

# **DATA-DRIVEN INSIGHTS INTO DELAYED RESPONSES TO CONSUMER GRIEVANCES IN THE BANKING SECTOR**

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# ABSTRACT

This project addresses a critical issue in the banking sector delays in responding to customer complaints, which are affecting customer trust. Assigned by the bank manager, the data analyst examined historical complaint data to identify patterns behind untimely responses. The analysis focused on key factors such as issue type, submission channel, and regional trends to uncover root causes and propose actionable solutions to improve service efficiency and customer satisfaction.

# INTRODUCTION

In today's competitive banking landscape, customer satisfaction and trust are critical to long-term success. One of the essential components of customer service is the prompt handling of consumer complaints. Recently, XYZ Bank has been facing a significant concern raised by its customers delays in receiving timely responses to their complaints. This growing issue has not only led to dissatisfaction but has also begun to erode the trust between the bank and its valued clients.

Recognizing the seriousness of the problem, the bank's branch manager has commissioned a detailed data-driven analysis to uncover the underlying causes of these delays. The responsibility was assigned to a data analyst, who was provided with historical complaint records. The dataset includes information such as complaint categories, submission channels, response timelines, and regional details. The objective of this project is to analyze the trends and patterns in delayed responses, identify which factors contribute most to these delays, and ultimately suggest actionable recommendations to improve the bank's complaint resolution process and rebuild customer trust.

# DATASET OVERVIEW

The dataset titled `Consumer_Complaints.csv` contains 62,516 entries and 12 columns, documenting customer complaints received by the bank. Each row represents a unique complaint identified by a `Complaint_ID`. The dataset includes various attributes such as:

- ▶ **Submitted via:** Channel through which the complaint was submitted (e.g., Web, Referral).
- ▶ **Date submitted and Date received:** Timelines related to complaint submission and receipt.
- ▶ **District :** Geographic district of the complaint origin.
- ▶ **Complaint category and compaint sub category :** The category of complaint (e.g., Credit card, Mortgage).
- ▶ **Issue and Sub\_issue:** Nature of the complaint.
- ▶ **Timely response?:** Indicates whether the response was timely.

# TOOLS



## POSTGRESQL

**Version :** PostgreSQL 16 , Windows 11

**Description:** PostgreSQL is a powerful, open-source object-relational database system known for its reliability, feature robustness, and standards compliance.



## JUPYTER NOTEBOOK

**Version :** JupyterLab 4.0 / Notebook 7.1 (Latest release in 2025)

**Python Version:** Python 3.11

**Description:** Jupyter Notebook provides an interactive environment for writing and running code, visualizing data, and documenting analysis.



