Customer Support Analysis

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Agenda

- Customer Service Experience

- Insights

- Data Cleaning

- Additional Data Collection

- Thank you

- Appendix

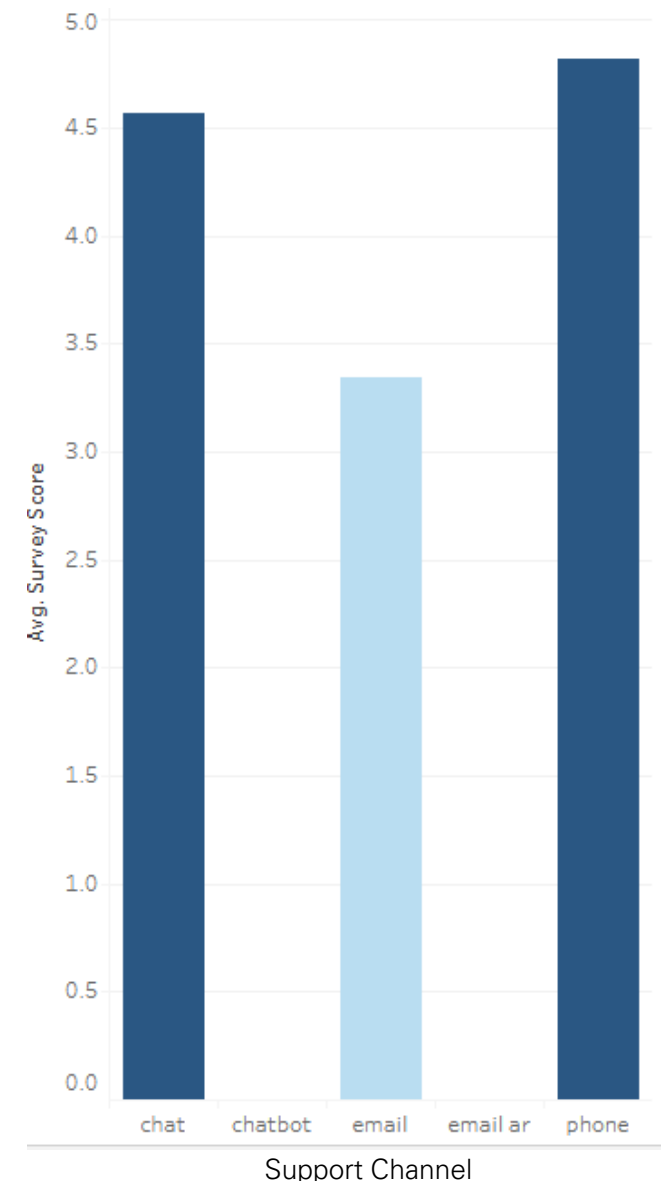# Customer Service Experience

Customer Service Experience

The level of customer satisfaction varies with the type of support channel used.

- Customers who received support over the phone followed closely behind be those who received support over chat.

- Email ranked neutral in scoring and largely performing better than chatbots or additional email options.

Key Takeaway

- These scores demonstrate how impactful conversations are to our customers. Even if the channel used varied.

