



# Customer Behavior Analysis

# Introduction & Problem Statement

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- SHOPEASY is an online retail platform facing declining performance.
- Despite high marketing spend, engagement and sales are dropping.

### Key Challenges

- Reduced customer interactions
- Falling conversion rates
- High marketing costs, low ROI
- Lack of structured customer feedback analysis

### Objective

Use SQL and Python to uncover insights from customer behavior and feedback to improve engagement and conversions.

# Dataset Overview

- **Total Files:** 6 CSV datasets
- **Data Sources:** Customer journey, customers, customer reviews, engagement data, geography, products.
- **Structure:** Varying rows & columns across files (ranging from twenty to hundreds of records)
- **Purpose:** To analyze behavior, preferences, and engagement patterns

# Key Metrics & Exploratory Analysis

## **Key Metrics Tracked**

- Customer visits, conversion rate
- Average session duration, cart abandonment rate
- Product views and review ratings

## **Exploratory Insights**

- Identified drop-off points in customer journey
- Low engagement with specific product categories
- Incomplete or missing customer feedback patterns

# Factors Influencing Customer Engagement

- ▶ Top products: Product Running shoes, Kayak, and Hockey stick showing highest engagement.
- ▶ Content types: Blogs and Videos drive the most engagement.
- ▶ Action: Focus on high-performing content formats for key products

# Customers Drop off Stages

- ▶ Homepage: 38.46% drop-off — homepage may lack compelling CTAs or navigation.
- ▶ Product Page: 63.08% drop-off — customers likely interested but not convinced to proceed.
- ▶ Checkout: Highest drop-off (70.77%) — friction likely in form fields, hidden charges, or trust issues.
- ▶ Action:
- ▶ Improve homepage UX
- ▶ Optimize product content
- ▶ Simplify checkout flow

# Customer Reviews Impact on Purchasing Behavior

- ▶ **Higher-rated products** (avg  $\geq 4.0$ ) tend to receive more reviews, indicating stronger customer trust and likely higher conversion rates.
- ▶ **Regions with more 4–5 Star reviews** (e.g., Region 5, 6, 9) show higher engagement and potential for repeat purchases.
- ▶ **Low-rated products** (e.g., Product 4, 9, 16, avg  $< 3.5$ ) struggle with engagement and may affect brand perception.
- ▶ **Business Insights & Actionable:**
  - ▶ Promote top-rated products more aggressively to boost conversion and brand credibility.
  - ▶ Collect & highlight positive reviews in marketing channels—especially in high-performing regions
  - ▶ Investigate issues in low-rated products (e.g., quality, pricing, expectations) and revamp positioning.
  - ▶ Encourage reviews through post-purchase nudges to build trust and drive organic growth.

# Performance Insights — Products, Regions & Customer Segments

## Top Products (High Ratings & Reviews):

- **Product 19** (★ 4.4, 5 reviews)
- **Product 15** (★ 4.0, 6 reviews)
- **Product 11** (★ 4.0, 6 reviews)

## Best Performing Regions:

- **Region 5:** Avg ★ 4.22 (9 reviews) — Highly engaged & satisfied
- **Region 9, 2, 1:** Avg ★ 4.0 — Positive sentiment, stable engagement
- **Region 4:** High activity but **low satisfaction** (★ 3.65)

## Customer Segment Insights:

- Focus on **satisfied, high-conversion** regions (5, 9)
- Improve **experience in Region 4** to reduce churn

## Business Actions:

- Boost marketing in top-performing segments
- Gather feedback & enhance support in low-rated areas



# Key Complaints & Improvement Areas

## Top Complaints:

- **"Worth" / "Money"**: Products not delivering value for the price.
- **"Bad" / "Performance"**: Issues with product reliability.
- **"Late" / "Arrived"**: Complaints about delivery delays.
- **"Disappointed" / "Experience"**: Overall dissatisfaction due to poor service.

## Improvement Areas:

- **Product Quality Control**: Investigate underperforming products (IDs 4, 9, 16).
- **Pricing Strategy**: Re-evaluate value perception of products.
- **Logistics Optimization**: Improve delivery timelines and tracking.
- **Customer Experience**: Enhance support, set expectations, and offer personalized service.

## Actionable Steps:

- Launch targeted surveys on "value for money."
- Set alerts for recurring complaint keywords (e.g., "late," "bad").
- Use feedback to train support staff and optimize FAQs.

# Patterns Between Negative Reviews and Product Performance

## Observation:

- Products with **low ratings** also exhibit **lower engagement** (fewer reviews, likely fewer purchases).
- This indicates a direct link: **Negative reviews** → **lower trust** → **lower conversions**.

## Insight:

- Customer dissatisfaction is visibly hurting both brand perception and sales performance of affected products.

## Business Action:

- **Reposition or rebrand** low-rated products after improvements.
- Add **post-purchase follow-up** to address early issues and prevent poor reviews.

# Strategies To Enhance Customer Satisfaction

- ▶ **Proactive Feedback Loops:** Implement in-app surveys post-purchase, especially for first-time buyers.
- ▶ **Sentiment Monitoring:** Set up dashboards (using NLP or keyword analysis) to monitor spikes in negative sentiment in real time.
- ▶ **Highlight Positive Experiences:** Promote top-rated products & customer testimonials on the website and campaigns.
- ▶ **Customer Support Optimization:** Fast-track complaint resolution for products with 3.5★ or lower ratings.

# Conclusion & Next Steps

## Conclusion:

- Positive sentiment dominates overall, showing strong customer satisfaction.
- However, **recurring spikes in negative reviews** (e.g., mid-2023, late 2023, early 2025) highlight **intermittent product or service issues**.
- Neutral reviews remain low, indicating most customers have a clear stance—either satisfied or disappointed.

## Next Steps:

- **Drill into timeline spikes** to uncover what triggered negative reviews during those months.
- **Audit underperforming products** for recurring issues linked to complaints.
- **Strengthen post-launch quality checks** and **customer support readiness** during high-risk periods.



# Thank You!

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