Tweets' Rolling Averages [Twitter SQL Interview Question]

This is the same question as problem #10 in the SQL Chapter of Ace the Data Science Interview!

Given a table of tweet data over a specified time period, calculate the 3-day rolling average of tweets for each user. Output the user ID, tweet date, and rolling averages rounded to 2 decimal places.

Notes:

- A rolling average, also known as a moving average or running mean is a time-series technique that examines trends in data over a specified period of time.
- In this case, we want to determine how the tweet count for each user changes over a 3-day period.

Effective April 7th, 2023, the problem statement, solution and hints for this question have been revised.

`tweets` Table:

Column Name	Type
user_id	integer
tweet_date	timestamp
tweet_count	integer

`tweets` Example Input:

user_id	tweet_date	tweet_count
111	06/01/2022 00:00:00	2
111	06/02/2022 00:00:00	1
111	06/03/2022 00:00:00	3
111	06/04/2022 00:00:00	4

user_id	tweet_date	tweet_count
111	06/05/2022 00:00:00	5

Example Output:

user_id	tweet_date	rolling_avg_3d
111	06/01/2022 00:00:00	2.00
111	06/02/2022 00:00:00	1.50
111	06/03/2022 00:00:00	2.00
111	06/04/2022 00:00:00	2.67
111	06/05/2022 00:00:00	4.00

The dataset you are querying against may have different input & output - **this is just an example**!