Project: Automated voice calling service

Overview

The call center manages interactions related to Equated Monthly Installments (EMI). It involves handling customer inquiries about EMIs, providing information on payment schedules, assisting with EMI-related concerns, and ensuring effective communication regarding loan repayments. includes analyzing data from these interactions to gain insights into customer behavior, langauges , demographic factors , disposition outcomes , Regional analysis payment trends, and overall EMI performance.

Objective

The call center's primary objective related to Equated Monthly Installments (EMI) is to facilitate smooth interactions between the organization and customers regarding their loan repayments. This involves addressing inquiries, providing information, and ensuring effective communication regarding EMIs. these interactions to gain insights into customer behavior, payment trends, and overall EMI performance..

Mutually Exclusive and Collectively Exhaustive.

Diagram of MECE

MECE Break Down Call center services

1 Language Categories

- **English:** Analyze collection rates for calls conducted in English.
- **Marathi:** Analyze collection rates for calls conducted in Marathi.
- **Hindi:** Analyze collection rates for calls conducted in Hindi.
- **Kannada:** Analyze collection rates for calls conducted in Kannada.

2 Time Periods

- **Daily Rates:** Analyze collection rates on a daily basis for each language category
- **Weekly Rates:** Analyze collection rates on a weekly basis for each language category.
- **Monthly Rates:** Analyze collection rates on a monthly basis for each language category.

3 Demographic Factors

- **Gender-based Analysis:** Analyse collection rates based on gender within each language category.

4 Disposition Outcomes

- **Successful Collections:** Analyze rates for successful collections in each language category.
- **Promise to Pay (PTP) Rates:** Analyze rates where customers promise to pay in each language category.
- **Unsuccessful Collections:** Analyze rates for unsuccessful collections in each language category

5 Performance Matrix:

- **Average Talk Time Analysis -** Analyse how average talk time correlates with collection rates in each language category.
- **Ring Time Impact:** Analyse if ring time has an impact on collection rates in each language category.

6.Trend Analysis

- **Historical Trend** - Analyse collection rates over time to identify any trends or patterns within each language category.

7.Regional Analysis

- **Regional Difference** - Analyse collection rates based on different regions or locations associated with each language.

Insights of automated call services in Power Bi

Autimated Voice Calling Service Dashboard

365M
Sum of emiAmount

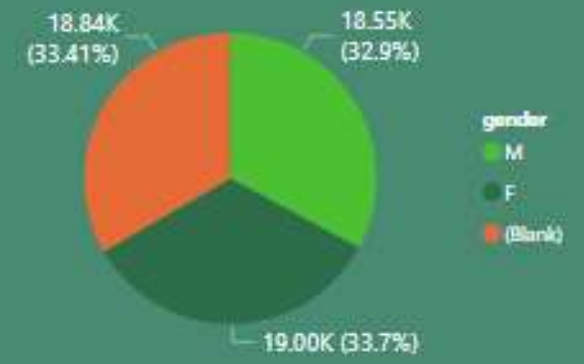
channel
- Call
- Message

connectio...
- CONNECT...
- NOT CON...

disposition
- Acceptable Promise To Pay
- Agree To Pay

Details of users connected or not connected

Distribution calls different demographics



Details users including promise to pay

Average talk time by client during calls

Collection Rates based different language and automated calls

Offer based on unique disposition

disposition	Average of emiAmount
Acceptable Promise To Pay	15368.99
Customer Hangup	18717.55
Dispute	18185.72
end delay	9736.75
Failed	18840.15
Human Handoff Requested	14739.35
Refused to Pay	13998.83
Unacceptable Promise To Pay	11920.00
Total	**18620.26**

