

RISK DATA ANALYST (Optimization) CHALLENGE @ CHARGEFLOW

Hi there! First off, thanks for applying! We're thrilled you're interested in joining Chargeflow. Before diving in, let's set the tone:

About Us

At Chargeflow, we're on a mission to make fraud prevention and revenue recovery far more efficient for businesses. We take our people seriously. We invest time, energy, and resources into nurturing talent, and we've got a proven track record of turning juniors into high-performing professionals. That said, the learning curve is real. We ask for your 110% because we're committing just as much in return.

Before You Begin

Take a few moments to explore the world of payment disputes, chargebacks, and especially First Party Misuse. Google it / Use any tool (yes, even ChatGPT, Claude, etc.). If you discover this field isn't your jam — totally fine! Better to know now.

The position

Combine qualitative and quantitative research analysis by becoming an expert payment-disputes "lawyer", who leverages data analysis for optimizing one of our flagship products.

Deadline & Format

- You have **2 days** to complete the challenge from the moment you receive it (we're not checking how long it took you to complete it. Just meet the deadline). Feel free to go for chill style 😊 a day for tasks #1-4, a day for #5 if you want :)
- Submit all your answers in a **single PDF** to shahafr@chargeflow.io. Email any **additional attachments if relevant** (e.g. Excel / Jupyter notebook) too.
- **You may use any & all tools:** Excel/Google Sheets/Python/SQL/ AI Tools, etc.
- If using code, include it in an appendix within the PDF (make sure it's runnable!). If using Google Sheets / Excel, it's recommended you attach that too for the ability to see the thought process and get points for the process even if not the final result.
To be clear: we are indifferent to the technology used (code/no code).
- Be clear and concise. Most answers shouldn't exceed 1–2 short sentences.
- If you don't have an answer, give it your best shot and move on.
- Make sure to clearly state any assumptions you made during analysis.
- Focus on communicating insights - not dry facts/statistics.
- Super stuck & must get a clarification? Shahaf: 0522-4343-82

Basic Terminology

- **Payment Dispute / Chargeback:**

A payment dispute occurs when a cardholder challenges a transaction, and the card issuer forcibly pulls the money back from the merchant - even though the transaction was originally approved.

- **First Party Misuse:**

Unlike classic fraud (where a fraudster uses someone else's card), First Party Misuse happens when the actual cardholder disputes a legitimate charge - whether out of confusion, regret, or malice. These disputes are not limited to a certain dispute reason/dispute reason code.

Chargeflow's Business Model

For the purposes of this assignment, it is sufficient to say that we make money by recovering money. If Chargeflow wins a dispute and recovers the funds on behalf of the merchant, then Chargeflow takes a success fee. The fee is a percent of the recovered disputed funds. No recovery = no fee.

The Challenge

Assist Customer Success, Tasks #1-4

DATASET: CANDYLAND

In this part of the assignment, you'll analyze data from an imaginary merchant — CandyLand — and help simulate the real work of a Risk Data Analyst. Ready?

Task #1:

1.1 Visualize the number of disputes which CandyLand received per month-year. Make sure to use data labels so that the precise number of disputes is visible.

1.2 What is CandyLand's overall win rate? (2 digits post decimal point, e.g. 10.19%)

Win Rate Calculation:

Numerator: total number of disputes with status "won"

Denominator: total number of disputes with status "won" and "lost"

Task #2: Benchmarking CandyLand vs. Others

You've now reviewed CandyLand's performance. But is it good? Time to compare.

We've attached a table with dispute metrics for multiple merchants, including their category (e.g. Foodstuffs, Crypto, Digital Goods, etc.).

Your mission is to evaluate how CandyLand performs **relative to relevant peers**.

