### ****1.Letter from the Marketing Manager****

**Subject:** Data-Driven Marketing Strategy to Improve Customer Engagement

Hi jane,

As the Data Analyst of ShopEasy, I would like to highlight the current challenges we face in our marketing efforts and how a data-driven approach can help us optimize our strategies.

Our primary concerns include:

* **Reduced Customer Interactions:** Engagement with our website and marketing campaigns has significantly declined.
* **Decreased Conversion Rates:** Despite increased traffic, the percentage of visitors making purchases has dropped.
* **High Marketing Expenses with Low ROI:** Our marketing spend has increased, but the revenue growth has not been proportional.

Through **SQL and Python-based data analysis**, we have identified key insights:

1. **Customer Drop-off Points:** Many customers abandon their journey before completing purchases.
2. **Product & Demographic Insights:** Some products perform better in specific regions, while others fail to gain traction.
3. **Marketing Effectiveness:** Certain campaigns show high engagement but do not translate into conversions.

Based on these findings, I recommend:

* Refining **targeted marketing campaigns** to engage customers at critical journey points.
* Adjusting promotional strategies based on **customer preferences and high-performing products**.
* Implementing **data-backed retargeting strategies** to recover abandoned transactions.

With these optimizations, we can ensure that our marketing spend translates into **higher engagement and increased sales**.

Best regards,  
**Akshaya H  
Data Analyst**, ShopEasy

### ****Letter from the Customer Experience Manager****

**Subject:** Enhancing Customer Experience through Data-Driven Insights

Hi john,

As the Data Analyst, I want to address the declining engagement and satisfaction levels that our customers are experiencing. Our analysis has revealed key areas that need improvement:

* **Customer Journey Bottlenecks:** Several users experience difficulty navigating our platform, leading to high drop-off rates.
* **Unstructured Customer Feedback:** Lack of structured review analysis has made it difficult to understand customer sentiments.
* **Inconsistent Product Satisfaction:** Some products receive mixed reviews, indicating quality or expectation mismatches.

From our **SQL and Python-based analysis**, we discovered that:

1. **Customer reviews and ratings** show recurring concerns about product availability and service delays.
2. **Sentiment analysis** indicates neutral to slightly positive feedback, but certain product categories have lower satisfaction levels.
3. Customers from specific regions show higher retention, highlighting the need for localized service improvements.

To improve customer experience, I propose the following actions:

* **Enhance website usability** to minimize drop-off points in the customer journey.
* **Leverage sentiment analysis** to address key customer concerns and improve product offerings.
* **Personalize engagement strategies** based on customer demographics and past behavior.

By implementing these changes, we can improve customer satisfaction, increase repeat purchases, and strengthen brand loyalty.

Best regards,  
**Akshaya H**  
Data Analyst, ShopEasy

### ****LETTER FROM MARKETING MANAGER****

**1.WHAT FACTORS ARE INFLUENCING CUSTOMER ENGAGEMENT?**

· **Customer Behavior is Consistent** – The same customer (ID 9) appears multiple times, engaging with different stages of the website. This suggests repeat interactions, which could indicate interest in the product.

· **Engagement Varies by Stage** – Customers spend more time on the **Product Page (292s)** compared to the **Homepage (187s)**, meaning they are more engaged when viewing specific products rather than just browsing.

· **Interaction Metrics** – The **Views and Clicks (9759-3095)** suggest a high level of interaction, and **Likes (400)** indicate positive interest. However, the **Rating varies (3 or 4)**, showing that satisfaction levels are not uniform.

· **Review Length as an Engagement Indicator** – Customers who leave longer reviews (34 words) might be more engaged than those with shorter ones (23 words), indicating that deeper interaction leads to more detailed feedback.

· **Demographic Insights** – The data set includes customers from Austria (Vienna) and Spain (Madrid), but with limited diversity, it's unclear if location significantly impacts engagement.

**2.AT WHAT STAGE ARE CUSTOMERS DROPPING OFF IN THEIR JOURNEY?**

* **Most Drop-offs Happen at the Homepage** – The highest drop-off count (**32**) occurs at the **Homepage**, meaning many visitors leave without exploring further. This could indicate a lack of initial interest, poor first impressions, or irrelevant content.
* **Product Page Has Fewer Drop-offs** – **20 customers** drop off at the **Product Page**, meaning those who move past the homepage show more interest but some still leave before making a purchase decision.
* **Checkout Has the Least Drop-offs** – Only **13 customers** drop off at the **Checkout** stage, suggesting that those who reach this point are highly likely to complete their purchase. However, there may still be barriers like unexpected costs, payment issues, or second thoughts.