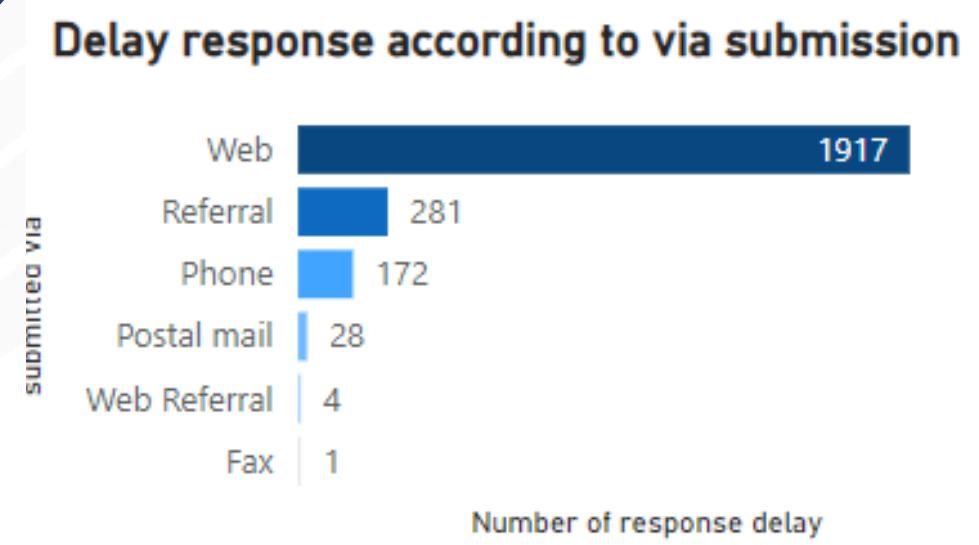
## POWER BI DESKTOP

**Version :** Power BI Desktop May 2025 Update (Version 2.128.x)

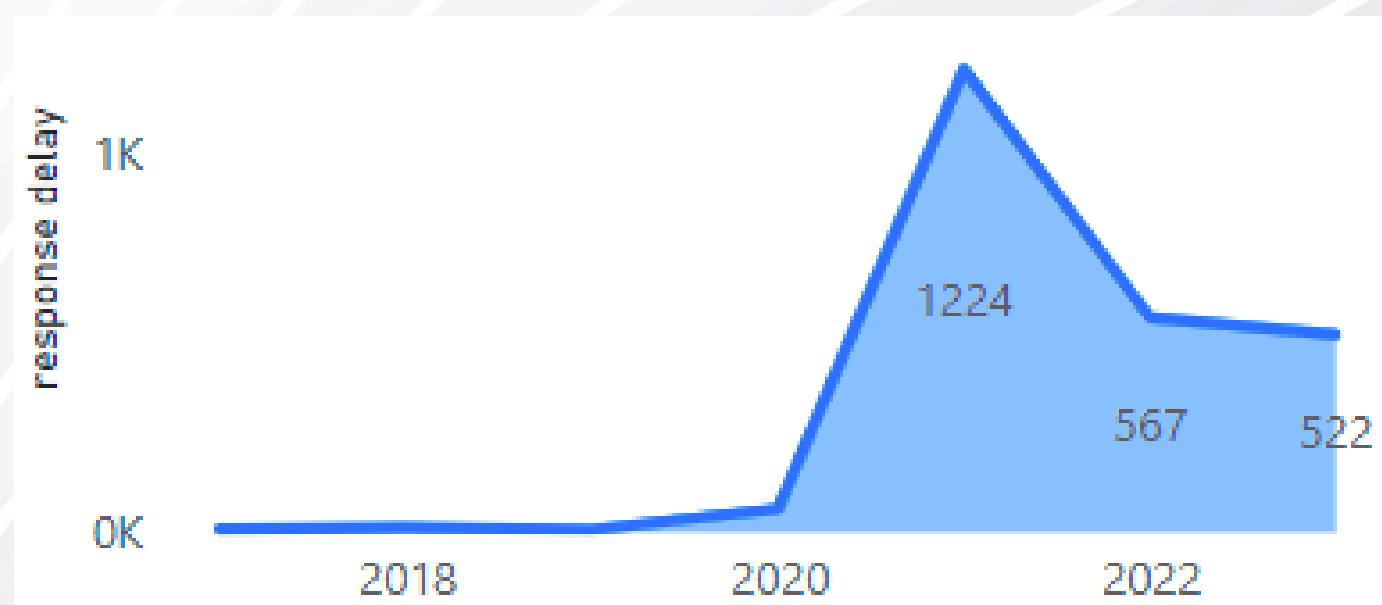
**Description:** Power BI is a business analytics tool that enables data transformation, modeling, and rich interactive visualizations.

# DATA ANALYSIS

Out of 65,000 total responses, only 2,403 were delayed, which is a relatively small proportion. However, the yearly trend clearly shows an increase in delayed responses over the past three years. This growing delay in addressing customer complaints is becoming a concern, as it undermines customer trust and negatively impacts the bank's reputation.