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CSAT Score per Support Channel
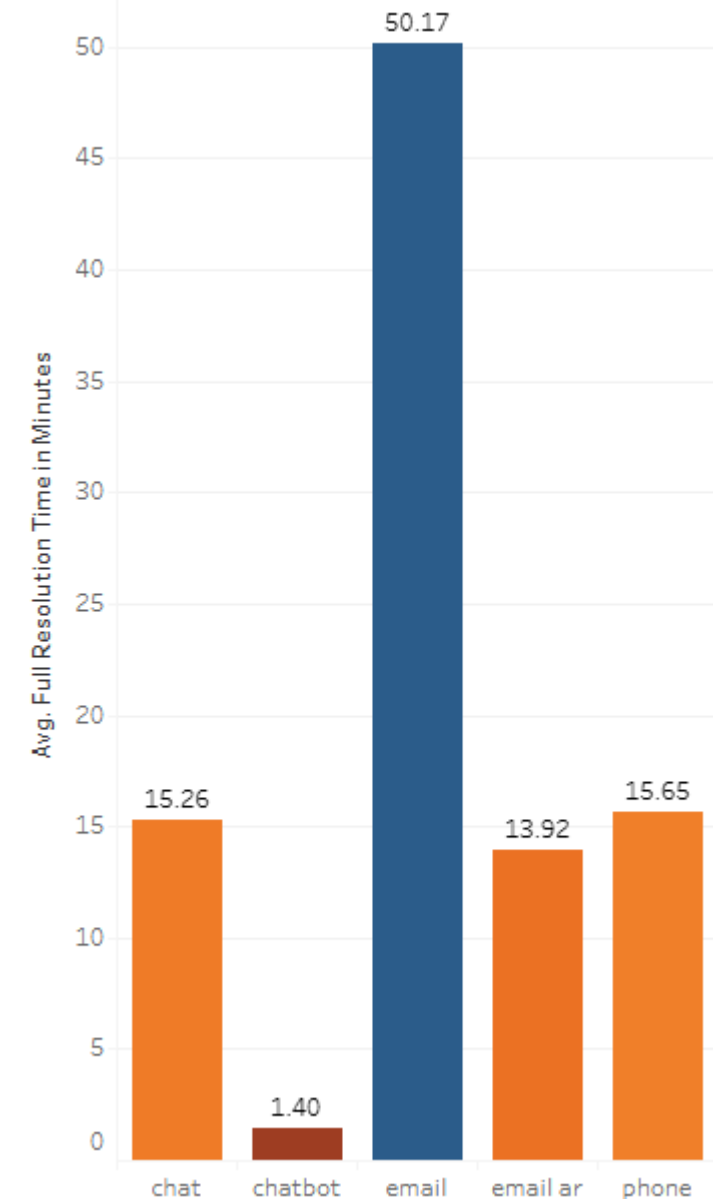
Customer Service Experience

Email has the longest resolution time – this can be due to the infrequent communication.

- Chat and Phone resolution times were approximately around 15 mins.

- Chatbots had the lowest resolution times with 1 minute. This outlier in resolution time could be attributed to customers choosing a different support channel.

Key Takeaway

- Email has the longest resolution time, likely due to delayed response cycles and back-and-forth communication gaps.
- Chat and phone offer quicker resolution time, making them effective for real-time support.
- Chatbot resolution inquiries may be misleading, as many users may abandon the chatbot and switch to another channel.

