

-- Write the SQL query to create a column that ranks each country based on their conversion rate performance for each week

With raw as (

-- Step 1: Extract the full data from the source conversion table and adjust the week numbers to start in week 1 instead of week 0.

SELECT

c.week\_date + 1 as week\_date,  
c.\* EXCLUDE (week\_date),  
c.visits / c. conversions as conversion\_rate\_browser\_country\_week

FROM STRIPE.PUBLIC.CONVERSIONS c

),

agg\_by\_country as (

-- Step 2: aggregate data by week and country, adding calculations for the sum of visits and conversion, and weekly conversion rate by country.

SELECT

r.week\_date,  
r.country,  
COALESCE(SUM(conversions), 0) AS sum\_conversions,  
COALESCE(SUM(visits), 0) AS sum\_visits,  
-- Calculation of conversion rate (conversions/visits)  
COALESCE(COALESCE(SUM(conversions), 0) /

NULLIF(COALESCE(SUM(visits), 0), 0), 0) AS weekly\_country\_conversion\_rate

-- added coalesce and nullif statements in case there are null values in future data to avoid division by zero errors.

-- the data is clean but in an edge case that a country doesn't have conversion, but does have visits, or in case there's a data quality issue on the source system or pipeline

FROM RAW r

GROUP BY

r.week\_date,  
r.country

)

SELECT

-- Step 3: Create the weekly rank based on the conversion rate, using the sum of conversions in the same time frame as a way to untie the rank, in the unlikely event of an equal conversion rate number.

agg.week\_date,  
agg.country,  
agg.sum\_visits,  
agg.sum\_conversions,  
agg.weekly\_country\_conversion\_rate,  
RANK() OVER  
(PARTITION BY agg.week\_date

```
ORDER BY weekly_country_conversion_rate DESC,  
agg.sum_conversions DESC)  
-- adding sum_conversions to the rank to reduce the risk of ties in the data  
if two data points have the same conversion rate. In this use case, I don't see a  
reason why to highlight ties and it seems better to have a continuous rank.  
AS weekly_country_conversion_rate_rank  
  
FROM agg_by_country agg  
  
order by agg.week_date,  
weekly_country_conversion_rate_rank
```