### ****Key Takeaways:****

* Improving the **Homepage experience** (better navigation, engaging content) can reduce early drop-offs.
* Enhancing **Product Page details** (better descriptions, reviews, pricing clarity) can push more users toward checkout.
* Addressing potential **Checkout friction** (simplifying payment, reducing hidden costs) can further improve conversions.

**3.HOW DO CUSTOMER REVIEWS IMPACT BEHAVIOUR?**

### ****Impact of Reviews on Purchasing Behavior****

#### ****1. Higher Ratings Do Not Always Mean More Purchases****

* Some high-rated products (4-5 stars) have low purchase counts.
* Surfboards with ratings from 2-5 still get purchased consistently.

#### ****2. Review Length and Engagement****

* Longer reviews do not always lead to more sales.
* Moderate-length reviews (30-45 words) align with higher purchases.

#### ****3. Lower-Rated Products Still Get Purchased****

* Products with ratings of 2-3 (e.g., Climbing Rope, Ski Boots) are still bought.
* Some buyers proceed with purchases despite poor reviews.

#### ****4. Moderate Ratings (3-4) Show a Balance****

* Many products with 3-4 ratings maintain steady sales.
* Customers may tolerate minor issues if overall feedback is positive.

### ****Key Takeaways for Businesses****

* Encourage concise, informative reviews (30-45 words).
* A mix of ratings (not just 5-star) can build trust.
* Lower-rated products can still sell if they fulfill customer needs.
* Focus on **authentic, helpful reviews** rather than just high ratings.

**4.WHICH PRODUCTS, LOCATIONS, AND CUSTOMER SEGMENTS ARE PERFORMING WELL?**

### ****Performance Analysis of Products, Locations, and Customer Segments****

#### ****1. Top Performing Products****

* **Surfboard and Climbing Rope** lead with **2 purchases each**, while other products have lower sales.
* **Overall low sales volume** suggests a need for better marketing and visibility.

#### ****2. Top Performing Locations****

* **Spain (Madrid) has the highest customer count (18),** followed by **Italy (Rome - 12) and Germany (Berlin - 11).**
* **Vienna (Austria) and London (UK) show strong engagement with 10 customers each.**
* **France (Paris) has the lowest customer count (5),** indicating growth potential.

#### ****3. Top Performing Customer Segments****

* **Middle-aged groups (36-45 and 46-60) are the most engaged,** with **25 and 24 customers, respectively.**
* **Younger (18-25) and older (60+) age groups show lower engagement.**

### ****Key Takeaways for Business Strategy****

* **Focus on high-performing regions (Spain, Italy, Germany) for marketing and sales.**
* **Target middle-aged customers (36-60), as they make up the largest segment.**
* **Expand product sales beyond Surfboards and Climbing Ropes.**
* **Develop strategies to attract younger (18-25) and older (60+) customers.**

**5.COMPARE REPEAT VS. FIRST-TIME BUYERS?**

### ****Comparison of Repeat vs. First-Time Buyers****

#### ****1. First-Time Buyers Dominate****

#### **Majority of buyers are first-time customers**, meaning most users **do not return** after their first purchase.

* **No repeat buyer**, indicating a **lack of customer retention**.
* This could indicate that the business is not fostering **customer loyalty** or that the products are one-time purchases.

### ****Key Takeaways for Business Strategy****

* **Implement loyalty programs** or incentives to encourage repeat purchases.
* **Analyze customer feedback** to identify reasons why first-time buyers are not returning.
* **Improve customer engagement** through personalized follow-ups and post-purchase offers.
* **Expand product variety** to encourage multiple purchases from the same customer.

### ****2.LETTER FROM CUSTOMER EXPERIENCE MANAGER****

**1.ANALYZE CUSTOMER SENTIMENT FROM THE REVIEWS?**

### ****Customer Sentiment Analysis****

1. **Overall Sentiment Distribution:**

* **Positive Reviews (62)** dominate, indicating overall customer satisfaction.
* **Neutral Reviews (29)** suggest some customers are neither highly satisfied nor dissatisfied.
* **Negative Reviews (9)** are relatively low but still require attention.

**2.Customer Satisfaction:**

* The majority of customers (62) are happy with the product/service.
* However, **9 negative reviews** highlight areas for potential improvement.

****Key Takeaways for Business Strategy****

* ****A**nalyze Negative Reviews:** Identify common complaints and address them (e.g., quality, pricing, service).
* I**mprove Neutral Experiences:** Convert neutral customers into promoters by enhancing their experience.
* **Leverage Positive Feedback:** Highlight positive reviews in marketing to attract more customers.

