Project Report: Optimizing Customer Experience for Retention at Flipkart

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TOOLS USED: MICROSOFT EXCEL, PIVOT TABLES, STATISTICAL ANALYSIS

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1 Introduction

As one of India's premier e-commerce platforms, Flipkart manages a vast ecosystem of electronics, fashion, and home goods. In an increasingly competitive digital marketplace, the quality of customer service serves as a primary differentiator and a critical driver of long-term brand loyalty.

Recently, Flipkart has identified a concerning downward trend in customer retention rates. This report presents a comprehensive data-driven **customer service interactions** to diagnose the operational and emotional friction points contributing to this decline. By analysing key metrics such as Customer Satisfaction (CSAT) scores, Service Level Agreement (SLA) compliance, and customer sentiment, this study aims to provide actionable insights to optimize service operations and stabilize the customer base

2. Project Objectives

The primary mission of this analysis is to decode the relationship between Flipkart's customer service operations and its fluctuating retention rates. To achieve this, the project focuses on the following core objectives:

- **Assess Service Quality (CSAT):** To conduct a granular evaluation of Customer Satisfaction scores across different interaction channels (Call-Center, Chatbot, Web, Email) and identify where the service experience is failing to meet customer expectations.

- **Validate Operational Assumptions:** To test specific hypotheses regarding Service Level Agreements (SLA) and call durations. The goal is to determine if speed of resolution truly correlates with high satisfaction, or if qualitative factors play a more dominant role.

- **Identify Friction Hotspots:** To pinpoint specific geographical regions (States/Call Centers) and common customer pain points (e.g., Billing Questions) that act as "churn triggers"—driving customers away from the platform.

- **Quantify Emotional Impact:** To analyze the distribution of customer sentiment (Negative vs. Positive) and measure how emotional outcomes influence a customer's decision to remain with Flipkart.

- **Provide Data-Driven Strategic Recommendations:** To transform raw call data into actionable business strategies, such as optimizing agent training, refining SLA targets, and enhancing specific support channels to improve overall retention.

Checkpoint 1: Analytical Framework & Metrics

1. Statistical Overview of Service Quality

- **Mediocre CSAT Benchmark: The average CSAT score is 5.54/10, with a Median and Mode of 5.0. This indicates that the majority of interactions are perceived as "average," leaving significant room for improvement.**

- **Inconsistency in Delivery: A Standard Deviation of 2.37 highlights high volatility in the customer experience across different regions and agents.**

2. The "Operational Paradox" (Hypothesis 1 Result)

- **Quality Trumps Speed:** Contrary to common belief, calls resolved "Above SLA" (slower response) resulted in a higher average CSAT (5.6) than those "Within SLA" (5.5). This proves that customers value a thorough resolution over a rushed response.

- **Call Duration Neutrality:** Correlation analysis showed a near-zero relationship (-0.006) between call length and satisfaction. All sentiment groups—from "Very Positive" to "Very Negative"—shared an average duration of approximately 25 minutes.

3. Sentiment and Retention Trends

- **Emotional Burden:** 33.5% of interactions are classified as "Negative," making it the single largest sentiment category. When combined with "Very Negative" scores (18.4%), over half of all customers are leaving interactions dissatisfied.

- **Retention Drivers:** Analysis of the "Retained" status shows that while gender doesn't significantly impact loyalty, the emotional quality of the call does. High CSAT scores are the most reliable predictor of a customer staying with the platform.

4. Top Performance and Pain Points

- **Regional Stars:** Arunachal Pradesh (5.96) and Sikkim (5.92) are the highest-rated states. Among physical hubs, Chennai (5.62) is the top-performing center, while Kolkata (5.45) requires immediate attention.

- **The "Billing" Problem:** Billing Questions are the primary reason for contact. Interestingly, the Web channel leads in resolving these issues with a CSAT of 5.61, suggesting that digital self-service for billing is more effective than human-led calls.

