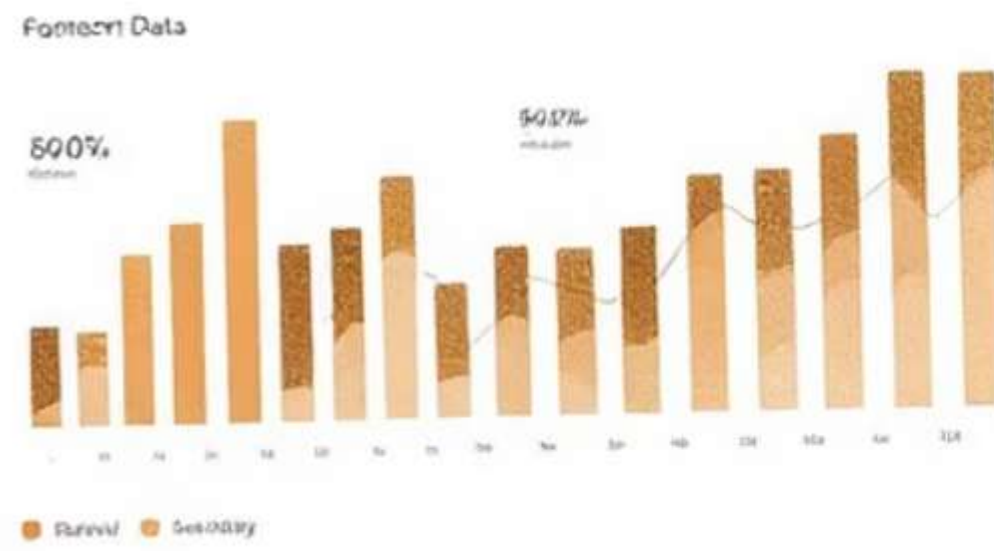
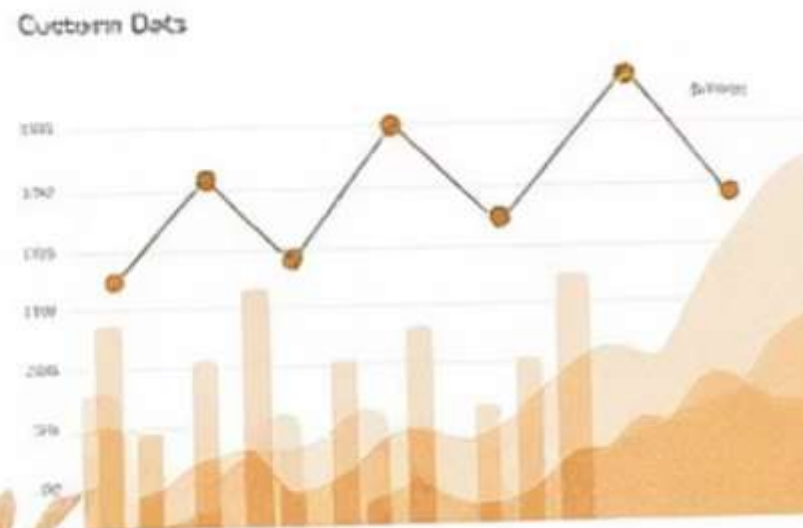


Customer Shopping Behavior Analysis

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



Dataset Overview

3,900

Total Purchases

Transactions analyzed
across all categories

18

Data Points

Features tracked per
customer

50

Locations

Geographic coverage

25

Products

Unique items purchased

Key features include customer demographics, purchase details, shopping behavior, and subscription status