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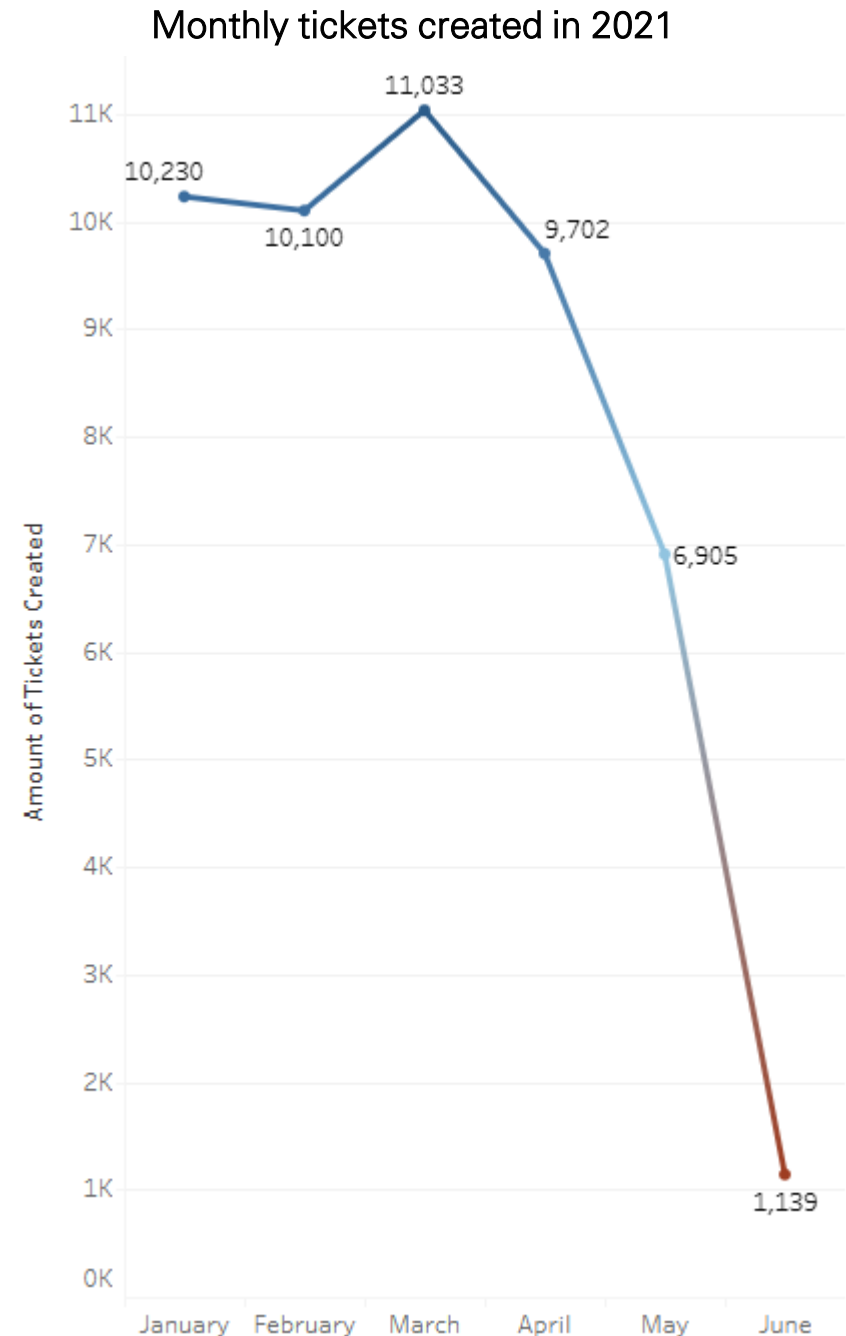Avg Resolution time per Support Channel

Customer Service Experience

The number of monthly tickets opened from January to June 2021 has decreased by **88%**.

- The month with the highest tickets opened were 11k tickets opened in March and each month has seen significant decreases.

- Between April and May tickets opened decreased by half and by June tickets opened **decreased by 83%.**

Key Takeaway

- **Overall Decline**: There was a **dramatic 88% decrease** in ticket volume over six months—indicating a major shift in support demand or resolution efficiency.
- The consistent month-over-month decline could indicate **improved self-service tools, reduced issues,** or **changes in customer behavior or volume.**

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Dropbox

Monthly tickets created in 2021

Amount of Tickets Created

11,033
10,230
10,100
9,702
6,905
1,139

11K
10K
9K
8K
7K
6K
5K
4K
3K
2K
1K
0K

January   February   March   April   May   June

Customer Service Experience –
Key Takeaways

Dropbox

Support Channel Performance

•Phone support received the highest customer satisfaction, followed closely by chat.
•Email support ranked neutral—outperforming chatbots and other secondary email options.

Resolution Time Insights

•Chat and Phone: Avg. resolution time ~15 minutes.
•Chatbots: Fastest resolution at 1 minute—likely due to users switching channels after initial interaction.

Ticket Volume Trends

•March saw the peak volume with 11,000 tickets opened.
•Ticket volume has decreased significantly each month, with June dropping to 1,139 tickets (an 88.9% decrease from January).

For further insights into customer support tickets, please refer to the *dashboard*

Insights

Insights

Suggestions on how to improve the customer support experience.

- **Monitor and Improve Self-Service Resources-** the large drop in tickets may suggest increased use of self-service tools.
  - Regularly update FAQs and create content based on common ticket topics.
  - Use feedback surveys to ensure helpfulness and better understand customer pain points.

- **Analyze Ticket Spikes**
  - Investigate what caused March's ticket spike—e.g., product changes, outages, seasonal issues—to proactively manage future surges.

- **Enhance Email Support Responsiveness**
  - Reduce resolution delays by setting expectations and using automated status updates.
  - Introduce prioritization to handle urgent tickets faster.

