



Flipkart Customer Service Analysis



Problem Statement

Flipkart

Flipkart has recently experienced a decline in customer retention rates. As customer service plays a critical role in shaping the overall customer experience, this project aims to investigate whether inefficiencies or pain points in the customer service process are contributing to this decline. By analyzing customer call data, the project seeks to identify key service-related factors affecting customer satisfaction and retention



User Journey



Customer Issue



Support Channel



Wait Time/SLA



Sentiment/Feedback



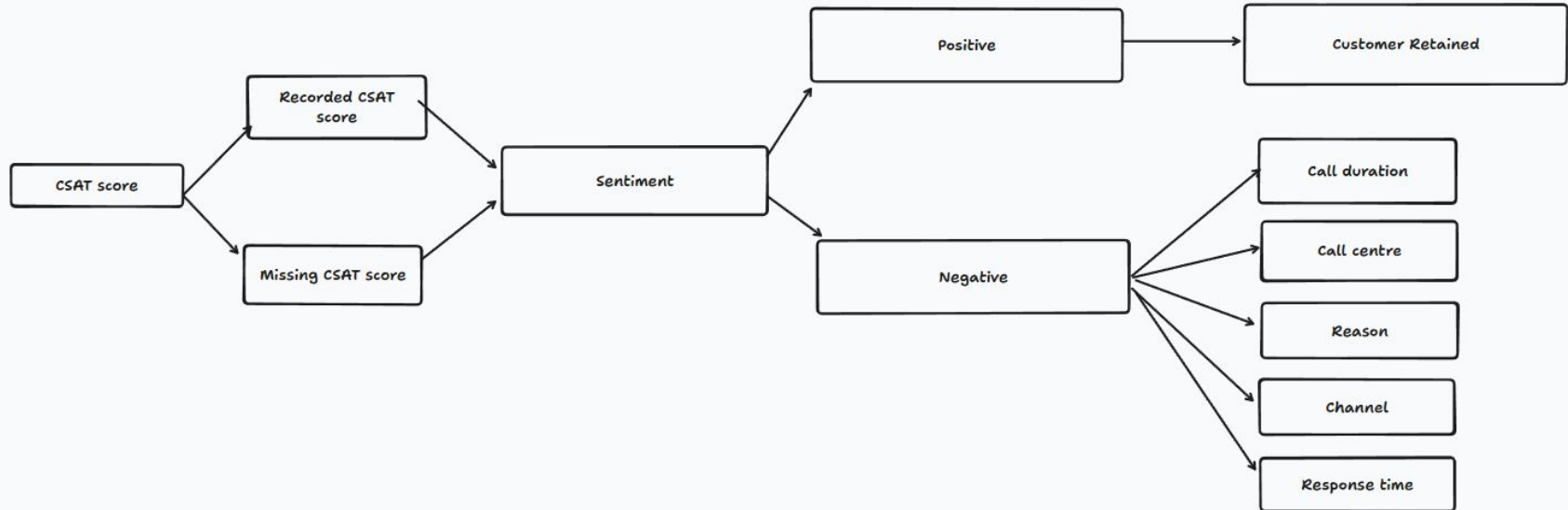
Key Metrics

csat_score
sentiment
response_time
call duration in minutes
channel
reason
call_center





