XYZ.ai

Monthly Recurring Revenue (MRR) is a common metric used to measure the profitability of Software-as-a Service (SaaS) companies. It can be described as recurring, subscription revenue.

XYZ.ai is a SaaS that sells an AI personal assistant service that helps manage your calendar, XYZ.ai has a monthly and annual subscription option. The pricing differs based on the number of users and size of the organization. XYZ.ai also sells AI designed (physical) calendars that customers can purchase, but these are often once-off customer transactions. The “xyz-billing.csv” contains customer billing information for XYZ.ai from Jan 2021- June 2022.

The following logic is applied to calculate MRR from billing data

1. If the client is billed annually, the subscription is considered a prepayment, and thus is divided by 12 and attributed as MRR evenly across the next 12 months, starting in the month AFTER the billing month.

eg $1200 billed in 31/05/2021, is attributed as:

- $100 MRR as @30/06/2021 (month 1)

- $100 MRR as @31/07/2021 (month 2)

- $100 MRR as @31/08/2021 (month 3)

…

- $100 MRR as @31/05/2022 (month 12)

1. If the client is billed monthly then the amount is attributed to the month they are billed and the entire amount is counted as MRR for that month.

Eg $20 billed in 31/05/2021 is $20 MRR as @ 31/05/2021

1. Physical calendar purchases are recorded as transactions revenue in the month billed

Based on the above information and the data provided complete/answer the following:

1. Produce either a visualization or table to show the total monthly MRR for January 2021 to June 2022 as at each month end.
2. Produce a visualization or table to show the monthly growth rates of MRR and calendar purchases (as separate categories). The monthly growth rate is the defined as the percentage change from the previous month.
3. As a SaaS it’s important to identify when customers are churning, produce a table or visualization to identify how many customers have churned each month between December 2021 and March 2022 (both months inclusive) where churn is defined as a customer having a non zero-MRR amount attributed in the previous month but no MRR in the current month.

Eg MRRt-1 > 0 and MRRt = 0 where t is the month.