Client flow type associated with emi amount during calls

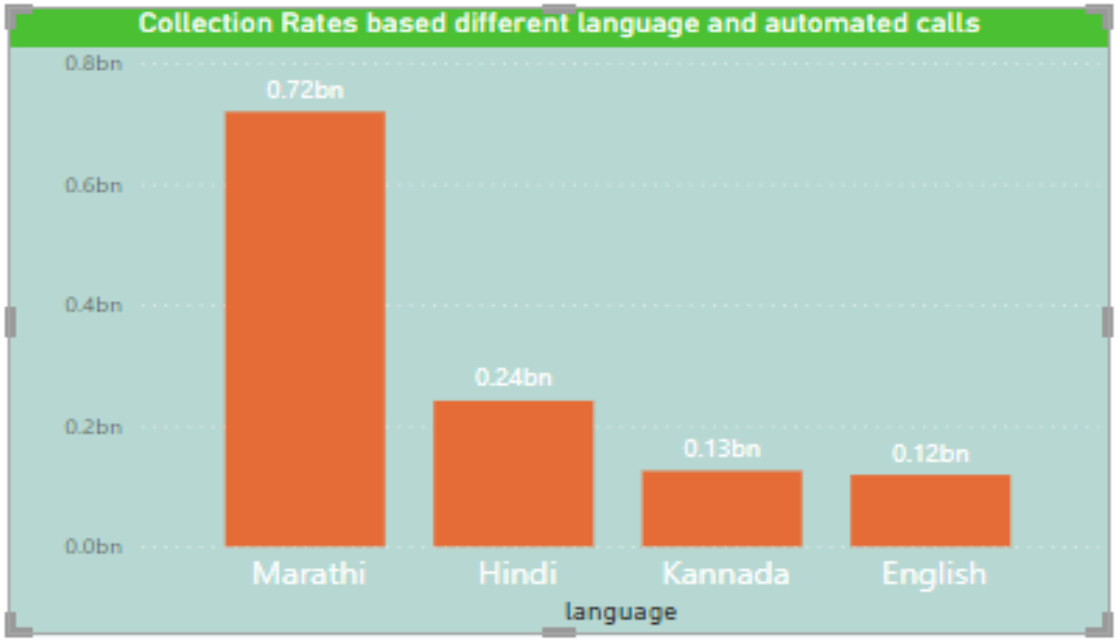
flow_type	ICD Finance	Smart Finance	Total
postbounce	18854.09	18774.24	18805.26
Total	**19193.04**	**18251.47**	**18620.26**

1.Collection rates based on different languages used in the automated calls

channel

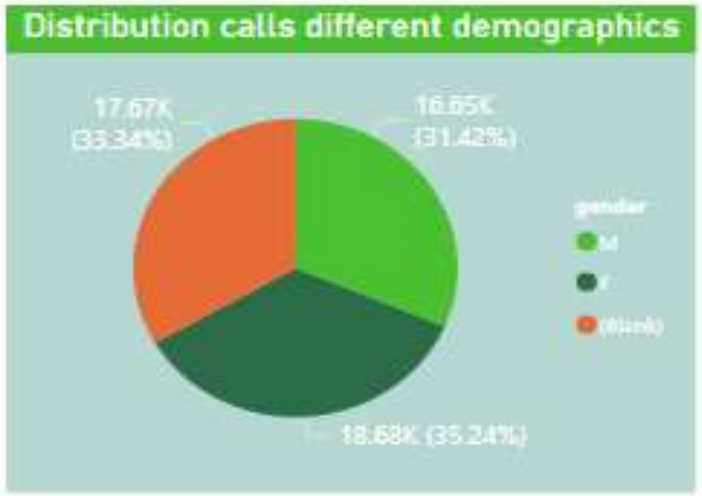
- Call
- Message

language	Sum of emiAmount
Marathi	719616618
Hindi	241370332
Kannada	125353555
English	118632523
Total	**1204973028**