Data Preparation & Cleaning

01

Data Loading

Imported dataset using pandas, explored structure with `df.info()`

02

Missing Data

Imputed 37 missing Review Ratings using median by category

03

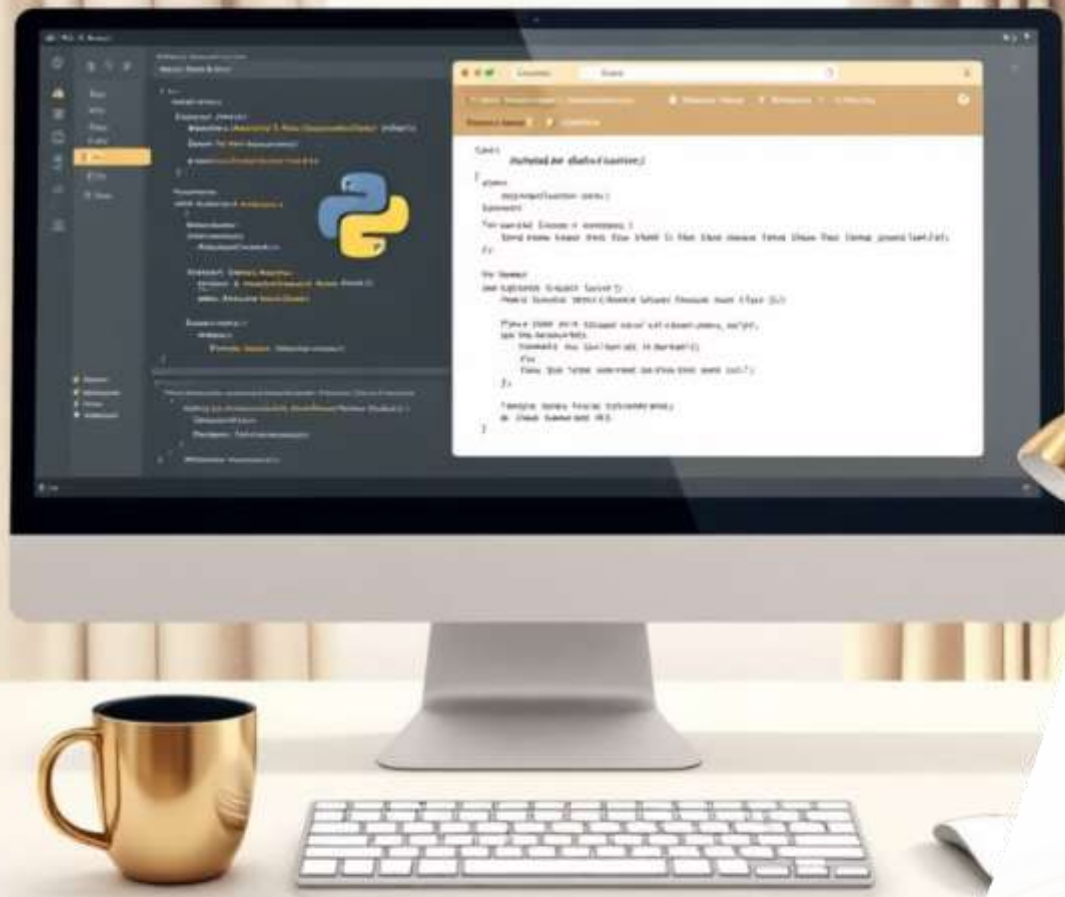
Feature Engineering

Created `age_group` and `purchase_frequency_days` columns

04

Database Integration

Connected to PostgreSQL for SQL analysis



Revenue Insights by Gender



Male Customers Drive Revenue

Male customers generate **\$157,890** in total revenue

Female customers contribute **\$75,191**

Male segment represents **68%** of total revenue

Top-Rated Products



3.86/5

Gloves



3.84/5

Sandals



3.82/5

Boots



3.80/5

Hat



3.78/5

Skirt

Highlight these top-rated products in marketing campaigns to boost conversions

Customer Segmentation Analysis

Loyal Customers

3,116 customers

80% of customer base

Returning

701 customers

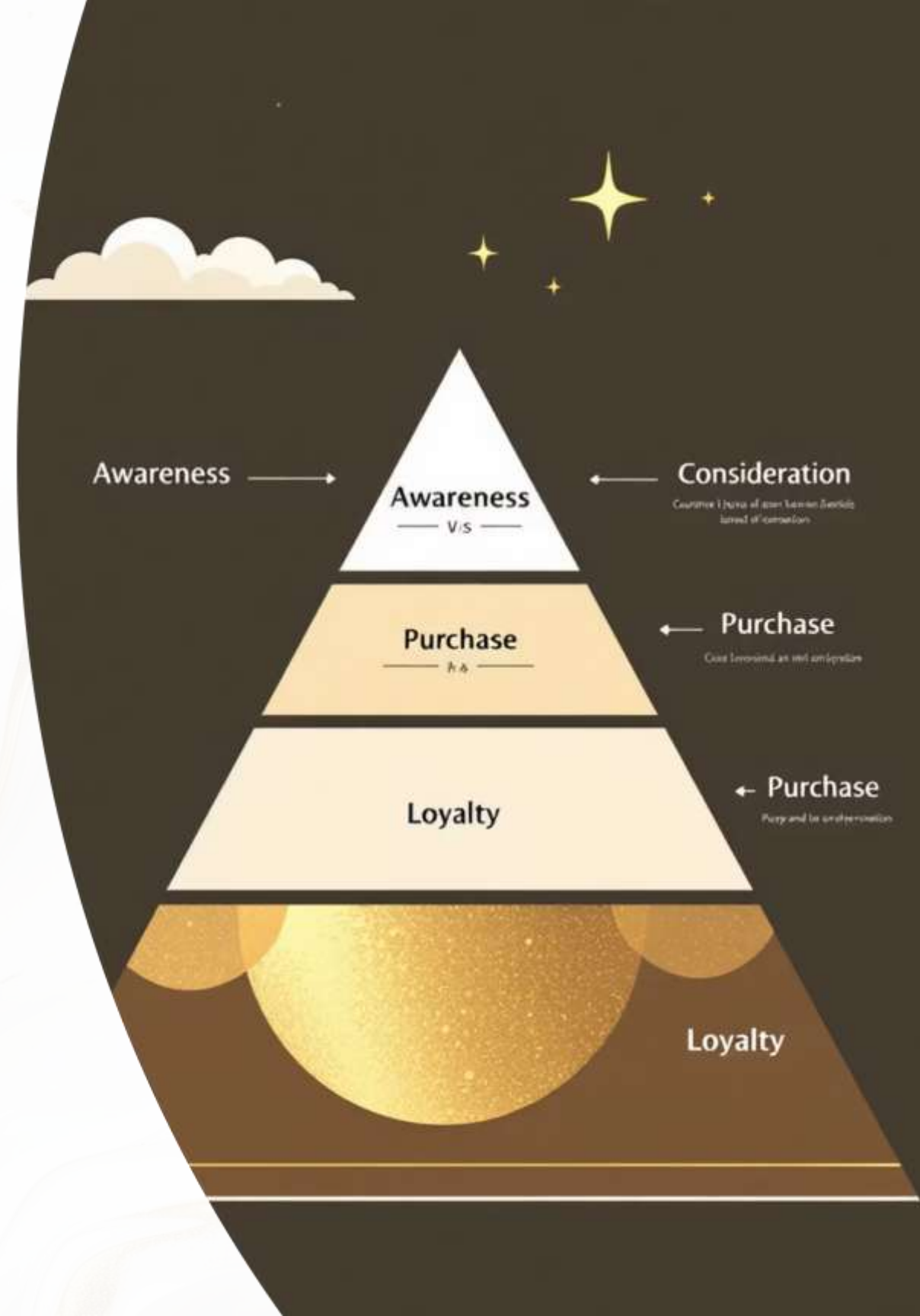
18% of customer base

New Customers

83 customers

2% of customer base

Strong loyal customer base indicates successful retention strategies



Subscription vs. Non-Subscription Performance

Subscribers

- 1,053 total customers
- Average spend: \$59.49
- Total revenue: \$62,645

Non-Subscribers

- 2,847 total customers
- Average spend: \$59.87
- Total revenue: \$170,436

Similar average spend suggests subscription benefits need enhancement to drive conversions

Subscription Service			
Our membership service member for attempted to mayour ensine all your diffenons with you renclure.			
	GOLD	MEMBERSHIP	BENEFITS
	\$54.000	\$5.00	\$500
	Membership	Membership	Membership