Metric Tree





Describing the Dataset

Customer Count:- 30,000

Feedback Scale : - 1 to 10

Date Period :- 01 Oct 2020 to 31 oct 2020

Sentiment:- 5 Categories

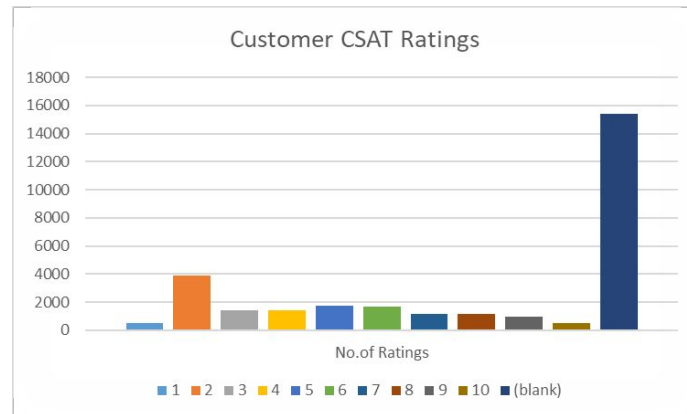
Support Channels : 4

Customer States :- 36

CSAT Ratings Analysis



Row Labels	No.of Ratings
1	541
2	3871
3	1449
4	1402
5	1740
6	1715
7	1196
8	1147
9	994
10	515
(blank)	15430
Grand Total	30000



Observations:-

The majority of customers did not provide feedback. This could indicate low engagement, survey fatigue, or system issues preventing responses.

Recommendations:

Investigate whether non-responses are concentrated among specific customer segments or service types.

Analyze other fields to find correlations with CSAT and impute missing CSAT scores only if strong patterns are found.

Hypothesis 1: Customer Sentiment Can Be Used as a Predictor of CSAT



Sentiment	Average of csat_score
Very Negative	2.2
Negative	4.8
Neutral	6.2
Positive	8.0
Very Positive	9.2
Grand Total	5.5

Observations:

Strong Positive Correlation: There is a clear upward trend between sentiment level and CSAT score. As sentiment becomes more positive, CSAT scores increase significantly.

Recommendation:

Based on the average CSAT per sentiment level, impute the missing CSAT scores

Hypothesis 2: Does customer sentiment significantly impact CSAT scores and potentially indicate risk of churn



Observations:

Strong positive correlation between sentiment and CSAT:


Very Positive → 9.18

Positive → 8.00

Neutral → 6.18

Negative → 4.82

Very Negative → 2.17

Sentiment 	Volume	Avg csat_score
Very Negative	18.08%	2.17
Negative	33.67%	4.82
Neutral	26.68%	6.18
Positive	11.86%	8.00
Very Positive	9.71%	9.18
Grand Total	100.00%	5.50

A large portion of responses fall under Negative or Very Negative (~51%) — a clear signal of dissatisfaction risk.

Very Negative sentiment has lowest CSAT (2.17), suggesting a potential churn risk if not addressed.

Recommendations:

Prioritize recovery actions for customers expressing Negative or Very Negative sentiment — these users are at highest risk of churn.

Monitor sentiment trends alongside CSAT in real time to flag unhappy users early.



Hypothesis 2: Investigating whether Call Duration has a significant impact on CSAT Score

CSAT SCORE	
MEAN	5.50
MEDIAN	5.00
MODE	5.00
STD.DV	2.19

CALL DURATION	
MEAN	25.01
MEDIAN	25.00
MODE	29.00
STD.DV	11.82

CORRELATION
-0.002921043

Insights:

The CSAT scores are clustered around 5 with low variation (std. dev = 2.37), meaning most customers gave similar satisfaction ratings. Call duration varies more (std. dev = 11.82), suggesting some calls are significantly longer or shorter than others.

The value -0.006552927 appears to be the correlation coefficient (r) between CSAT Score and Call Duration.

Interpretation of the Correlation:

$r = -0.00655$ indicates a very weak negative correlation between CSAT Score and Call Duration.

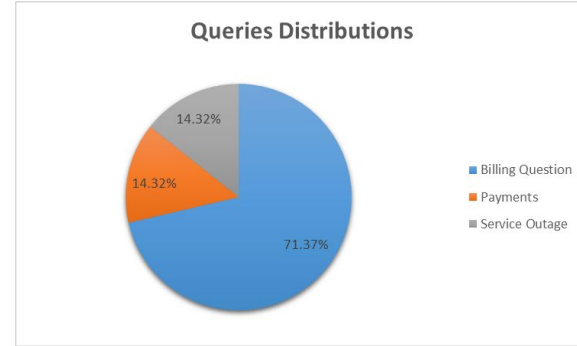
Since the value is close to 0, it suggests almost no relationship between these two variables.