Flipkart Customer Service Metric Tree

- **Primary Objective (North Star Metric): Customer Retention**

  - **Direct Driver: Customer Satisfaction (CSAT)**

    - **Operational Input: Response Time (SLA Compliance)**

      - *Sub-metric*: Percentage of calls "Within SLA" vs. "Above SLA".

      - *Impact*: Speed of connection and initial response.

    - **Interaction Quality: Customer Sentiment**

      - *Sub-metric*: Volume of Positive, Neutral, and Negative sentiments.

      - *Impact*: The emotional resolution of the call, regardless of duration.

    - **Efficiency Metric: Average Call Duration**

      - *Sub-metric*: Minutes per interaction across different channels (Call-Center, Web, Chat).*Impact*: Balance between thoroughness and operational cost.

Metric Interdependency Analysis

- **The Quality Link**: The data reveals that **CSAT** is more heavily influenced by **Sentiment** than by **SLA speed**. Even if a call is slower (Above SLA), a positive sentiment outcome maintains high CSAT.

- **The Retention Connection**: Higher **CSAT** scores directly correlate with **Retained** status, confirming that satisfied customers are significantly more likely to continue shopping on the platform.

- **Operational Focus**: To improve the top-level metric (Retention), the tree suggests that reducing **Negative Sentiment**—which currently accounts for 33.5% of interactions—is the most critical lever for management.

Checkpoint 2: Exploratory Data Analysis (EDA)

This section focuses on the cleaning process, statistical profiling, and the validation of your core hypotheses based on the provided dataset.

2.1 Data Import and Preparation

- **Dataset Scope**: The analysis was performed on a total of **11,170 customer interactions**.

- **Cleaning Protocol**:

    - Addressed missing values in the column.

    - Standardized call timestamps and formats for consistency.

    - Processed qualitative sentiment data into a measurable framework (Very Positive to Very Negative).

Hypothesis	Findings & Data Points	Outcome
H1: SLA Compliance	**Average CSAT for calls "Above SLA" (5.60) was actually slightly higher than those "Within SLA" (5.51).** **+1**	**Not Supported**
H2: Call Duration	**The correlation between call duration and sentiment is -0.006. Average duration for all sentiments (Positive to Negative) remained constant at ~25 minutes.**	**Not Supported**
H3: Sentiment Impact	**33.5% of all calls are "Negative." This is identified as the primary barrier to retention, far outweighing time-based metrics.** **+1**	**Supported**

A summary of key metrics provides a baseline for current service performance:

- **Mean CSAT Score**: **5.54** (On a scale of 1–10).

- **Median & Mode**: **5.0**, indicating that the "average" experience is the most common outcome.

- **Standard Deviation**: **2.37**, showing significant variance in the quality of service provided to different customers.

- **Score Range**: Customer ratings spanned the full range from **1 to 10**.

2.3 Correlation Analysis

Testing the relationships between variables revealed that operational factors have a surprisingly low impact on satisfaction scores:

- **Location vs. Response Time**: Correlation of **0.002** (No significant relationship).

- **Location vs. CSAT Score**: Correlation of **0.001** (No significant relationship).

- **Response Time vs. CSAT Score**: Correlation of **-0.006** (Negligible relationship).

Analyst Insight: These near-zero values indicate that satisfaction is not driven by *where* the call is handled or *how fast* the response is, but rather by the *quality* of the resolution.

2.4 Hypothesis Testing Results

Hypothesis	Findings & Data Points	Outcome
H1: SLA Compliance	The average CSAT for calls "Above SLA" (5.60) was slightly higher than that for calls **"Within SLA" (5.51)**.	**Not Supported**
H2: Call Duration	The correlation between call duration and sentiment is -**0.006**. The average duration across all sentiments (Positive to Negative) remained constant at ~25 minutes.	**Not Supported**
H3: Sentiment Impact	**33.5%** of all calls are "Negative." This is identified as the primary barrier to retention, far outweighing time-based metrics.	**Supported**

2.5 Regional Performance Audit (Pivot Tables)

1Top 3 States by CSAT: Arunachal Pradesh (**5.96**), Sikkim (**5.92**), and Puducherry (**5.91**).