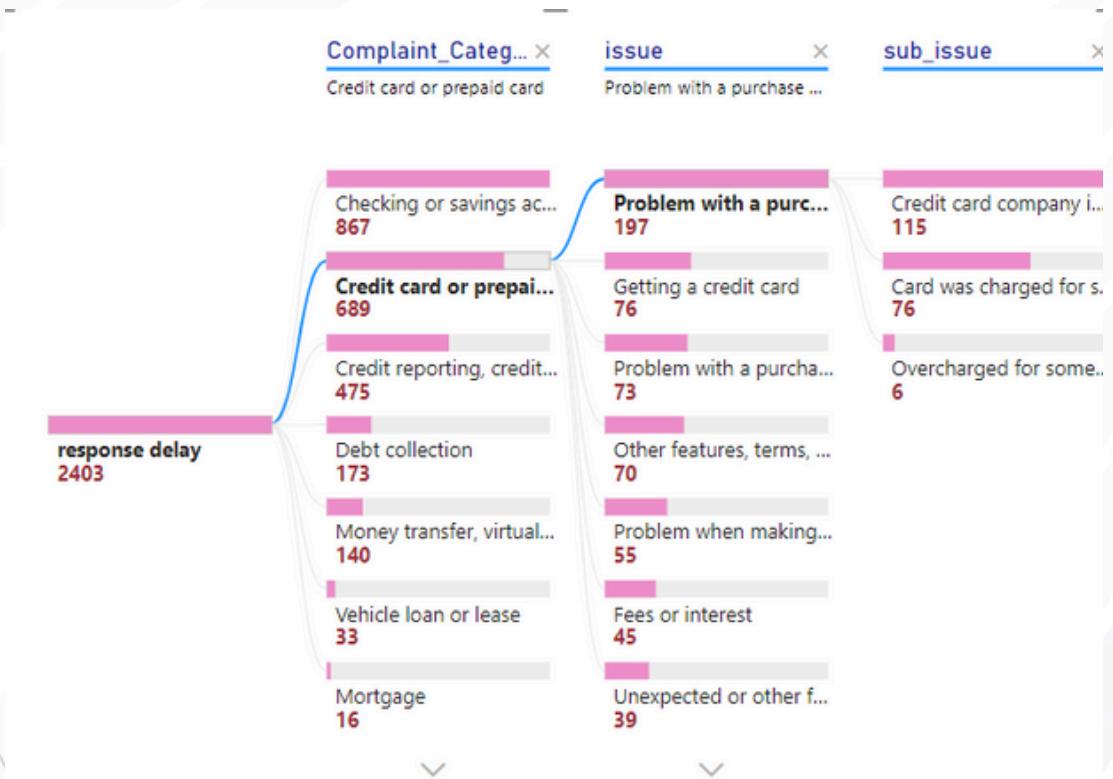


Let's examine the complaint channels. The web application shows the highest number of delayed responses, possibly due to submissions being overlooked or challenges in handling a high volume of requests promptly, leading to increased delays in response.



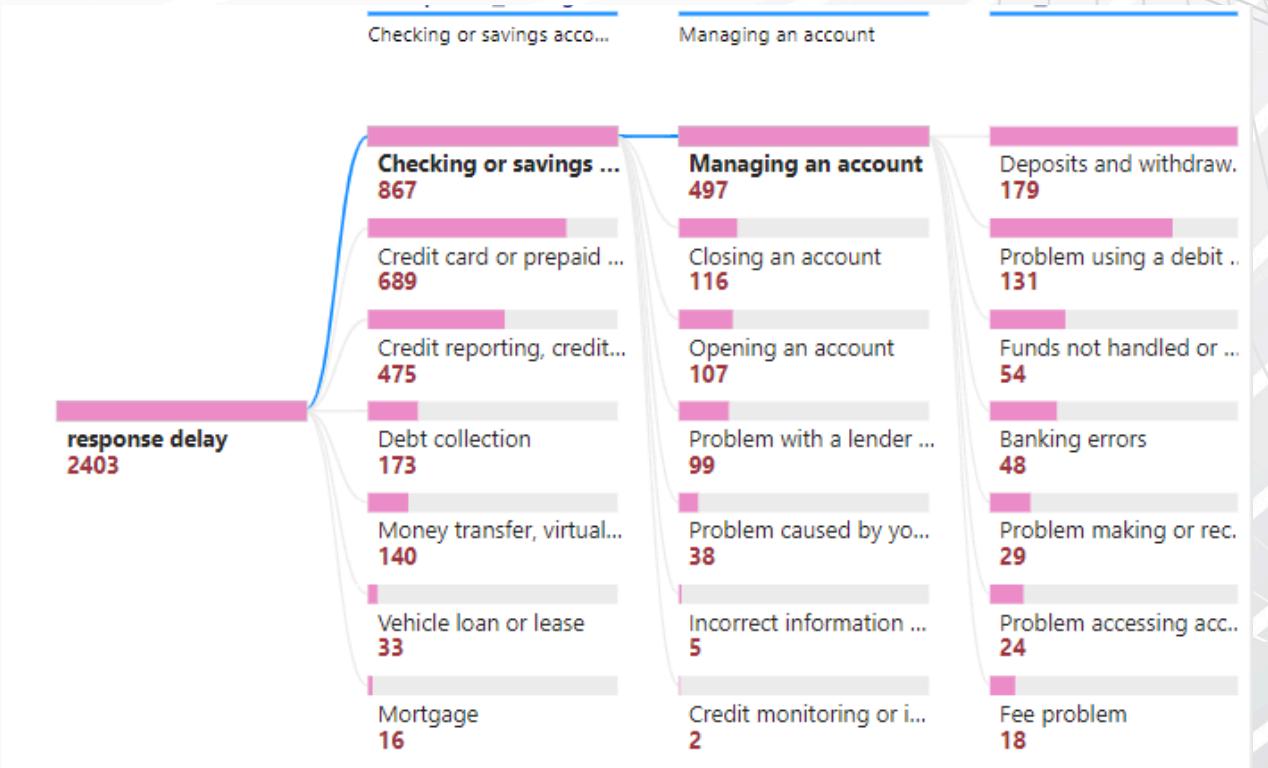
# INSIGHTS

After a brief analysis, it is evident that the most delayed responses are associated with complaint categories such as checking or managing savings accounts, credit cards, and prepaid cards.



