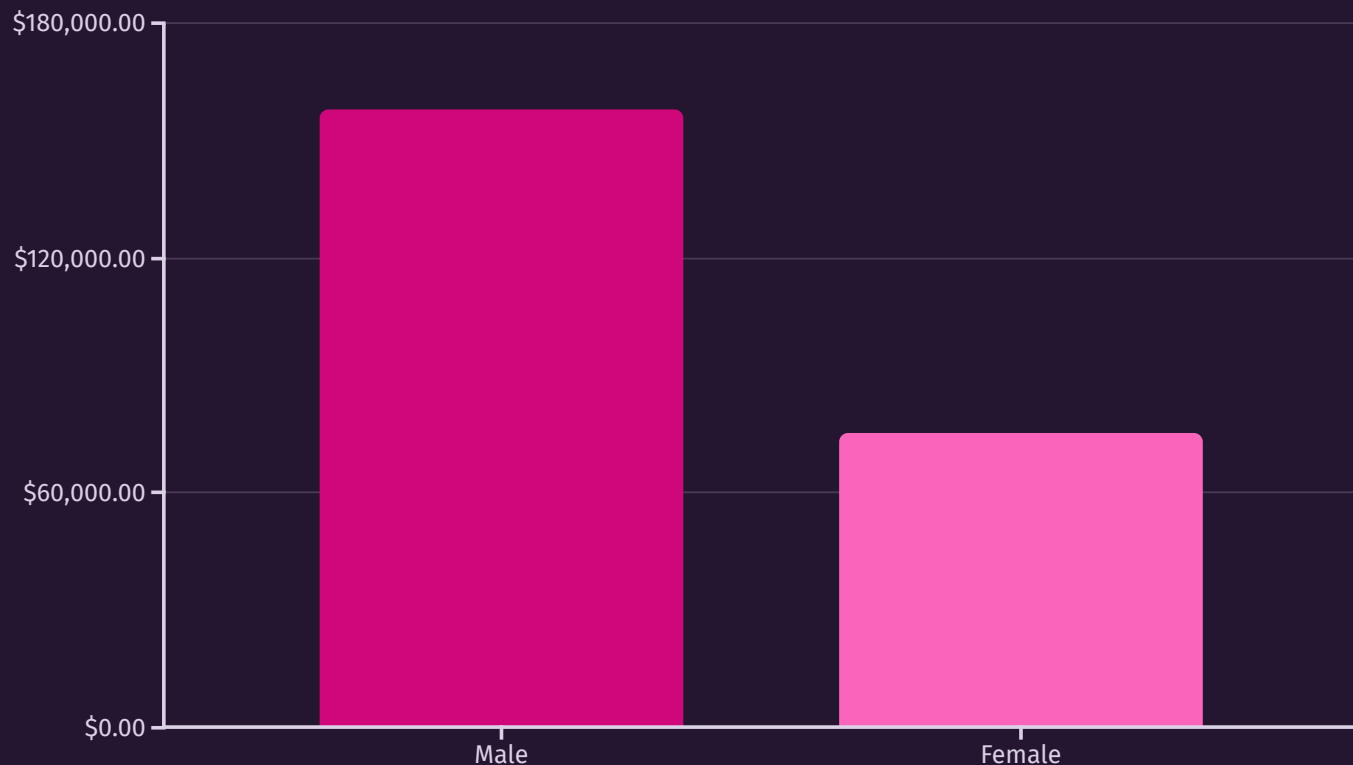
Standard vs. Express analysis

05

Customer Segments

New, Returning, Loyal classification

Revenue Insights



Gender Spending Patterns

Male customers generate **2.1x more revenue** than female customers

- Male: \$157,890 total revenue
- Female: \$75,191 total revenue
- Opportunity for targeted female marketing