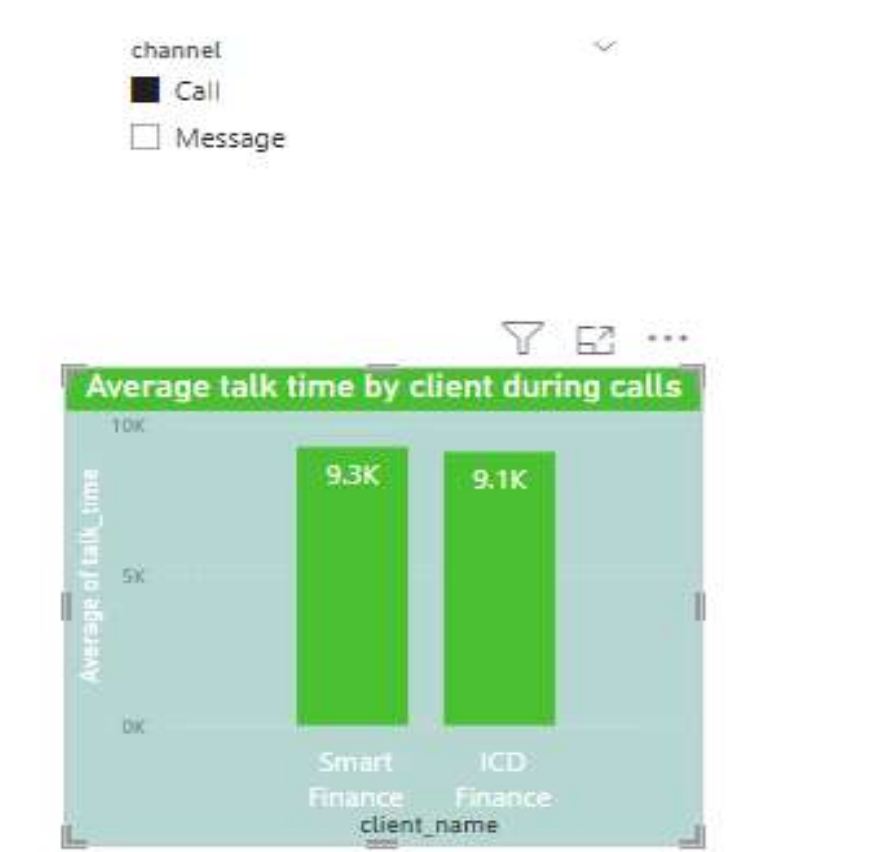
Language-Level Collection Analysis: Evaluate collection rates by analyzing the use of different languages in automated calls.

2.Demographic Analysis:



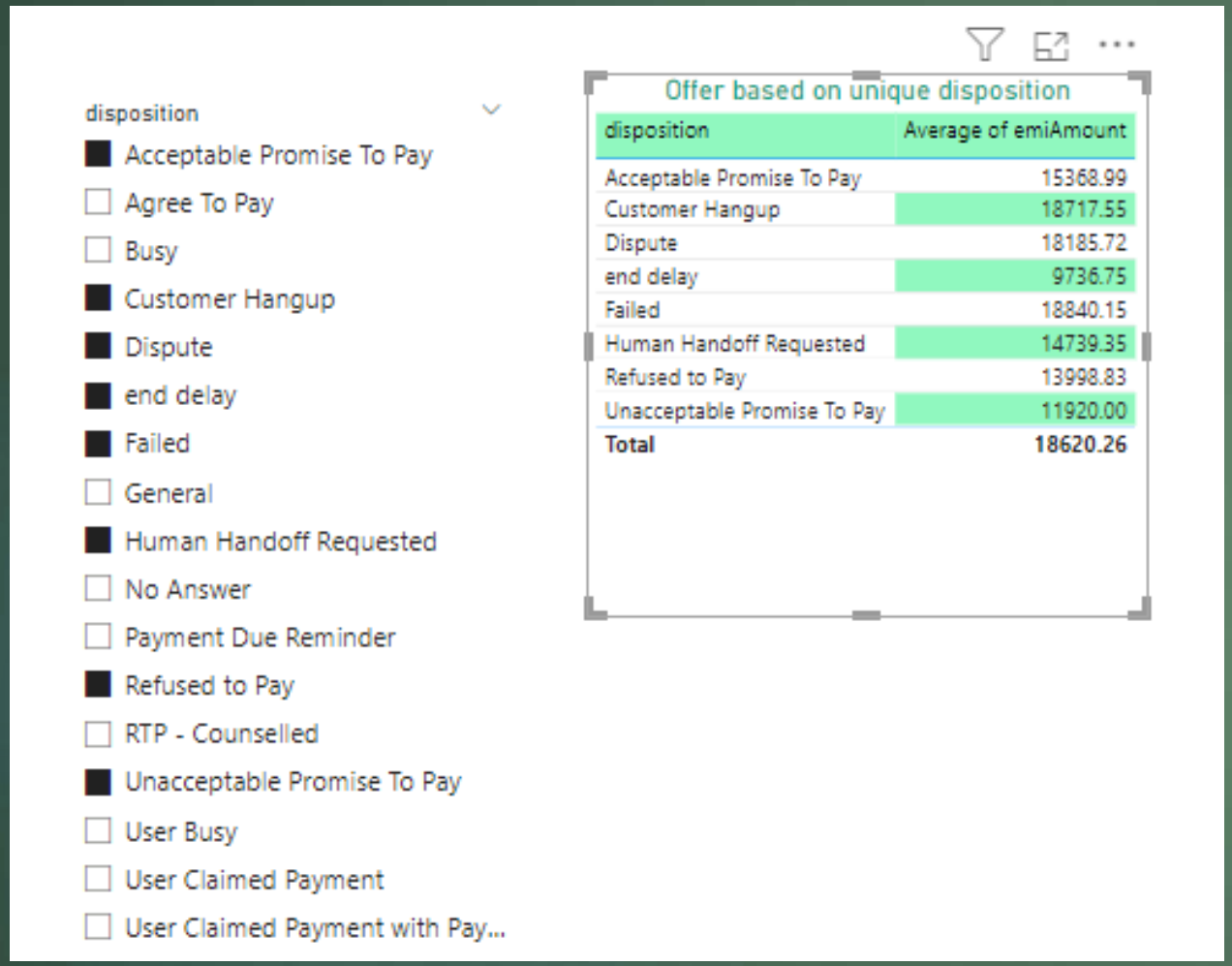
Gender-based Analysis: Analyse collection rates based gender wise with calls . As the visual suggests, participation in terms of gender Female participants are 18.68% of total participants whereas Males consist of only 16.42%.

3.related to the automated voice calling system that relevant analysis



Average Talk Time Analysis:
with client, average duration of conversations (talk time) and the effectiveness of collecting payments. Determine if longer or shorter talk times have any correlation with successful collection rates in different language categories.

4.Identify and analyze a unique aspect of the data that could offer valuable insights.



Offer based on unique disposition

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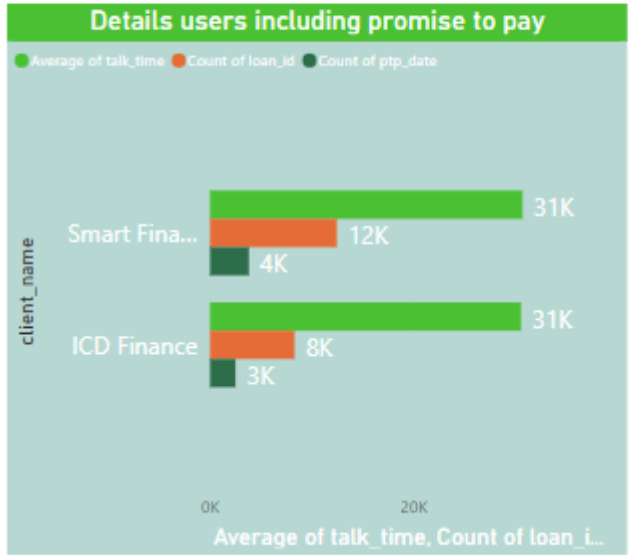
Refused to Pay	13998.83
Unacceptable Promise To Pay	11920.00
Total	**18620.26**

I filtered out individuals who, for various reasons, are unable to make payments and created a list. I recommend offering something to these users as it could potentially enhance the collection rate."

