

Customer Shopping Behavior Analysis

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





Dataset Overview

3,900

Total Purchases

Analyzed
transactions

18

Data Columns

Tracked features

37

Missing Values

Found in the 'Review
Rating' column

Customer Demographics

- Age, Gender, Location
- Subscription Status

Purchase Details

- Item, Category, Amount
- Season, Size, Color

Data Preparation Journey

01

Data Loading

Imported dataset using pandas.

02

Initial Exploration

Checked data structure and summarized statistics.

03

Missing Data Handling

Imputed missing 'Review Rating' values using the median within each category.

04

Feature Engineering

Created age groups and calculated purchase frequency metrics.

05

Database Integration

Connected to PostgreSQL for SQL analysis.

Revenue Insights

Gender Revenue Comparison

Male customers generated slightly higher total revenue than female customers.



Express Shipping

Higher average purchase amounts

Standard Shipping

Lower average spend per order



High-Value Discount Users

Customers who utilized discounts but still spent above the average purchase amount.

Strategic Insight

Discounts attract high-spending customers, not solely bargain hunters.

Business Opportunity

Targeted discount campaigns can effectively drive premium purchases.

Top-Rated Products

Highest Ratings

Top 5 products identified by average review scores

Customer Satisfaction

Quality products drive positive ratings and repeat purchases

Product quality directly correlates with customer loyalty and subscription rates

Subscription Impact

Subscribers vs Non-Subscribers

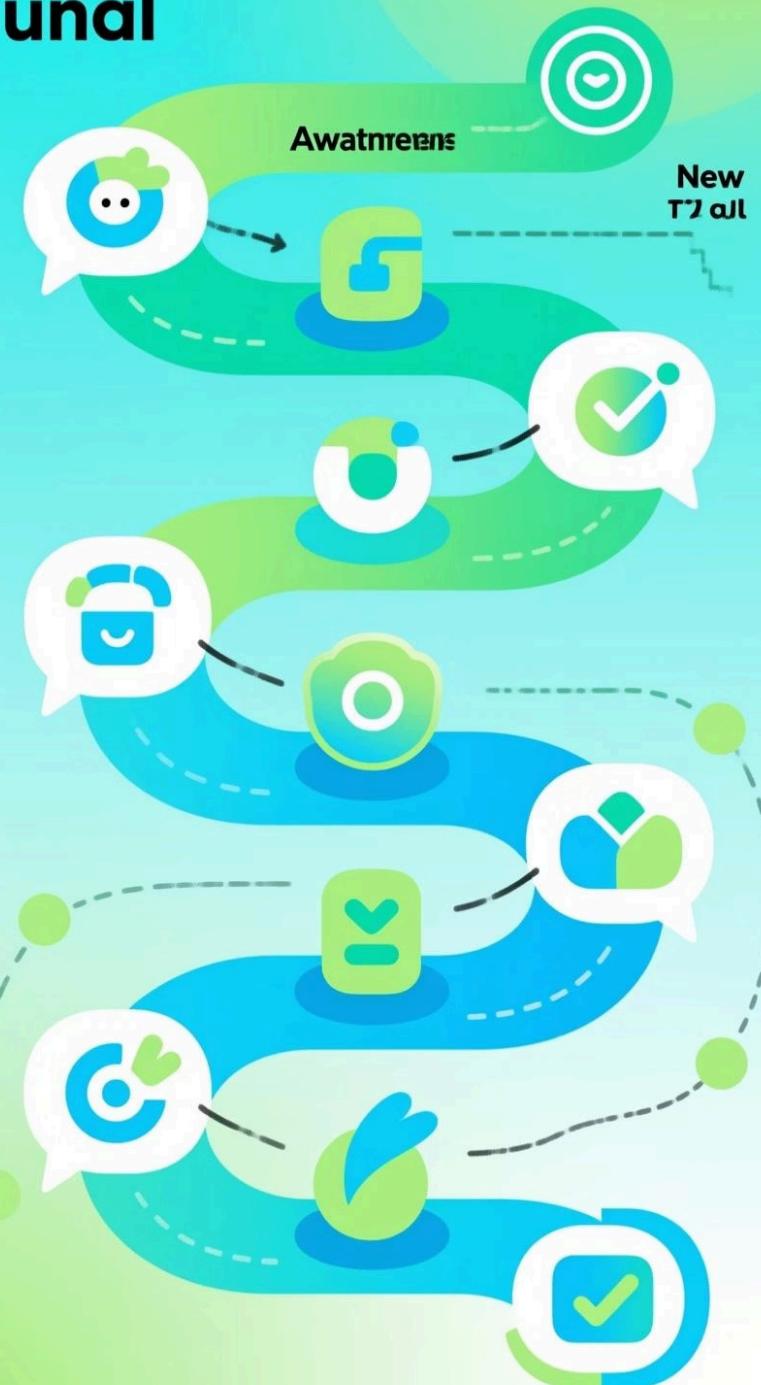
- Higher average spend per transaction
- Greater total revenue contribution
- More consistent purchase patterns



Customers with 5+ purchases more likely to subscribe

Customer Jurnal

Loyal



Customer Segmentation



New Customers

First-time buyers exploring products.



Returning Customers

Customers with 2-5 purchases, developing a relationship.



Loyal Customers

Customers with 5+ purchases, representing the highest value segment.

Revenue analysis by age group indicates that the 25-44 demographic contributes most significantly.

Interactive Dashboard



Visual Insights

Real-time data visualization in Power BI.



Interactive Filters

Drill down by category, season, and demographics.



Trend Analysis

Track patterns and performance metrics.





Strategic Recommendations



Boost Subscriptions

Promote exclusive benefits for subscribers



Loyalty Programs

Reward repeat buyers to increase retention



Review Discount Policy

Balance sales growth with margin control



Targeted Marketing

Focus on high-revenue age groups and express shipping users