



Innovation & Entrepreneurship Hub for Educated Rural Youth (SURE Trust – IERY)

Call Centre Dashboard

The domain of the Project:

Call Centre Dashboard (Power BI)

Mentor (and their designation):

Mrs. Siddhika Shah(HCL Tech)

By:

Ayushree Sharma (B.Tech)

Period of the project

February 2025 to March 2025



Innovation & Entrepreneurship Hub for Educated Rural Youth (SURE Trust – IERY)

Declaration

The project titled “Call Centre Dashboard” has been mentored by Mrs. Siddhika Shah, organised by SURE Trust, from February 2025 to March 2025, for the benefit of the educated unemployed rural youth for gaining hands-on experience in working on industry relevant projects that would take them closer to the prospective employer.

I, Ayushree Sharma declare that to the best of my knowledge the members of the team mentioned below, have worked on it successfully and enhanced their practical knowledge in the domain.

Name

Ayushree Sharma

Mentor's Name

Mrs. Siddhika Shah

(HCL Tech)

Prof. Radhakumari

Executive Director & Founder

SURE Trust



Innovation & Entrepreneurship Hub for Educated Rural Youth (SURE Trust – IERY)

Table of contents

1. Executive summary
2. Introduction
3. Project Objectives
4. Methodology & Results
5. Social / Industry relevance of the project
6. Learning & Reflection
7. Future Scope & Conclusion



Executive Summary

The "Call Centre Dashboard" project aims to provide a comprehensive analysis of call centre performance, examining key metrics such as total calls, call duration, response time, and call distribution by various factors. The goal is to identify trends, patterns, and areas for improvement to optimize call centre operations, enhance customer service, and ensure efficient resource allocation.



Introduction

4.1. Background and Context

The project focuses on analysing call centre performance to improve operations and customer service.

4.2. Problem Statement

Identifying inefficiencies and areas for improvement in call centre operations.

4.3. Scope

Analysis includes metrics like total calls, call duration, response time, and call distribution by day, reason, channel, sentiment, and geographic location.

4.4. Limitations

The insights and trends identified are based on past performance, which may not fully capture future changes in customer behavior or call centre operations.

4.5. Innovation

Utilizing Power BI for comprehensive data visualization and analysis.



Innovation & Entrepreneurship Hub for Educated Rural Youth (SURE Trust – IERY)

Project Objectives

5.1. Project Objectives and Expected Outcomes

To provide insights into call centre performance and identify areas for improvement.

5.2. Deliverables

A Power BI dashboard with visualizations of key metrics and trends.



6.1. Methods/Technology Used

Data collection, data loading, data cleaning and preparation, data relationships and calculations, dashboard design, customization, and formatting.

6.2. Tools/Software Used

Power BI Desktop, Excel, CSV.

6.3. Data Collection Approach

Gathered data on call centre operations, including total calls, call duration, response times, call reasons, channels, sentiments, and geographic locations.

6.4. Project Architecture

Data collection, data loading into Power BI, data cleaning and preparation, defining relationships, creating calculations, and designing the dashboard.

6.5. Results

The call centre handled 32.94K calls, with the highest volume on Fridays. The average call duration was 25.02 minutes, and the response time was 75.26%. Most calls were about billing questions, and the majority were handled by the call centre channel. Sentiment analysis revealed a mix of negative and neutral sentiments. The highest call volumes were from Los Angeles and California.

6.6. Final Project Hardware and Working Screenshots

Home Page



CALL CENTRE DASHBOARD | HOME

Home

Grid

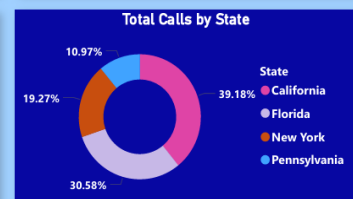
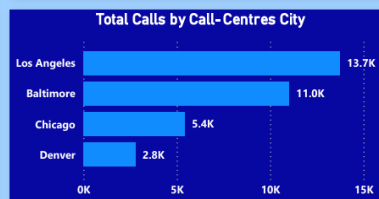
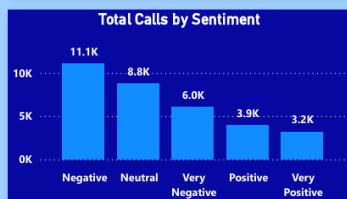
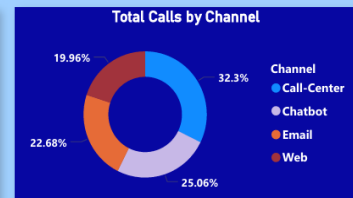
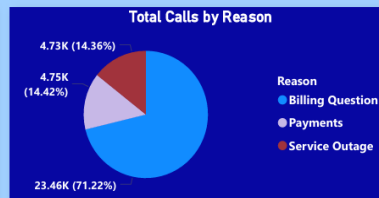
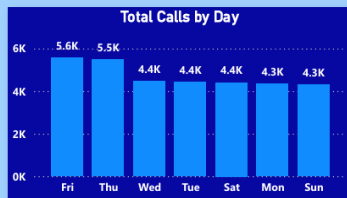
Total Calls
32.94K

