

MI Manager Assessment Task: Understanding the State of Operations

Context

You've been provided with a raw dataset extracted from our Intercom system, containing information about conversations handled by our financial support team for one particular inbox. This dataset includes chats, emails, and automated AI-assisted interactions.

Your objective is to **analyze this data** and present a clear picture of the "**State of Operations**" in a way that stakeholders can easily understand.

We are most interested in seeing:

- The assumptions you make about the data
- Your ability to **identify trends and seasonality in demand**
- Insights into **customer satisfaction (CSAT)**
- Backlog and email servicing performance (e.g., first response time, open stock snapshot, etc.)
- AI involvement and automation performance
- Source of conversations and how they differ

Your deliverable should help leadership understand what's going well, what's not, and where to focus attention.

Deliverables

1. Dashboard or Notebook

- You may present your analysis in:
 - **Dashboard tool** like Looker Studio, PowerBI, Tableau, etc.
 - OR a **Python notebook** (e.g., Jupyter or Colab)
- The dashboard/notebook should be intuitive and highlight the key story you want to tell.

2. Supporting Code/Queries

- Include **all SQL queries and/or Python code** you used to clean, transform, and analyze the data.
- This will help us understand your logic and technical approach.

3. Summary Write-Up (max 1 page)

- Document the **key assumptions** you made while working with the data.
- Briefly explain:
 - The KPIs you chose and why
 - The story you are telling through your dashboard
 - Any limitations or gaps in the data

What to Focus On

Here are the main themes we want you to explore:

Theme	Examples of Questions to Answer
Demand & Seasonality	- Are there peak days/times for conversations? - Is there weekly or monthly seasonality?
CSAT Performance	- How is customer satisfaction trending over time? - Which channels or sources drive higher/lower CSAT?
Backlog & Email Servicing	- How quickly are emails being responded to? - How big is the backlog of open emails? - How is backlog changing over time?
AI Involvement	- What % of conversations involve AI assistance? - Does AI involvement differ by source or time of day?
Source of Conversations	- Where are conversations coming from (e.g., app, marketplace, search)? - Are there performance differences by source?

You don't need to cover everything equally — **go deep** where you find interesting patterns.

Expectations & Timebox

- Total expected time: **3–5 hours maximum**
- We value **clarity and depth** over flashy visuals.
- It's okay to make assumptions — just **document them clearly** in your write-up.

Evaluation Criteria

We will assess your submission based on:

Area	What We Look For
Data Handling	Can you clean, structure, and analyze raw data effectively?
Storytelling	Does your dashboard/notebook clearly tell the story of operations?
Granularity	How deep do you go into trends, segments, and KPIs?
Assumptions	Are your assumptions logical and well-documented?
Technical Rigor	Quality of SQL/Python code and logical consistency.

Submission Instructions

Please submit:

1. Your dashboard or Python notebook attached
2. A folder with all supporting SQL/Python code
3. A one-page max write-up (PDF or Word)

Below we have attached a data appendix to guide you:

Column Name	Description
ID	Unique conversation ID
CREATED_AT	Timestamp when conversation was created
SOURCE_DELIVERED_AS	How the conversation started (e.g., customer_initiated, auto, etc.)
FIRST_CONTACT_REPLY_CREATED_AT	Time when the first contact reply was created
CONVERSATION_RATING_CREATED_AT	When customer satisfaction rating was given
CONVERSATION_RATING_VALUE	Customer satisfaction rating (1–5 scale)
CONVERSATION_RATING_TEAMMA_TE_ID	Agent ID who handled the

	conversation rated
UPDATED_AT	Last updated timestamp for the conversation
SOURCE_TYPE	Channel source (e.g., email, chat, marketplace)
ASSIGNEE_ID	Agent assigned to handle the conversation
WAITING_SINCE	Timestamp since when conversation has been waiting
STATE	Conversation state (e.g., open, closed)
STATISTICS_FIRST_CONTACT_REPLY_AT	Time when first contact reply was sent
STATISTICS_FIRST_ADMIN_REPLY_AT	Time when first admin reply was sent

STATISTICS_TIME_TO_LAST_CLOSE	Time (in seconds) to last close
STATISTICS_TIME_TO_FIRST_CLOS E	Time (in seconds) to first close
SOURCE_AUTHOR_ID	ID of the customer who initiated the conversation
AI_AGENT_PARTICIPATED	Whether AI participated in the conversation