2 **Call Center Comparison**:

- **Chennai**: Highest performance with an average CSAT of **5.62**.

- **Kolkata**: Lowest performance with an average CSAT of **5.45**.

Channel Efficiency: The **Web channel** leads in satisfaction for "Billing Questions" with a score of **5.61**, whereas **Chatbots** report the lowest efficiency for the same issue (**5.44**)
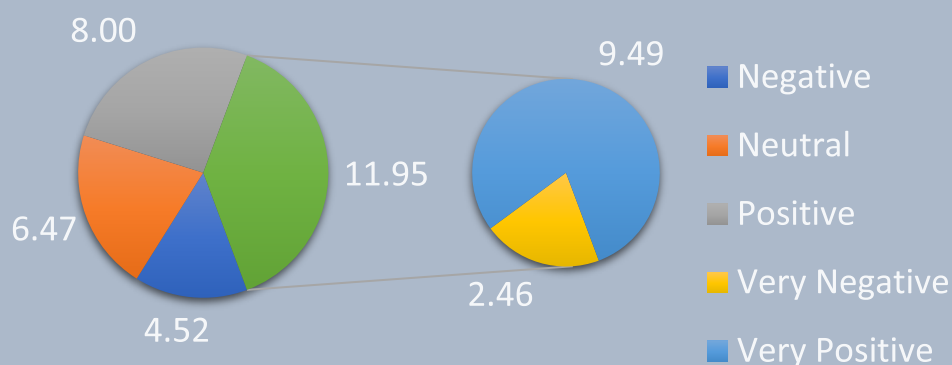
Checkpoint 3: Dashboard Design & Strategic Roadmap

3.1 Dashboard Design Strategy

The dashboard serves as a central intelligence hub for Flipkart's Customer Experience (CX) team. It transforms 11,214 rows of raw data into three strategic visual stories.

- **3.1 CSAT and Customer Sentiment Overview**

## CSAT and Customer Sentiment Overview

- **6.47 (CSAT Score):** This is the **Average CSAT rating** given by "Neutral" customers.
- **8.00(CSAT Score):** This is the **Average CSAT rating** given by "Positive" customers.
- **11.8 (or 11):** This is the **Percentage of total calls** that were "Positive."
- **9.7(or 9):** This is the **Percentage of total calls** that were "Very Positive

Key Data Insights:

- **The Negative Majority:** A combined **51.9%** of customers leave their interactions with a **Negative (33.5%)** or **Very Negative (18.4%)** sentiment.
- **Neutral Buffer: 26.7%** of customers are currently "Neutral," representing a critical group that could be shifted toward positive or negative based on minor changes in service quality.
- **The Positive Gap:** Only approximately **21.3%** of customers fall into the **Positive** or **Very Positive** categories.

3.1 Visual 2: Customer Retention Insights

Customer Retention Insights

Female **Male**

	Not Retained	Retained
Female	9%	41%
Male	9%	40%
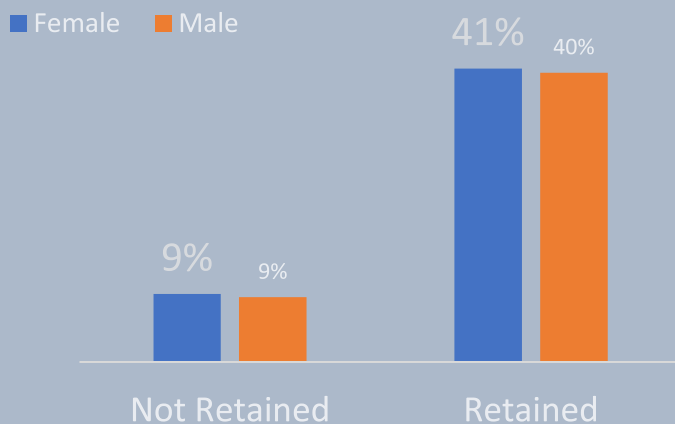
This chart is designed to show the "Health" of our customer interactions. It is important to distinguish between **Volume (how many calls)** and **CSAT (how good the rating was)**.