Total Call Duration (min)
824.22K

Total Call Duration (Hrs)
13.74K

Avg Call Duration (min)
25.02

Response Time %
75.26%



Grid Page

CALL CENTRE DASHBOARD | GRID

Home

Grid

Total Calls
7.47K

Total Call Duration (min)
187.49K

Total Call Duration (Hrs)
3.12K

Avg Call Duration (min)
25.10

Response Time %
75.61%

Date

01-10-2020

31-10-2020

Channel

☐ Call-Center

☐ Chatbot

☒ Email

☐ Web

ID	Customer Name	Channel	State	Reason	Response Time	City	Total Call Duration (min)
AAK-01722446-R-008487-pL	Rolland Gillbey	Email	New York	Billing Question	Within SLA	Albany	30.00
ADI-18403811-N-192452-GP	Zilvia Songist	Email	New York	Service Outage	Within SLA	Albany	44.00
BAK-33644667-X-948549-Gv	Decca Colwell	Email	New York	Billing Question	Within SLA	Albany	21.00
CEF-80154526-I-844984-QF	Gerhardine Paolozzi	Email	New York	Service Outage	Within SLA	Albany	20.00
EEZ-14014726-Q-899379-v1	Launce Eatherton	Email	New York	Billing Question	Within SLA	Albany	30.00
EHW-82363878-4-875245-nE	Chloette Swanston	Email	New York	Billing Question	Within SLA	Albany	11.00
FWW-07157791-S-997401-Yk	Evie Colthard	Email	New York	Service Outage	Within SLA	Albany	31.00
GKZ-05094592-E-881269-BL	Cristiano Butchers	Email	New York	Billing Question	Within SLA	Albany	26.00
GLU-69971870-Y-894390-uz	Ursuline Toomey	Email	New York	Billing Question	Within SLA	Albany	10.00
GRI-85765828-H-644360-o1	Leelah Wilcocke	Email	New York	Billing Question	Within SLA	Albany	20.00
HAR-19454693-r-442584-3e	Axe Shrubbs	Email	New York	Billing Question	Above SLA	Albany	27.00
HHZ-51031474-m-666896-Zv	Cora Snawdon	Email	New York	Billing Question	Within SLA	Albany	37.00
HMM-44145260-w-536416-gR	Kalinda Salvatore	Email	New York	Billing Question	Below SLA	Albany	16.00
IAN-71136547-r-513920-sP	Elfreda Cunneiffe	Email	New York	Service Outage	Above SLA	Albany	42.00
ITG-27830459-6-891611-fp	Xylia Sambrook	Email	New York	Service Outage	Within SLA	Albany	23.00
JNW-17466397-i-412126-84	Di Whatling	Email	New York	Service Outage	Within SLA	Albany	43.00
Total							53491.00

6.7. GitHub Link

[sure-trust/AYUSHREE-SHARMA-g16-sql](https://github.com/sure-trust/AYUSHREE-SHARMA-g16-sql)



Working on the "Call Centre Dashboard" project provided several valuable insights and learning opportunities:

1. Data Handling and Preparation:

- **Data Collection:** Understanding the importance of gathering comprehensive and accurate data on call centre operations.
- **Data Cleaning:** Learning techniques to handle missing values, remove duplicates, and ensure data consistency.
- **Data Formatting:** Ensuring data is in a compatible format for analysis in Power BI.

2. Power BI Proficiency:

- **Data Loading:** Gaining experience in importing and loading data into Power BI.
- **Data Relationships:** Setting up relationships between multiple tables to create a cohesive dataset.
- **DAX Calculations:** Using Data Analysis Expressions (DAX) to create necessary calculations for metrics like average call duration and response time percentage.

3. Dashboard Design and Visualization:

- **Visual Selection:** Choosing appropriate visuals (e.g., bar charts, pie charts, KPI visuals) to represent different metrics.
- **Customization:** Adjusting visuals for better readability and aesthetic appeal, including colors, labels, and titles.
- **Navigation:** Implementing navigation features to allow users to easily switch between different sections of the dashboard.

4. Analytical Skills:

- **Trend Analysis:** Identifying trends and patterns in call centre data, such as peak call times and common call reasons.
- **Sentiment Analysis:** Analyzing call sentiments to understand customer satisfaction and areas needing improvement.
- **Geographic Distribution:** Understanding the geographic distribution of calls to identify regional trends.



Conclusion and Future Scope

8.1. Objectives

To provide a comprehensive analysis of call centre performance and identify areas for improvement.

8.2. Achievements

Successfully created a Power BI dashboard that provides valuable insights into call centre operations.

8.3. Conclusion

The analysis shows that the call centre handled 32.94K calls, with the highest volume on Fridays. The average call duration was 25.02 minutes, and the response time was 75.26%. Most calls were about billing questions, and the majority were handled by the call centre channel. Sentiment analysis revealed a mix of negative and neutral sentiments. The highest call volumes were from Los Angeles and California.

8.4. Future Scope

The future scope of the "Call Centre Dashboard" project includes several enhancements to improve its functionality and value. Integrating real-time data feeds can provide up-to-the-minute insights, while advanced analytics and machine learning can help predict call volumes and optimize resources. Enhancing sentiment analysis with sophisticated natural language processing techniques can better understand customer emotions. The dashboard can also be integrated with other business systems for a holistic view of operations. Customizable dashboards, mobile accessibility, and user training can improve usability. Additionally, implementing a feedback mechanism, ensuring scalability, strengthening security, and adding multilingual support can further enhance the dashboard's effectiveness and accessibility.



Innovation & Entrepreneurship Hub for Educated Rural Youth (SURE Trust – IERY)