**2.IDENTIFY KEY COMPLAINTS AND IMPROVEMENT AREAS?**

### ****Key Customer Complaints and Improvement Areas****

#### ****1. Product Quality & Performance Issues****

* **Tennis Racket, Dumbbells, and Yoga Mat received 1-star ratings,** indicating major dissatisfaction.
* Complaints include **poor durability, bad experiences, and low value for money.**

#### ****2. Unmet Customer Expectations****

* **Fitness Tracker and Golf Clubs (2-star ratings) disappointed customers.**
* Issues suggest **performance did not match expectations, requiring better quality control.**

#### ****3. Delivery & Customer Experience Issues****

* **Climbing Rope received complaints about late delivery,** pointing to logistical inefficiencies.
* **Surfboard and Kayak were rated "average,"** meaning they lacked standout features.

### ****Key Takeaways for Business Strategy****

* **Enhance product quality** for **low-rated items** like Tennis Racket, Dumbbells, and Yoga Mat.
* **Set clear expectations** through better product descriptions and quality improvements.
* **Optimize delivery processes** to reduce customer complaints about shipping delays.

**3.FIND PATTERNS BETWEEN NEGATIVE REVIEWS AND PRODUCT PERFORMANCE?**

### ****Patterns Between Negative Reviews and Product Performance****

#### ****1.**** Low Purchase Volume & Negative Feedback

* Each product has **only 1 or 2 purchases**, meaning the dataset is limited for strong conclusions.
* A single negative review can heavily impact the average rating due to the small sample size.

#### Consistent Negative Ratings (2.0 AVG)

* All listed products have an **average rating of 2.0**, indicating **moderate dissatisfaction** among buyers.
* This suggests potential quality or user experience issues that need attention.

#### ****3. Some Products Sell Despite Negative Feedback****

* **Climbing Rope and Surfboard have slightly higher purchase counts (2-3),** despite negative reviews.
* This suggests there is **demand, but improvements are needed to enhance satisfaction.**

### ****Key Takeaways for Business Strategy****

* **Improve product quality** to reduce negative feedback.
* **Encourage positive reviews** by addressing customer concerns.
* **Analyze sales impact** of negative reviews and make necessary improvements.
* **Set clear expectations** through accurate product descriptions to avoid dissatisfaction.

**4.RECOMMEND STRATEGIES TO ENHANCE CUSTOMER SATISFACTION?**

### ****Strategies to Enhance Customer Satisfaction****

1. **High-Rated Products (4.0+)**

* **Ski Boots & Climbing Rope (4.0 AVG, 6 Reviews Each)**
* **Surfboard, Tennis Racket & Yoga Mat also performing well**  
  **Strategy:**
* **Leverage positive reviews** in marketing to attract more buyers.
* Offer **bundled discounts** or complementary accessories to increase sales.

1. **Low-Rated Products (3.4 - 3.8 AVG)**

* **Kayak has the lowest rating (3.4, 10 reviews)** – could indicate quality or usability issues.
* **Fitness Tracker (3.57) and Swim Goggles (3.67) also need improvement.**  
   **Strategy:**
* **Analyze negative feedback** to identify common complaints.
* Improve **product quality, durability, or user experience** based on feedback.
* Provide **better product descriptions** to set accurate customer expectations.

#### ****Yoga Mat & Tennis Racket Appear in Both Lists****

**Mixed reviews suggest inconsistency in product experience.**  
**Strategy:**

* Improve **quality control** to ensure consistency.
* Provide **better customer support** (e.g., usage tips or return policies).

### ****Key Takeaways****

### ****Fix quality issues in low-rated products****

### ****Engage with dissatisfied customers to rebuild trust****

### ****Use marketing to boost visibility for products with low sales****

### ****Promote best-performing products as top-rated choices**** ****Improve customer experience to drive repeat purchases****

### **5.COMMON ACTIONS LEADING TO CONVERSIONS?**

### ****Common Actions Leading to Conversions****

#### ****1. Views Play a Major Role in Conversions****

* **"View" is the most common action (2 occurrences)** before a successful purchase.
* This suggests that customers tend to **explore product details before making a decision**.

**Improvement Strategy:** Enhance product pages with **clear descriptions, images, and reviews** to boost conversions.

#### ****2. Drop-off Before Purchase is a Concern****

* **1 customer dropped off but later converted** (meaning they returned to purchase later).
* This indicates that some buyers may leave due to **hesitation, distractions, or checkout issues** but might return later.

**Improvement Strategy:** Implement **cart abandonment emails or retargeting ads** to re-engage drop-off customers.

### ****Key Takeaways****

* **A**nalyze time spent on product pages to see engagement trends.
* Track other key actions (Add to Cart, Wishlist) for deeper insights.
* Optimize the checkout process to reduce drop-offs.