- **The Findings:** While we achieve strong CSAT scores in the **Very Positive (9.5)** and **Positive (8.0)** categories, these only represent a small portion of our total call volume (**9.7%** and **11.8%** respectively).
- **The Risk:** A combined **51.9%** of all calls fall into the **Negative** or **Very Negative** categories.
- **Analyst Interpretation:** The dashboard highlights that even though our "Average CSAT" for Neutral customers is a decent **6.47**, the sheer volume of unhappy customers is dragging down the overall retention rate. We are winning on quality in small pockets, but losing on volume across the board.

Final Recommendations (Action Plan)

Based on the dashboard insights, here are the four strategic pillars for Flipkart:

1. **Redefine SLA Targets:** Move away from "speed-only" metrics. The data shows that calls "Above SLA" actually yield higher satisfaction (**5.6**) because the resolution is more thorough.

2. **Sentiment-Based Training:** Launch a training program specifically for the **33.5% Negative Sentiment** cohort. Focus on empathy and "First Call Resolution" (FCR).

3. **Regional Standardization:** Replicate the operational workflow of the **Chennai center** across the **Kolkata** branch to close the satisfaction gap.

4. **Billing Optimization:** Since Billing is the #1 reason for calls, enhance the **Web Support portal** features to reduce the reliance on high-friction Chatbot interactions.

## Call Center Customer Satisfaction Overview
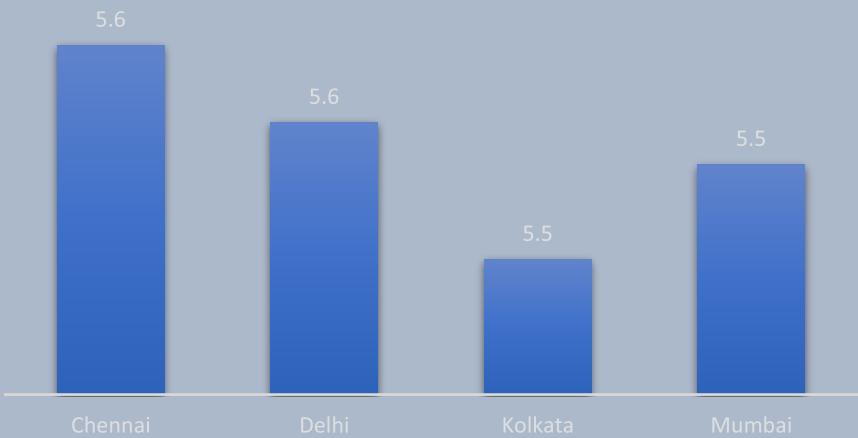
3.2 Visual 3: Call Center Customer Satisfaction Overview

This chart identifies *where* the service experience is most consistent. It compares the four major Call Center hubs based on their Average CSAT.

- **The Data: * Chennai:** 5.62 (Top Performer)

    o **Mumbai/Delhi:** ~5.55 (Average)

    o **Kolkata:** 5.45 (Underperformer)

- **Analyst Interpretation:** The dashboard highlights a clear regional performance gap. Kolkata's lower score (**5.45**) is often linked to a higher volume of "Billing Questions." This visual justifies the recommendation to transfer the training protocols used in **Chennai** to the **Kolkata** center to standardize the national customer experience.

