

Customer Behaviour Analysis

Full-cycle data pipeline: Python extraction, SQL analysis, Power BI visualization





Executive Summary

3,900

Total Customers

68% Male
demographic
dominance

\$60

Avg Transaction

Consistent spending
per purchase

3.75

Review Rating

High customer
satisfaction

73%

Non-Subscribers

Major loyalty
conversion opportunity



Data Extraction & Transformation

Python-Powered Data Pipeline

01

Initial Audit

Loaded CSV, inspected structure, identified missing values

02

Statistical Summary

3,900 records validated across demographics and categories

03

Feature Engineering

Age grouping, frequency mapping, column standardization

04

Database Prep

Cleaned data ready for SQL analysis

Revenue by Gender

	gender	revenue
▶	Male	157890
	Female	75191

Male Dominance

\$158,102 from male customers

\$74,978 from female customers

68% of total revenue driven by male demographic



Age Group Performance

Young Adult

\$62,143 revenue

Highest spending segment

Middle-Aged

\$59,197 revenue

Strong consistent buyers

Adult

\$55,978 revenue

Stable market segment

Senior

\$55,763 revenue

Emerging opportunity

Target marketing to 30-60 age range for maximum ROI

Subscription Analysis

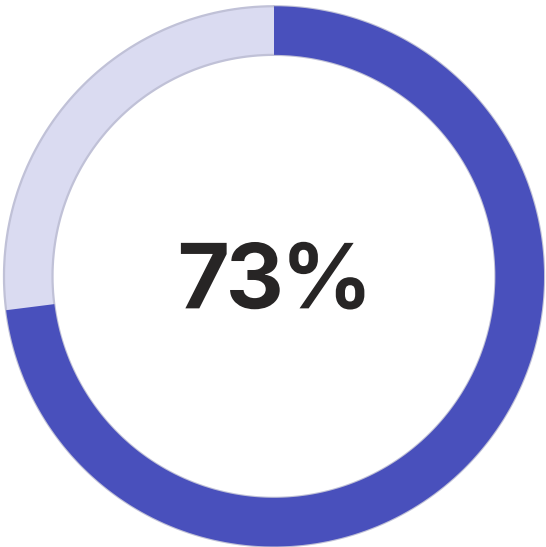
	subscription_status	total_customers	avg_spend	total_revenue
▶	Yes	1053	59.49	62645
	No	2847	59.87	170436

Critical Finding

Subscribers: **\$59.60** avg spend

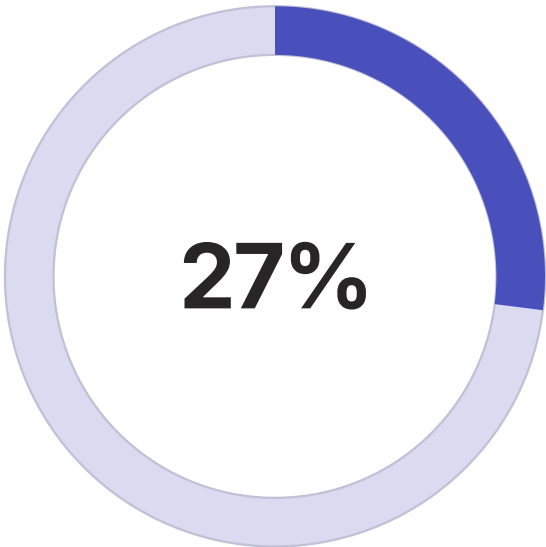
Non-subscribers: **\$59.80** avg spend

Subscription model not driving higher basket size



Non-Subscribers

2,847 customers - major conversion opportunity



Subscribers

1,053 customers - need value enhancement

Customer Segmentation

	customer_segment	Number of Customers
▶	Loyal	3116
	Returning	701
	New	83



Loyal Customers

3,116 customers (80%)

10+ previous purchases



Returning

701 customers (18%)

2-10 purchases



New

83 customers (2%)

First-time buyers

VIP program recommended for 3,116 loyal customers to prevent churn



Product Performance Insights



Clothing Dominance

1,737 items sold - primary category driving revenue



Top Rated Items

Gloves and Boots lead satisfaction ratings



Shipping Insight

Express shipping doesn't increase purchase amounts vs free shipping

Power BI Dashboard

- **Executive Overview**

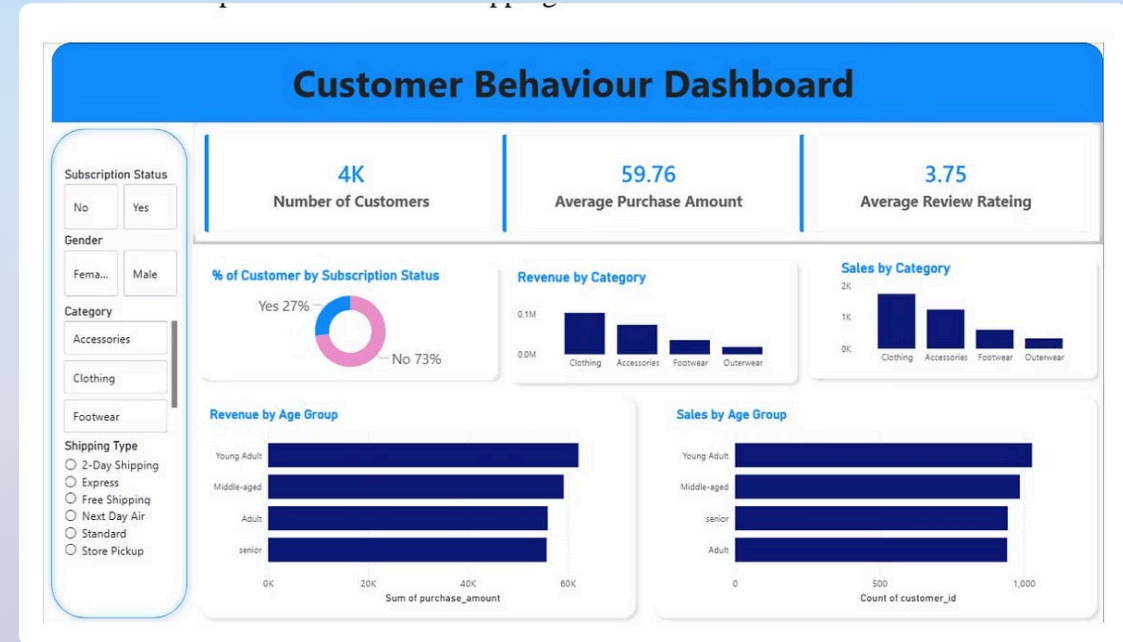
KPI tracking: \$233K revenue, \$60 AOV, 3,900 customers

- **Customer Loyalty**

Subscription analysis, segment comparison, frequency matrices

- **Product Performance**

Top 10 products, shipping impact, inventory insights





Strategic Recommendations



Marketing Focus

Shift budget to male demographic and 30-60 age groups



Subscription Overhaul

Add exclusive bundles and tiered discounts to increase basket size



Inventory Management

Increase stock for high-rated accessories: gloves, hats for winter



VIP Retention Program

Launch program for 3,116 loyal customers to prevent churn