Top-Rated Products



Gloves

Rating: 3.86



Sandals

Rating: 3.84



Boots

Rating: 3.82



Hat

Rating: 3.80



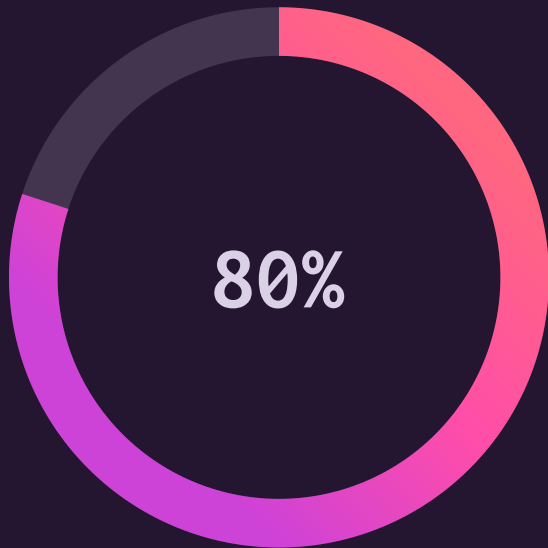
Skirt

Rating: 3.78

Customer Segmentation

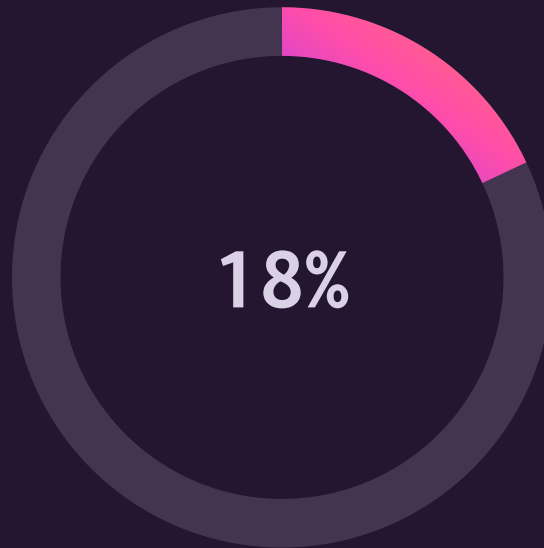
Loyalty Distribution

Understanding customer lifecycle stages



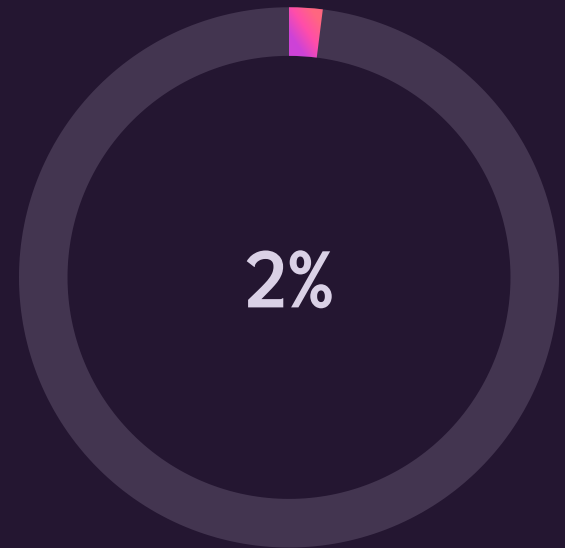
Loyal

3,116 customers



Returning

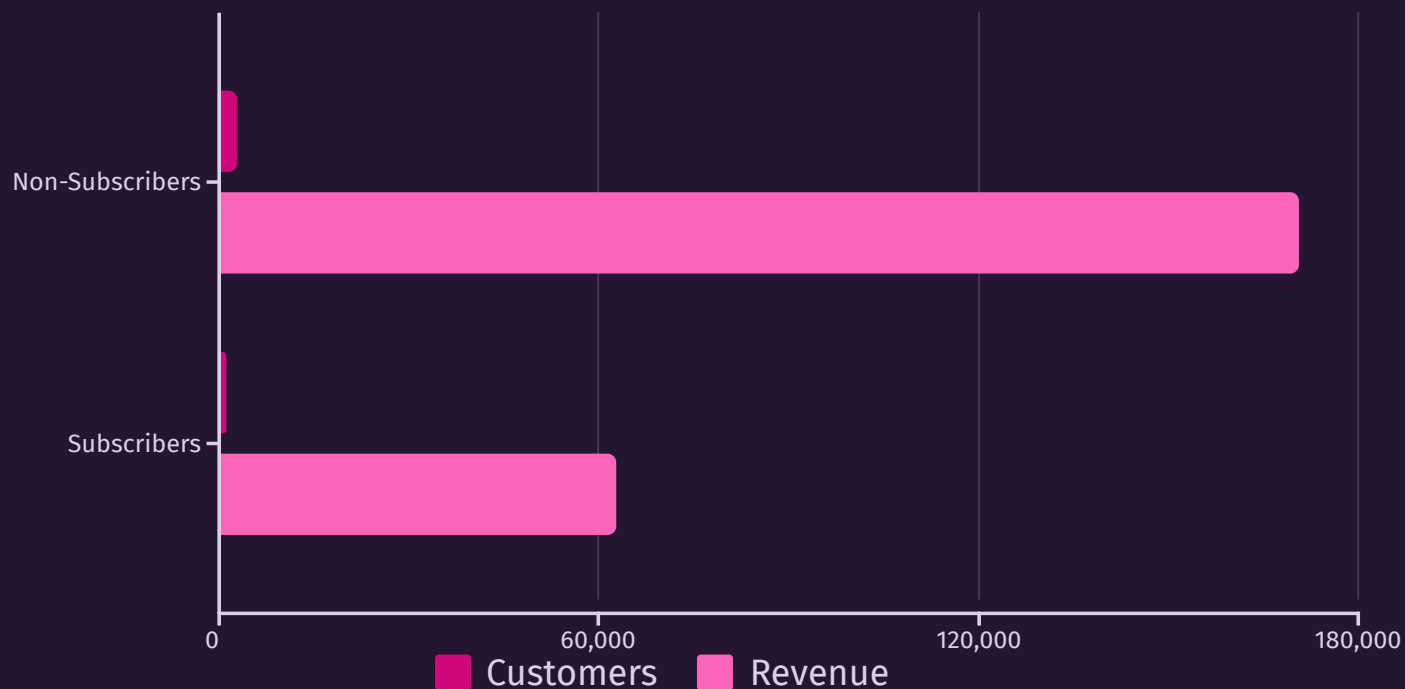
701 customers



New

83 customers

Subscription Impact



Key Findings

27% Subscribe

1,053 active subscribers

Similar Spend

\$59.49 vs \$59.87 average

Growth Potential

73% non-subscribers to target

POWER BI

Interactive Dashboard



Customer Metrics

3.9K customers, \$59.76 avg purchase, 3.75 rating



Category Performance

Clothing leads with \$100K revenue



Age Group Analysis

Young Adults generate highest revenue



Dynamic Filtering

Slice by subscription, gender, category, shipping

STRATEGIC ACTIONS

Business Recommendations



Boost Subscriptions

Promote exclusive benefits to convert 73% non-subscribers



Loyalty Programs

Reward repeat buyers to increase retention



Targeted Marketing

Focus on high-revenue age groups and express shipping users

Highlight top-rated products and optimize discount strategy for margin control