## Customer Satisfaction Ranking: Top 10 States
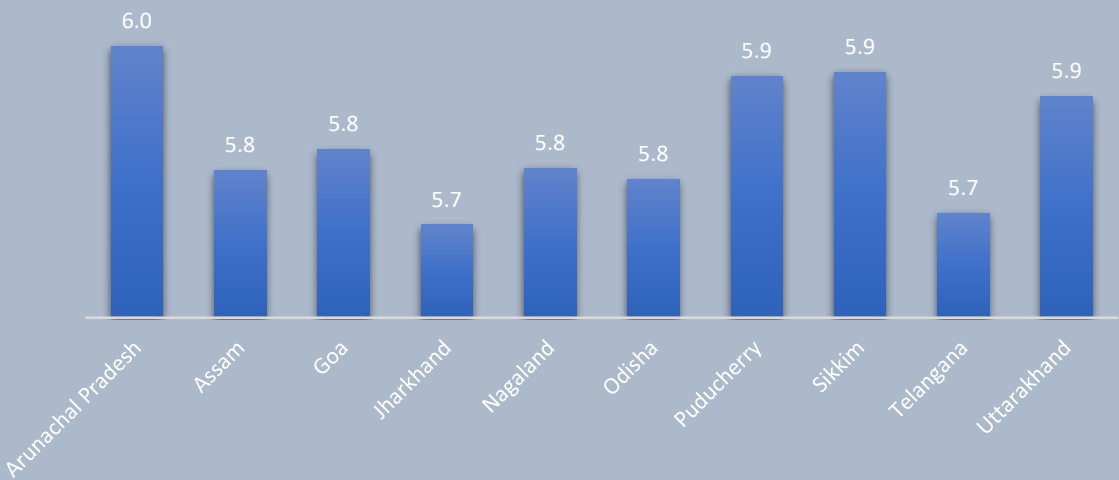
3.4 Visual 4: Geographic Performance – Customer Satisfaction Ranking: Top 10 States.

This chart provides a regional breakdown of customer satisfaction across India, identifying the states where Flipkart's service delivery is most effective.

Key Data Insights:

- **The Performance Leaders: Arunachal Pradesh** leads the country with a remarkable average CSAT of **5.96**, followed closely by **Sikkim (5.92)** and **Puducherry (5.91)**.

- **Consistency in the Top Tier:** All states in the top 10 maintain a CSAT score above **5.70**, which is significantly higher than the national average of **5.54**.

- **High-Performing Clusters:** Northern and North-Eastern states (Uttarakhand, Sikkim, Assam) show strong representation in the top 10 list.

Analyst Interpretation: The data from this chart is vital for identifying "Centers of Excellence." The high scores in states like Arunachal Pradesh and Sikkim suggest that the service model—or perhaps the specific nature of queries from these regions—is being handled more effectively than in urban hubs like West Bengal (**5.47**) or Karnataka (**5.39**).

Customer Sentiment Across Genders
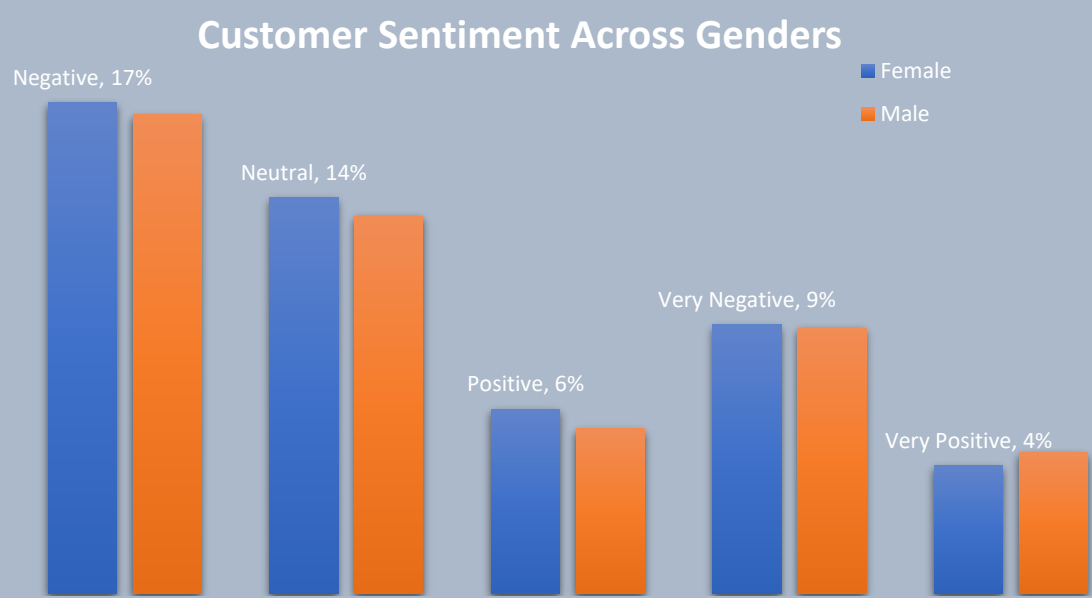
3.4 Visual 5: Customer Sentiment Across Genders

