

Customer Shopping Behavior Analysis

Uncovering insights from 3,900 purchases to guide strategic business decisions



Made with **GAMMA**

Dataset Overview

3,900 Purchases

Transactions analyzed across multiple categories

18 Columns

Demographics, purchase details, behavior metrics

37 Missing Values

Review Rating column cleaned and imputed



Data Preparation & Cleaning

01

Data Loading

Imported dataset using pandas

02

Exploration

Checked structure and summary statistics

03

Missing Data

Imputed Review Rating using category median

04

Feature Engineering

Created age groups and purchase frequency metrics

05

Database Integration

Loaded cleaned data into PostgreSQL

Revenue Insights

Revenue by Gender

Male: \$157,890

Female: \$75,191

Male customers generate 2x more revenue





Customer Segmentation

3,116

Loyal Customers

Repeat purchasers with
strong engagement

701

**Returning
Customers**

Moderate purchase
frequency

83

New Customers

First-time or minimal
purchase history

Product Performance

Top Rated Products

1. Gloves: 3.86★
2. Sandals: 3.84★
3. Boots: 3.82★

Highest Discount Rate

1. Hat: 50%
2. Sneakers: 49.66%
3. Coat: 49.07%



Subscription Impact

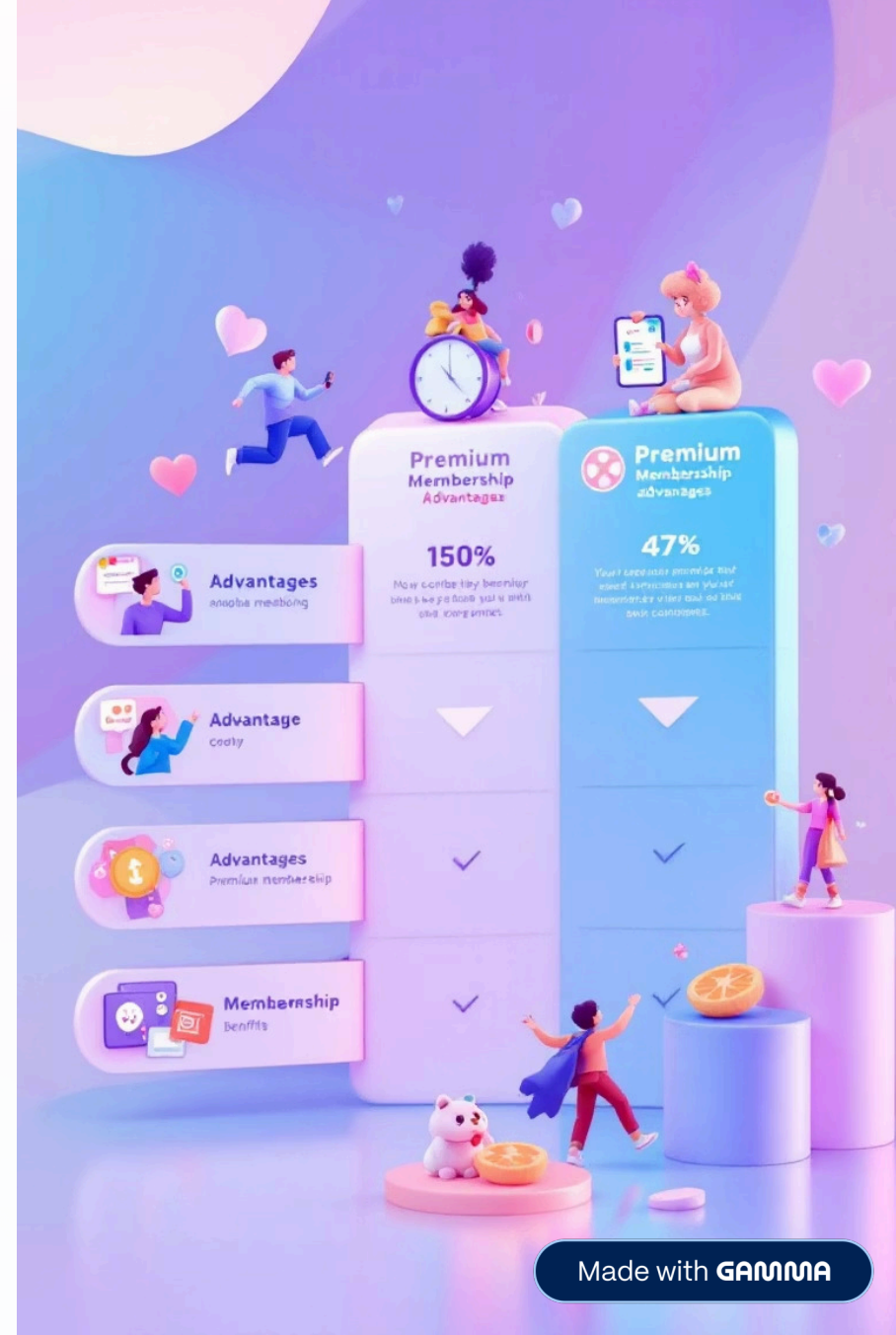
Subscribers

1,053 customers | \$62,645 revenue | \$59.49 avg spend

Non-Subscribers

2,847 customers | \$170,436 revenue | \$59.87 avg spend

Non-subscribers represent 73% of customer base but similar average spend



Shipping & Discount Behavior

Express Shipping

\$60.48 avg purchase



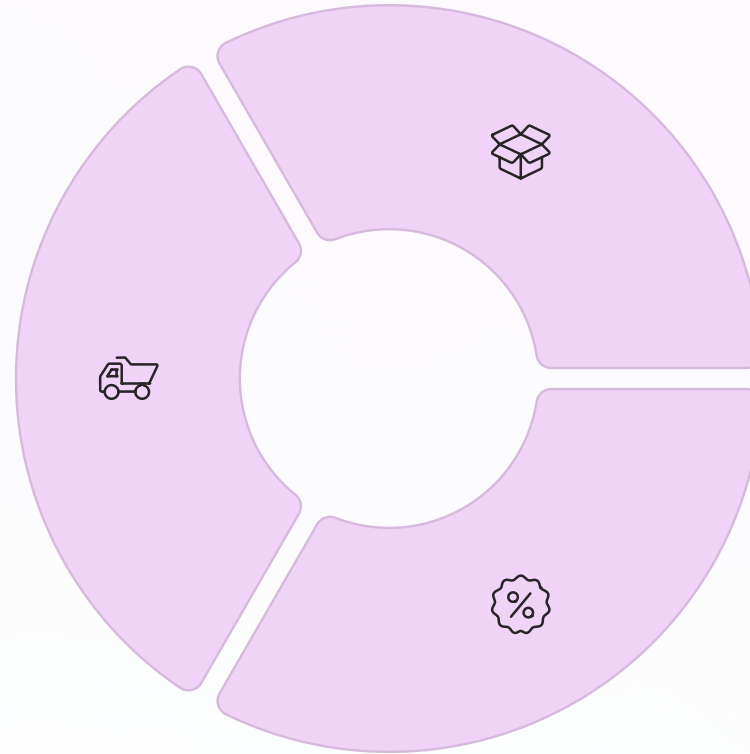
Standard Shipping

\$58.46 avg purchase



Discount Users

839 high-spenders identified



Strategic Recommendations

Boost Subscriptions

Promote exclusive benefits to increase subscriber base

Loyalty Programs

Reward repeat buyers to strengthen engagement

Review Discount Policy

Balance sales growth with margin protection

Targeted Marketing

Focus on high-revenue age groups and express-shipping users

Interactive Dashboard

Power BI visualization of key metrics and customer insights

Real-time tracking of revenue, customer segments, product performance, and behavioral trends

