SQL FROM SCRATCH

Francisco Martorano Jr

Table of contents

1. Get familiar with codeflix
2. Overall churn trend since company started
3. Compare churn rate between segments

Get familiar with codeflix

1. How many months has the company been operating? Which months do you have enough information to calculate a churn rate? The company has been operating for 4 months. I have enough information to calculate the churn rate from 3 months (from January 2017- March 2017).

2. What segments of users exist? There are two segments such as segment "87" and segment "30."

Overall churn trend since company started

1. What is the overall churn trend since company started?

The churn trend overall has been increasing since the company started.

Overall churn trend since company started (query version)

select * from subscriptions limit 100;

select min(subscription_start), max(subscription_start) from subscriptions;

with months as (select '2017-01-01' as first_day, '2017-01-31' as last_day union select '2017-02-01' as first_day, '2017-02-28' as last_day union select '2017-03-01' as first_day, '2017-03-31' as last_day), cross_join as (select * from subscriptions cross join months), status as (select id, first_day as month, case when (subscription_start < first_day) and (subscription_end > first_day or subscription_end is null) and (segment = 87) then 1 else 0 end as is_active_87, case when (subscription_start < first_day) and (subscription_end > first_day or subscription_end is null) and (segment = 30) then 1 else 0 end as is_active_30, case when (subscription_end between first_day and last_day) and (segment = 87) then 1 else 0 end as is_canceled_87, case when (subscription_end between first_day and last_day) and (segment = 30) then 1 else 0 end as is_canceled_30 from cross_join), status_aggregate as (select month, sum(is_active_87) as sum_active_87, sum(is_active_30) as sum_active_30, sum(is_canceled_87) as sum_canceled_87, sum(is_canceled_30) as sum_canceled_30 from status group by month) select month, 1.0 * sum_canceled_87/sum_active_87 as churn_rate_87, 1.0 * sum_canceled_30/sum_active_30 as churn_rate_30 from status_aggregate;

Compare churn rate between segments

1. Which segment of users should the company focus on expanding?

The company should focus on expanding the users of segment "30" or as stated on the query version "churn_rate_30."

Compare churn rates between segments (query version)

(select month, sum(is_active_87) as sum_active_87, sum(is_active_30) as sum_active_30, sum(is_canceled_87) as sum_canceled_87, sum(is_canceled_30) as sum_canceled_30 from status group by month) select month, 1.0 * sum_canceled_87/sum_active_87 as churn_rate_87, 1.0 * sum_canceled_30/sum_active_30 as churn_rate_30 from status_aggregate;