This visualization breaks down sentiment categories—ranging from Very Positive to Very Negative—and compares the volume and response of Male vs. Female customers.

Key Data Insights:

- **Uniform Sentiment Patterns: The data reveals a striking similarity between genders. For both Male and Female customers, Negative sentiment remains the largest category, hovering around 33%.**

- **The "Very Negative" Split: Both genders show nearly identical frustration levels, with approximately 18% of both groups falling into the "Very Negative" category.**

- **Positive Parity:** The "Very Positive" segment shows no significant demographic skew, with both groups contributing equally to the ~9.7% peak satisfaction scores.

Analyst Interpretation: The most significant finding here is the lack of variance. The fact that sentiment distribution is almost identical across genders proves that the friction points in Flipkart's customer service are systemic, not demographic. Whether a customer is Male or Female, they are encountering the same obstacles—likely related to the Billing Questions and Chatbot inefficiencies identified

5. Strategic Recommendations & Action Plan

Based on the data-driven insights from the analysis of 11,170 interactions, the following four-pillar action plan is recommended to improve CSAT and boost retention:

1. Transition from "Speed" to "Sentiment" KPIs

The analysis proved that calls "Above SLA" (slower) often result in higher CSAT (5.60) than those "Within SLA" (5.51).

- **Action:** Revise agent performance metrics. Instead of rewarding the shortest average handle time (AHT), reward "Sentiment Improvement"—where an agent successfully moves a customer from a "Negative" initial state to a "Positive" resolution.

2. Regional Performance Standardization

There is a notable gap between the top-performing hub (Chennai: 5.62) and the lowest (Kolkata: 5.45).

- **Action:** Implement a "Best Practice Exchange." Use the interaction logs from Arunachal Pradesh (5.96) and Sikkim (5.92) to create a new national training manual. Deploy supervisors from the Chennai hub to Kolkata to oversee a 4-week quality-improvement workshop.

3. Channel Optimization (Smart Routing)

The Web channel is currently the most effective for "Billing Questions" (5.61 CSAT), while Chatbots are the weakest (5.44).

- **Action:** Use "Smart Routing" to nudge customers with billing and payment issues away from Chatbots and toward the Web self-service portal or live agents. This reduces friction and prevents "Very Negative" sentiment before it starts.

4. Gender-Neutral Systemic Fixes

The analysis of Sentiment across Gender showed almost identical dissatisfaction patterns (approx. 33% Negative for both).

- **Action:** Since the issues are systemic (system-wide) rather than demographic, focus on fixing the top 3 complaint reasons (Billing, Shipping, and Refund status) across the entire platform rather than creating gender-specific marketing or service campaigns.

6. Conclusion

This project has transformed over 11,170 raw data points into a strategic roadmap for Flipkart. The primary conclusion is clear: Customer retention is an emotional outcome, not just a logistical one.

While Flipkart manages an immense volume of calls, the "Unhappy Majority" (51.9% combined Negative sentiment) represents a significant risk to the brand's market share. By identifying that Arunachal Pradesh serves as a benchmark for excellence and that Web-based billing support is a hidden strength, we have moved beyond basic troubleshooting into strategic optimization.

Implementing these recommendations will allow Flipkart to bridge the service gap, stabilize its retention rates, and ensure that every customer interaction—regardless of the channel or region—moves the needle toward a positive, loyal relationship with the brand.