This means that longer or shorter call durations do not significantly impact the CSAT Score.



Hypothesis 4: Do Billing, Payment, and Service Outage Queries Lead to Varying Satisfaction Levels

Reason	Volume	Avg csat_score
Billing Question	71.37%	5.51
Payments	14.32%	5.49
Service Outage	14.32%	5.51
Grand Total	100.00%	5.50



Observations:

Billing Questions dominate, accounting for 71% of all queries, while Payments and Service Outage each account for 14%.

CSAT scores are similar across all categories — ranging between 5.49 and 5.51, indicating little variation by query type. This suggests that volume doesn't significantly impact CSAT.

Recommendations:

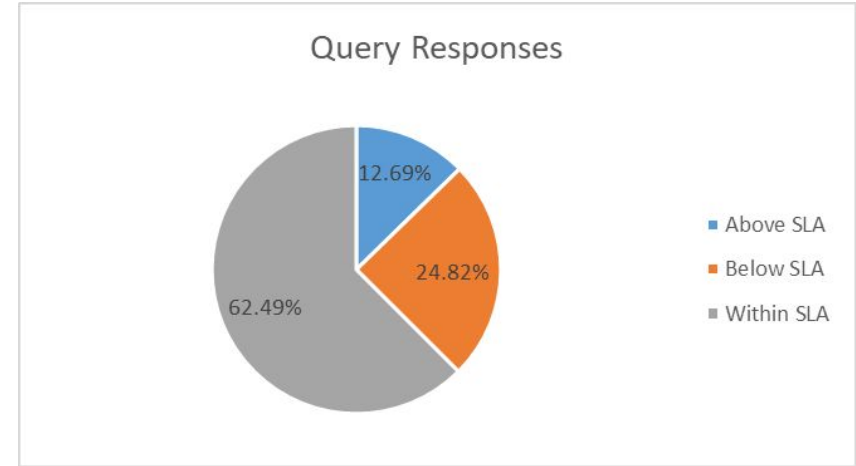
Identify the root causes of the high volume of Billing-related queries.

Improve the billing process and consider automating certain steps to reduce manual load and enhance customer experience.

Hypothesis 5 : Is customer satisfaction influenced more by SLA adherence or by the quality of support experience?



Response Time	Volume	Avg csat_score
Above SLA	12.69%	5.51
Below SLA	24.82%	5.52
Within SLA	62.49%	5.50
Grand Total	100.00%	5.50



Observations:

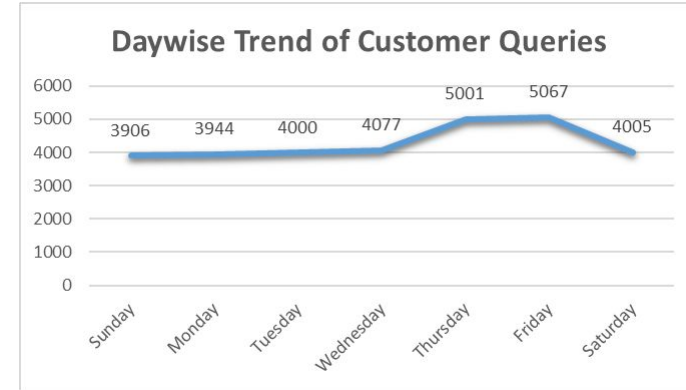
Average CSAT score is similar across all SLA levels, showing very minimal variation. Additionally, 62% of the cases are resolved within SLA, which indicates that timely resolution does not significantly impact CSAT.

Recommendations:

Focus should be on the quality of interaction rather than just closing issues on time.

Hypothesis 6: Does customer satisfaction (CSAT) & Queries vary by day of the week ?