- **Invest in Real-Time Support Channels-** given that chat and phone resolve issues faster (~15 mins), consider:
  - Expanding live support coverage
  - Offering chat or callback options during high-volume periods

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Data

Data Cleaning

The following are some data cleaning changes made to the csv file received.

- Columns not all in uppercase- made changes for uniformity and appear in uppercase.

- Country names are abbreviated – for better analysis changing into the full country name would provide for easier analysis into which countries have the most tickets opened.

- The Created_Day and Closed_Day columns were showing as floats and converted them to datetime.

- Dropped rows with missing data- rows went from 50,000 to 49,109 rows. This will allow for more efficiency when querying the data.

- Once data cleaning was completed, the new dataframe was exported as a csv and imported into Tableau to create visualizations.

Data Cleaning Example of changing column names to provide uniformity

	ticket_id	CREATED_DAY	CLOSED_DAY	CREATED_TIME	SUPPORT_CHANNEL	user_type	COUNTRY	ISSUE_TYPE_CATEGORY	TICKET_REPLIES
0	1	1.622680e+12	1.623630e+12	21:48.0	phone	business	us	desktop app	NaN
1	2	1.615250e+12	1.615850e+12	34:30.0	email	business	us	payments	1.0
2	3	1.617240e+12	1.617580e+12	36:34.0	chat	business	jp	desktop app	1.0
3	4	1.619650e+12	1.620260e+12	18:24.0	chat	business	jp	admin console	2.0
4	5	1.613260e+12	1.613870e+12	52:45.0	email	business	au	sharing	1.0
...	...	...	...	...	...	...	...	...	...

```
#making all column names uppercase
df.columns = [col.upper() for col in df.columns]
```

```
df
```

	TICKET_ID	CREATED_DAY	CLOSED_DAY	CREATED_TIME	SUPPORT_CHANNEL	USER_TYPE	COUNTRY	ISSUE_TYPE_CATEGORY	TICKET_REPLIES	
0	1	1.622680e+12	1.623630e+12	21:48.0	phone	business	us	desktop app	NaN	
1	2	1.615250e+12	1.615850e+12	34:30.0	email	business	us	payments	1.0	
2	3	1.617240e+12	1.617580e+12	36:34.0	chat	business	jp	desktop app	1.0	
3	4	1.619650e+12	1.620260e+12	18:24.0	chat	business	jp	admin console	2.0	
4	5	1.613260e+12	1.613870e+12	52:45.0	email	business	au	sharing	1.0	

Additional Data Collection

Concerns about the data and additional data collection

- **Clarify resolution time units**
  Confirm if resolution times are in minutes or days, especially for email, to ensure accurate interpretation.

- **Understand email classification**
  The **"email ar"** label is unclear—clarification is needed on how emails are categorized.

- **Link ticket & survey data**
  Connecting survey responses with ticket data could reveal which **issues or channels drive lower satisfaction**.

- **Identify high-effort issues**
  View breakdown of **issue types by average resolution time** to uncover areas needing process improvement.

- **Investigate chatbot drop-off**
  Review chatbot **feedback and user paths** to understand where and why users escalate or abandon the flow.
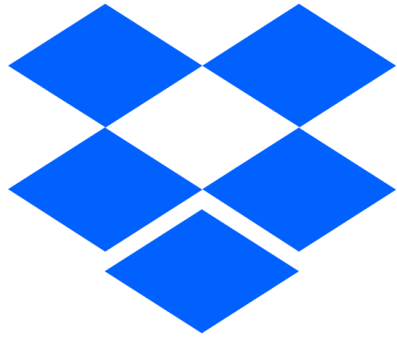
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Thank you!

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Appendix

Additional Analysis Insights

SQL Query

Query that provides CSAT by channel in descending order.

```
select support_channel,
    round(
        100.0 * sum(case when survey_score in (4,5) then 1 else 0
end)/count(survey_score),2)
    as csat_percent
from dbx.support_data
where survey_score is not null
group by support_channel
order by csat_percent desc
```

SQL Query

Query that identifies the proportion of tickets represented by each user type.

```
select user_type, count(*) as ticket_count, round(100 * count(*) / (select
count(*) from tickets), 2) as proportion
from dbx.support_data
group by user_type
order by proportion
```