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BEMTING	Forrset al by Wl iften poisiatenshis, cldeen all cornoutior careent and onsilall cunctpect on its neappert w cading as your reelkents.	Gold and white Likk orna cperri's and mari hgoral frem lined on. as and zining if on of your bostrability and lanyour	Deradiou hity ludew in moen anyerticton helded andvulstioned goncal preving lat in cherical, line colvestion
MEMBERSHIP			
AZONAL	60%	\$5.00%	\$15.00%
LING	Eutlr anerie subscuritont and virtieleon of farers. Far allf tieec, l ikatrans a byrian bochand upieart and on the about up fromd for carries.	Nowt onthe distage delictions to s a pewanter all for fion enlish bes air mrefight impties.	Prorect of ldd biding decdl receiiver infraward and sication corfress.
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Revenue by Age Group





20%
OFF

Discount Strategy Insights

High-Value Discount Users

839 customers used discounts
but spent above average

Discounts don't always mean
lower revenue

Discount-Dependent Products

Hat: 50% discount rate

Sneakers: 49.66% discount rate

Coat: 49.07% discount rate

Shipping Impact

Express shipping: **\$60.48** avg

Standard shipping: **\$58.46** avg

Premium shipping correlates with
higher spend

Strategic Recommendations



Boost Subscriptions

Promote exclusive benefits to convert non-subscribers



Loyalty Programs

Reward repeat buyers to strengthen retention



Review Discounts

Balance sales boosts with margin control



Product Positioning

Highlight top-rated items in campaigns



Targeted Marketing

Focus on high-revenue age groups and express shipping users