5.automated calling system to enhance collection

client_name	Average of talk_time	Count of loan_id	Count of ptp_date
ICD Finance	30563.95	8304	2502
Smart Finance	30713.20	12458	3817
Total	**30653.50**	**20762**	**6319**

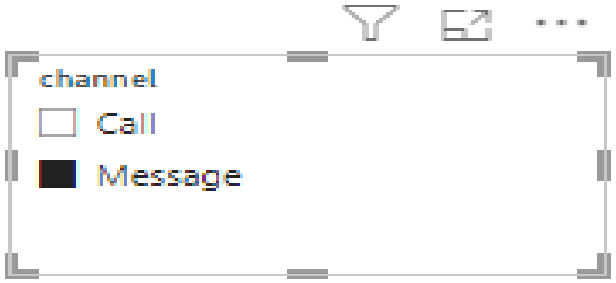
channel
- Call
- Message



connectionStatus
- CONNECTED
- NOT CONNECTED

I filtered clients based on their connection status during calls, specifically selecting those who were connected. Subsequently, I calculated the average time spent in conversation for this group. Additionally, I continued the analysis by associating the findings with the respective loan IDs .it could potentially enhance the collection rate.“
it could potentially enhance the collection rate," I suggesting that taking a particular action or making an offer to the identified users (who are facing difficulties in payment) has the potential to improve the overall rate of successful collections.

6.Flow type during calls



Client flow type associated with emi amount during calls

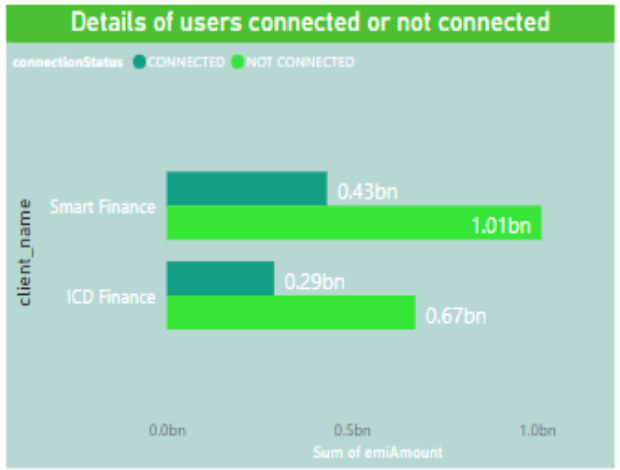
flow_type	ICD Finance	Smart Finance	Total
postbounce	17156.54	17871.74	**17583.68**
predue	17572.10	17279.78	**17397.61**
Total	**17364.99**	**17574.99**	**17490.38**

clients based on their flow type—such as pre-due, post-bounce, etc.—I explore how different types of interactions correlate with varying EMI amounts. This analysis aims to provide insights into patterns or trends in EMI amounts across different client flow types during calls.

7. Connected or not connected users details

client_name	connectionStatus	Count of loan_id	Sum of emiAmount
ICD Finance	CONNECTED	16557	289656254
Smart Finance	CONNECTED	24756	432518046
ICD Finance	NOT CONNECTED	38967	671031447
Smart Finance	NOT CONNECTED	57503	1012219370
Total		**137783**	**2405425117**

connectionStatus
- CONNECTED
- NOT CONNECTED



I identified and separated users based on whether they were connected or not during their interactions. This selection is performed using loan IDs and the corresponding loan EMIs.The purpose of this filtering is to further analyze or address specific characteristics or behaviors related to the users' connection status and loan details.

Findings : In this whole analysis process we explored all possible perspective, evolution the data comprehensively analysis of language-level collections, gender-based participation, talk time impact, recommendations for users facing payment difficulties, and insights into client flow types and EMI amounts during calls. The focus on connected clients and their average talk time further adds depth to the understanding of collection dynamics.

Thank You