Please answer in 3 bullet points:

1. What would you tell the Customer Success? State your bottom-line evaluation of CandyLand's win rate relative to others.
2. Mention the merchant names you compared to.
3. Note why you selected these merchants (e.g., similar name, category, etc.).

merchant name	merchant category	win rates					
		credit not processed	damaged product	fraud	unrecognized	product not received	overall win rate
sweetTooth	foodstuffs	68.10%	70.20%	33.50%	85.00%	66.00%	54.80%
teaAndCoffeeStore	foodstuffs	65.40%	65.90%	27.80%	86.70%	63.30%	51.70%
bookBarn	books	70.10%	71.20%	40.50%	88.50%	69.40%	58.60%
trendyThreads	clothing	62.50%	59.80%	24.30%	81.90%	58.40%	48.20%
homeEssentials	home_appliances	66.80%	69.50%	32.00%	87.50%	64.10%	53.80%
petpet	animals	64.70%	67.10%	30.20%	83.50%	62.90%	51.70%
glowBeauty	cosmetics	70.20%	72.30%	35.60%	89.10%	68.20%	59.10%
gums	healthcare	68.70%	70.90%	36.10%	88.00%	67.90%	57.70%
spicyKitchen	restaurants	63.90%	64.50%	28.20%	85.40%	61.30%	50.90%
lolipopHeaven	furniture	61.10%	66.20%	29.70%	86.80%	63.00%	51.40%
mugHalfFull	beverages	69.30%	71.80%	31.10%	86.20%	67.20%	55.20%
pixelPlay	digital_gaming	72.90%	73.40%	55.50%	89.50%	70.30%	64.30%
subStream	digital_entertainment	73.10%	74.50%	58.20%	90.20%	71.00%	65.40%
coinGalaxy	crypto	68.00%	70.10%	62.00%	91.80%	68.80%	64.10%
firefly	cloud tech s.a.a.s.	75.30%	78.90%	67.20%	92.30%	74.40%	68.90%
readio	digital_books	71.60%	74.10%	54.40%	89.90%	72.30%	64.60%
VPNzone	cybersecurity s.a.a.s.	74.20%	77.60%	66.50%	91.20%	73.00%	67.90%

Task #3: Business Value KPIs

So far, you've focused on win rate — but what other KPI would you *absolutely* recommend tracking and communicating to the merchant?

Give **only one**. The one you find most important. Answer in 1 sentence, maximum.

Task #4: Investigating First Party Misuse Patterns

Now analyze CandyLand's data and identify signs of **First Party Misuse**.

Hint: Look for anomalies. Then dig deeper. Compare. Unleash your analytical capabilities!

Deliverables:

- Write **1–3 bullet points** summarizing your insights / thoughts / suspicions (max 3 sentences total).
 - Add a **visualization** if you'd like, to support your case.
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Task #5: The New AI Agent

So you finished helping Customer Success. You grab a drink and bump into Yuval (Product), Ben (Risk) & Re'em (Finance).

Yuval and Ben are excited about the **new** AI agent which went live on **25 January**, but they clearly understand there's a problem! Its performance is better in every aspect against all disputes except for the **Visa 10.4 (Fraud, card absent environment)** chargebacks. Clearly, the agent's calibration is off, negatively impacting Chargeflow's revenue.

You've extracted the perfect sample of cases to review (**DATASET: AI AGENTS**).

Identify the **4 rules** which were mistakenly **left out of the new agent's knowledge-base** using Visa's "[Visa Core Rules and Visa Product and Service Rules](#)" document. **Focus on pages 136, 674-682, 696-703.**

Respond in **4** short bullet points:

- Per bullet point:
Identify the rule (Name it [if you can't you may describe it very briefly - 1 line maximum please]). Write down the Visa document page number.

EXAMPLE:

- Liability shift due to Visa Secure 3DS successful authentication; page: 698; e.g. see data row index (the last column): compare 27 & 28 vs. 29.

Final Notes

- Be thorough but efficient. We care about clarity and sharp thinking, not fluff.
- If you made assumptions, **state them explicitly**.

Looking forward to seeing how you think.

And remember — if you're enjoying this challenge, there's a good chance you'll love working here. If not... that's cool too 😊

Kind regards,

Ben & Shahaf

Risk @ Chargeflow