Day of week	Volume	Avg csat_score
Sunday	13.02%	5.51
Monday	13.15%	5.48
Tuesday	13.33%	5.54
Wednesday	13.59%	5.55
Thursday	16.67%	5.46
Friday	16.89%	5.50
Saturday	13.35%	5.50
Grand Total	100.00%	5.50



Observations:

The volume of queries is highest on Thursday and Friday. However, the average CSAT shows very minimal variation 5.46 on Thursday and 5.50 on Friday, indicating that volume does not significantly impact CSAT.

Recommendations:

Since query volumes are high on Thursday and the weekend, workforce planning should focus on aligning resources or redistributing workload more effectively.

Hypothesis 7: Does the support channel influence customer satisfaction. regardless of query type ?



Channel	Billing Question	Payments	Service Outage	Grand Total
Call-Center	17.87%	14.32%	0.00%	32.18%
Chatbot	18.05%	0.00%	7.06%	25.11%
Email	18.04%	0.00%	4.78%	22.82%
Web	17.41%	0.00%	2.47%	19.89%
Grand Total	71.37%	14.32%	14.32%	100.00%

Observations:

Call Center bears the highest load (32.18% of total queries), indicating a reliance on live support, possibly for urgent or complex issues.

CSAT scores are fairly consistent across channels:

Call Center & Chatbot: 5.50

Email: 5.49

Web: 5.53

Billing-related queries dominate across all channels (71%), showing consistency in query type with minimal impact on CSAT variation.

Payment issues are handled only via the Call Center, possibly due to urgency.

Service outages are handled by other channels except the Call Center.

Billing queries are fairly evenly distributed across all channels.

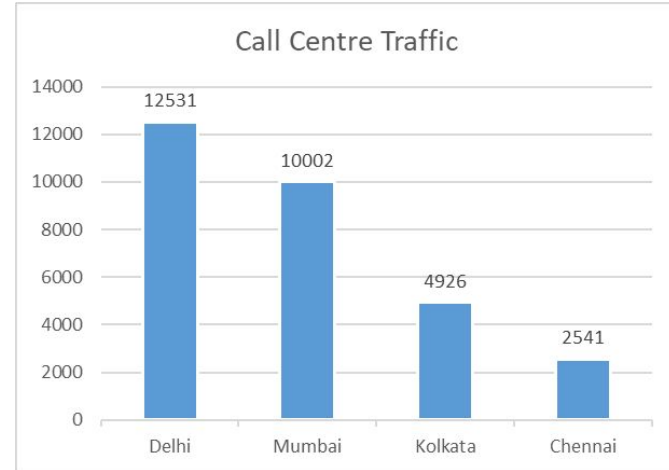
Recommendations

Given its high load (32% of total volume), consider workforce balancing, process automation, or deflection strategies for routine queries



Hypothesis 8: Does Load on Call centre effects CSAT ?

Call Centre	Volume	Avg csat_score
Delhi	12531	5.51
Mumbai	10002	5.48
Kolkata	4926	5.51
Chennai	2541	5.53
Grand Total	30000	5.50



Observation:

Delhi handles the highest volume (12,531 queries) but maintains a stable CSAT of 5.51. Mumbai, with the second-highest load, has a slightly lower CSAT (5.48), possibly indicating minor strain.

Recommendations:

Redistribute workload where feasible, explore routing overflow traffic from Mumbai to centers like Chennai or Kolkata



Conclusion

After analyzing various dimensions—channel, issue type, SLA, volume, geography, and sentiment—**no single factor** strongly influences CSAT, which remains consistent across segments.

However, key opportunities emerged:

- **Billing queries** account for **71%** of volume — highlight the need for **automation and process improvement**.
- **Low CSAT response rate** limits insights — prioritize boosting feedback collection.
- **Sentiment analysis emerged as the most actionable signal:**

Focus on "Very Negative" and "Negative" customers to uncover root causes through surveys or follow-up calls.

Target Neutral customers with engagement strategies to elevate their experience into the positive sentiment bucket.

- **Call Center bears the highest load** — invest in **agent training** that emphasizes **empathy and quality** over speed.