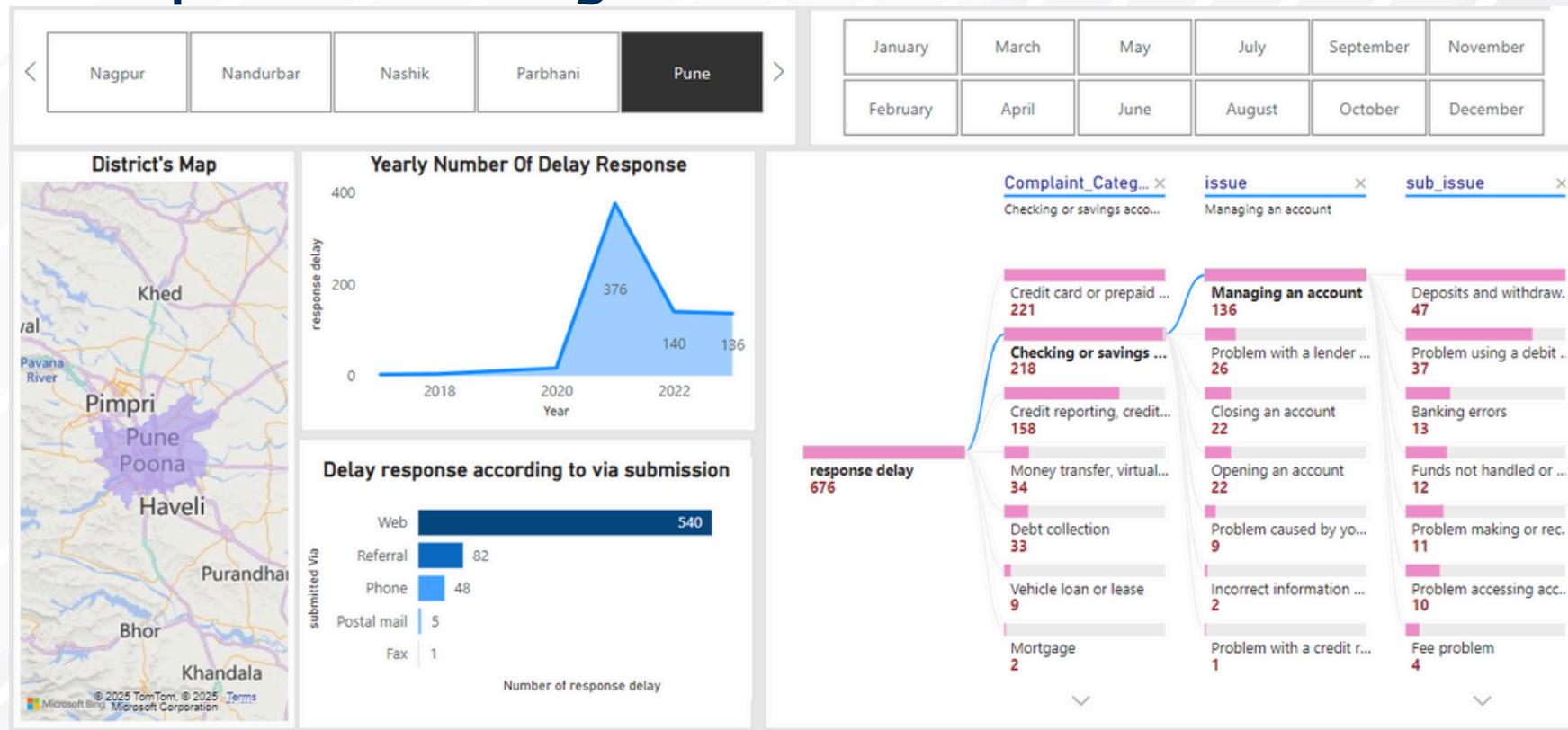
These specific types of complaints are experiencing the highest response delays, indicating a need for improved efficiency in handling core banking service issues.

A closer breakdown reveals that the majority of issues stem from account-related concerns—such as opening, managing, or closing accounts. In the credit card category, delays are mostly linked to complaints about making purchases with credit cards, obtaining a new credit card, or issues related to purchase transfers.



# INSIGHTS

Pune has the highest number of complaints and also the most delayed responses, especially in issues related to credit and prepaid cards, such as credit card purchase transfers and incorrect charges on statements. When analyzed district-wise, bank branches in Pune, Mumbai City, and Nagpur show the highest delays in response. These delays are mostly seen in complaints concerning savings accounts and credit cards, indicating a need for improved response systems in these areas and complaint categories.



# DECISION

- Throughout the project, several recommendations have been identified to help banks reduce delays in responding to customer complaints. Delays are most common when the volume of complaints is high, particularly in major cities like Pune, Mumbai, and Nagpur.
- To address this, banks should first increase the number of employees handling complaints to ensure timely responses. Secondly, they should identify the most common complaint submission method—such as the website—and improve the web application's efficiency.
- Lastly, since most complaints relate to savings accounts and credit cards, special attention should be given to strengthening the accounts and credit card departments. These steps can significantly reduce response delays.

# THANK YOU