Business Analyst CHALLENGE

Welcome to the Neural Design challenge for Business Analysts designed for Influur. From your CV/LinkedIn profile & previous conversations, we know that you say that you love the business analysis side of data and that you're a very knowledgeable professional that we would like to call a teammate.

In this challenge, we are looking for ownership: ownership of the decisions, the data, and of business. Imagine you're already a crucial part of Influur's team and that many business decisions depend on the analysis you provide. Let's get started.

1. We just launched the new version of the app to market. As you can probably imagine, data is growing and changing very fast. Hence, making constant monitoring of the engagement with the app a key business need.

   What would be the key performance indicators you would come up with as the most important to monitor engagement with the app? How often would you suggest such indicators must be monitored?

2. Many times a business report or dashboard is needed by different stakeholders, where they may not necessarily have the same interpretation of a specific concept. Let's take for example the concept 'active user': some stakeholders may interpret an active user as one that logs into the app with a certain frequency, while others may not consider a simple log-in as a relevant engagement.

   How would you propose a problem resolution strategy with the stakeholders? Which facts would you present to them?

3. It is a common practice to have many systems scattered all over: one might be hosting the Influur app, and others might be hosting models needed for daily operations. This usually benefits usability over scalability. Nevertheless, data centralization is crucial for its exploitation. For simplicity, imagine there are 4 systems:

- The first system hosts the app. It generates data that is stored in an internal database (ignore the database's architecture for now). Every time influencers and brands interact with a screen, click a button, or open the app, this is stored as an event.
- The second system hosts the AI matching engine. Every time a brand asks for a recommended influencer, the system retrieves the best matches from Influur's AI matching engine.
- The third system hosts influencers' and brand's information. Here, unrestricted information is hosted. This database contains the name, contact info, relevant Instagram info, followers, etc…
- Finally, the fourth and last system hosts all the payment information, this means, all the information related to past services: the brand that paid for the services, the influencer that provided the service, payments, etc…

All systems share a unique identifier for all of the influencers and brands. Those are the keys that allow data to be joined on other databases.

What should we do to centralize the data in order to display it in charts for KPI monitoring? What would you propose the data governance strategy should be?

4. Download the attached .csv file. This database contains credit card information and transactions from multiple customers.

   Your task is to exploit the information contained in this database as you seem fit. Also, take the following affirmations into consideration:

   [1] This database contains credit card information and transactions from multiple customers. Use your favorite data visualization tool/programming language to explore the data and present the results [R, Python, PowerBI, Tableau, Spotfire, etc…]. The database has the following architecture:

ID	UPDATE	STATUS	MOTIVE	INTEREST_RATE	AMOUNT	CAT	TXN	CP	DELIVERY_SCORE

Where:

ID = This is the user's unique identifier.
UPDATE = Date when the event happened.
STATUS = The event, which can take the following values:

EMPTY - The user did not respond to the communication OR there was a transaction (this is reflected in the TXN column).
RESPONSE – The customer responded to the MKT campaign.
RISK – The customer was checked on the risk model whether the customer is fit to get a credit or not.
REJECTED – The risk model determined the customer is not fit to get a credit.
APPROVED – The risk model determined the customer as fit to get a credit. The customer is granted a credit. Here some of the other columns are populated.
DELIVERED – The customer received a physical credit card.

MOTIVE = The reason for rejection OR the type of card.
INTEREST_RATE = The interest rate of the customer's credit card.
AMOUNT = The amount of the credit granted to the customer.
CAT = The annual cost of the credit granted to the customer.
TXN = The amount of each transaction for each customer.
CP = Zip Code where the physical credit card was delivered to.
DELIVERY_SCORE = A score the customer gives to the delivery company for the delivery service.

Usually, the sign-up process starts when the customer responded to the communication and ends up with approval, either with a physical or digital card.

[2] Display and plot the information you consider to be the most relevant for a Credit card business. You could consider the following departments: Operations, Growth (Marketing), Finance, Customer Service, and Product.

[3] Creatively design charts and tables to best describe relevant data. Generate a set of those key performance indicators you consider that drive the business. Present recommendations based on those indicators that, to the best of your knowledge, might be low or could be improved.

[4] Additional information can be used! If you feel that extra data-based information might be needed to support your arguments, include it in the folder: PowerPoint presentations, word documents, etc…

[5] Uploading your results to a git repo is highly desirable but not mandatory.

Influur's and Neural Design's teams wish you the best of luck!