

Customer Shopping Behavior Analysis

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



Dataset Overview

3,900

Total Purchases

Transactions analyzed

18

Data Points

Features per transaction

37

Missing Values

Review ratings imputed

Customer Demographics

- Age, Gender, Location
- Subscription Status

Shopping Behavior

- Purchase patterns & frequency
- Discounts & promo codes
- Review ratings & shipping

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Data Preparation Pipeline



Data Loading

Imported dataset using pandas



Exploration

Structure check & summary statistics



Cleaning

Handled missing values, standardized columns

Engineering

Created age groups & frequency metrics

Revenue by Gender



Key Finding

Gender-based revenue analysis reveals spending patterns across customer segments

Critical for targeted marketing campaigns and product positioning strategies

Discount Strategy Insights



High-Spending Discount Users

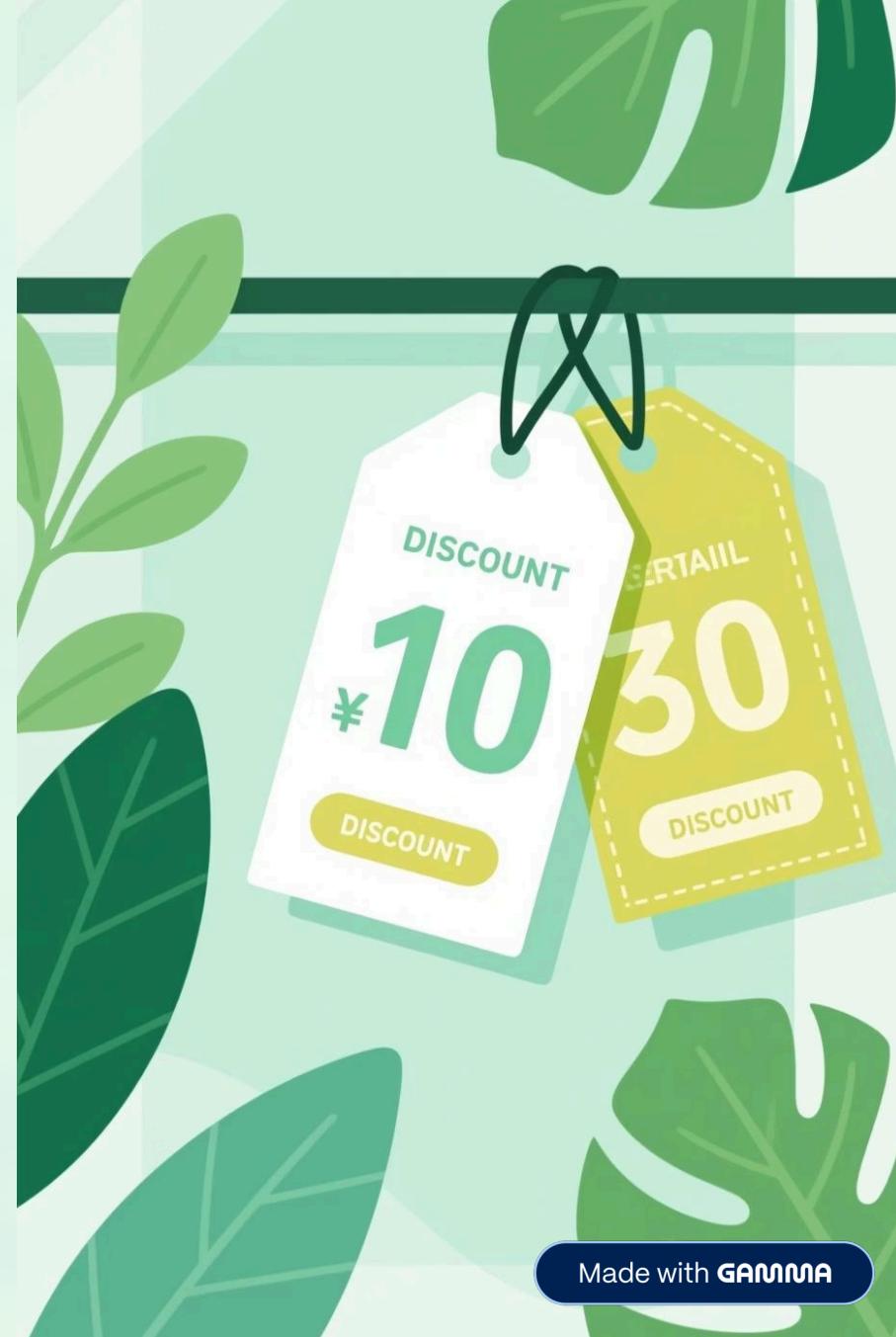
Customers using discounts while spending above average



Discount-Dependent Products

Top 5 products with highest discounted purchase rates

Balance promotional offers with margin control for optimal profitability





Product Performance

1

Top-Rated Products

Highest average review ratings
across categories

2

Best-Sellers by Category

Top 3 most purchased items
per product category

3

Customer Favorites

Products driving repeat purchases and loyalty

Shipping & Subscription Analysis

Shipping Type Comparison

Standard vs. Express average purchase amounts



Subscription Impact

Subscribers vs. non-subscribers: average spend and total revenue



- Express shipping users show higher purchase values - opportunity for premium service positioning

Customer Segmentation



Repeat Buyer Insight

Customers with >5 purchases show higher subscription rates

Revenue by Age Group

Total contribution varies significantly across demographics

Interactive Dashboard

Comprehensive Power BI visualization bringing all insights together for real-time decision making





Strategic Recommendations

Boost Subscriptions

Promote exclusive benefits for subscribers

Loyalty Programs

Reward repeat buyers to build loyal segment

Discount Optimization

Balance sales growth with margin control

Product Positioning

Highlight top-rated and best-selling items in campaigns

Targeted Marketing

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