Project Title	Customer Behavior Analysis
Skills take away From This Project	SQL for Data Analysis ,Database Management , Python for Database Operations,customer Journey & Marketing Analytics, Business Insights & Decision-Making
Domain	Marketing & Customer Analytics

Problem Statement:

ShopEasy, an online retail business, is experiencing a decline in **customer engagement and conversion rates**, despite investing heavily in marketing campaigns. The company has observed:

- **Reduced Customer Interactions**: Fewer customers are engaging with the website and marketing content.

- **Decreased Conversion Rates**: A decline in the percentage of site visitors making purchases.

- **High Marketing Expenses**: Increased spending on digital marketing but without a proportional increase in revenue.

- **Customer Feedback Gaps**: Poorly understood customer preferences due to lack of structured feedback analysis.

To address these challenges, **ShopEasy's Marketing and Customer Experience teams** have reached out for a data-driven solution that analyzes **customer behavior, reviews, and journey patterns** using **SQL and Python**.

Letter from the Marketing Manager (Jane Doe)

Subject: Request for Data Analysis to Improve Marketing Strategy

Hi Data Analyst,

I hope this email finds you well. I'm the Marketing Manager at ShopEasy, and we've been facing some serious challenges with our marketing campaigns lately. Despite increasing our investment, we've seen:

- A decline in customer engagement and site interactions
- A drop in conversion rates
- Rising marketing expenses with low ROI

We need a data-driven strategy to understand what's working and what's not. Your role is to analyze our customer journey data, product reviews, and conversion patterns to identify opportunities for improvement.

We believe the key questions to answer are:

- What factors are influencing customer engagement?
- At what stage are customers dropping off in their journey?
- How do customer reviews impact purchasing behavior?
- Which products, locations, and customer segments are performing well?

We have provided access to our databases containing customer behavior records, reviews, and transactions. Your insights will be critical in optimizing our marketing efforts and driving better business outcomes.

Looking forward to your analysis.

Best regards,

Jane Doe
Marketing Manager, ShopEasy
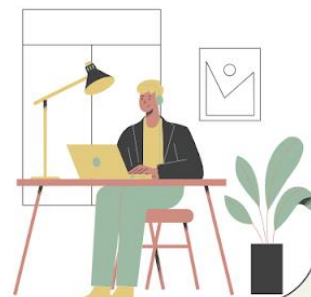
Letter to the Marketing Manager

Subject: Data Analysis to improve Marketing Strategy

Hi Jane Doe,

I have analyzed the customer data, including engagement patterns, reviews, and customer demographics, to identify key insights that can help optimize our marketing strategy. Below are my findings:

Factors Influencing Customer Engagement

• Customers spend more time on the homepage but drop off before reaching the product pages

• Product pages with more clicks and longer duration tend to have better reviews

Customer Drop-off Stages

• A significant drop-off occurs on the product page, suggesting pricing concerns or weak product descriptions.

• Customers engaging with reviews before purchasing have higher conversion rates.

Impact of Customer Reviews on Purchases

• Products with higher ratings (4-5 stars) lead to more engagement and conversions.

• Negative reviews mentioning "price" or "quality concerns" discourage buyers.

Recommendations:

1. Make product pages better – Use clear descriptions, good images, and easy to understand prices.

2. Use customer reviews wisely – Show good reviews, fix common complaints, and ask happy customers to leave feedback.

3. Improve website navigation – Guide visitors from the homepage to product pages with clear buttons and suggestions.

4. Reduce drop-offs – Test different layouts, offer discounts, and make checkout quick and easy.

Please let me know if you want me to focus on specific areas. Looking forward to your feedback and to discussing on further steps.

Regards,

Sunil Kumar G T

Letter from the Customer Experience Manager (John Smith)

Subject: Request for Customer Feedback Analysis

Hi Data Analyst,

I'm the Customer Experience Manager at ShopEasy, and I need your help in analyzing our customer reviews and feedback. We've noticed a decline in customer satisfaction and engagement, which is negatively affecting our overall conversion rates.
Our main concerns include:
- Customers leaving negative reviews about certain products.
- Low repeat purchase rates, indicating dissatisfaction.
- A lack of structured insights into customer opinions.

We have collected customer reviews, ratings, and purchase history. Your role is to:
1. Analyze customer sentiment from the reviews.
2. Identify key complaints and improvement areas.
3. Find patterns between negative reviews and product performance.
4. Recommend strategies to enhance customer satisfaction.
5.

We hope your expertise in SQL and Python will provide actionable insights to improve customer experience and retention.

Best regards,
John Smith
Customer Experience Manager, ShopEasy
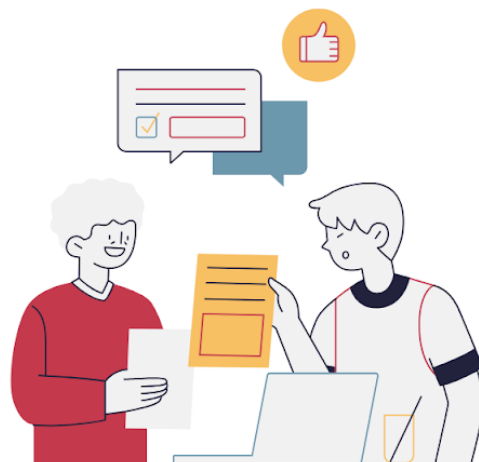
Letter to the Customer Experience Manager

Subject: Customer Feedback Analysis

Hi John Smith,

Thank you for reaching out regarding customer engagement and feedback analysis. To understand customer reviews and feedback based on the products, I have provided my insights and recommendations on the same. Below are my findings based on the provided data.

Sentiment Analysis from Customer Reviews

• The majority of negative reviews (ratings 1-2) highlight product quality and delivery

Delays and poor packaging.

• Positive reviews (ratings 4-5) focus on excellent customer service and fast shipping.

Identifying Key Complaints from Low Ratings

• The top complaints are related to late deliveries, product quality issues, and poor

customer support.

• These complaints need immediate attention to improve satisfaction.

Patterns between negative reviews and Product Performance

- Low-performing products show low average ratings (below 3.0) and relatively high views, indicating interest but likely dissatisfaction after purchase.
- Despite receiving higher views and clicks, these products have a large number of negative reviews, which may be contributing to poor customer satisfaction and low repeat purchases.
- Product shows better alignment between high engagement (views and clicks) and better ratings, suggesting strong product-market fit.

Recommended strategies to enhance Customer Satisfaction

- Items like Dumbbells, Basketball, and Ice Skates have low average ratings despite receiving a high number of views. This indicates that customers are interested but are not satisfied after purchase. Investigate product quality or alignment with customer expectations.
- High views with low ratings suggest a mismatch in product expectation vs reality. Improving descriptions, specifications, and customer support visibility may help reduce negative experiences.
- Introduce post-purchase surveys or targeted follow-ups for low-rated items to gather deeper insights into dissatisfaction causes.

Recommendations

• Improve product quality and delivery speed to reduce negative feedback.

• Enhance customer support response time to address concerns efficiently.

• Increase video-based promotions, as they lead to higher engagement and

satisfaction.

• Run re-engagement campaigns for inactive customers and offer discounts to re-attract
customers

Let me know if you want me to look over other aspects of insights, looking forward to your

insights.

Regards,

Sunil Kumar G T