DW (JUNIOR) DATA ENGINEER

Scenario | You receive via email daily reports for social media posts, their performance and interactions. Your task is to download those attachments programmatically and load the data into a database.

Task 1

0. GMAIL-ACCOUNT | Please create a gmail account and send separate emails to that account with the files ("2022-09-….csv") you find in the task folder. The subject can be, e.g. "Your report is ready".
1. LOCAL POSTGRESQL server | Please set up a local PostgreSQL server or use an equivalent service online.
2. REPO @GITHUB & PYTHON | Please make a repo on github and use it.
    1. Connect securely via the Gmail API (not IMAP)
    2. Write a python script that identifies the correct daily reports, as the mail account could also receive other emails over time.
    3. Download the attachments via the script.
    4. Read the data from the files and upload them to the postgres database.
3. SQL | Write SQL scripts to further process the data (and please also push it to git). Be creative and create tables that seem sensible to you. What insights can you generate?
4. RESULTS | Please send us the database scheme, share the repository with sandra.martin@dw.com and timothy.swinbank@dw.com and send screenshots visualizing your results.
5. README | Please write a readme on Github with bulletpoints to how you approached this task, the challenges you encountered, reason the choices you made and briefly sketch further ideas.

Task 2

1. Have a look at the dwh_dl_facebook_post_insights.csv. You will find there 3 rows for seperate posts. Import the csv to a database table.
2. Please write a SQL script to unpack the json in column *post_video_view_time_by_age_bucket_and_gender* in a new table, while preserving the other columns.
3. Write a script for the sums per post for each gender. Additionally create the sum for age 18-34 of all genders.

Please share the results you achieved within the time frame of 8 hours with us. Don't forget to commit regularly and push the code to a public repository you share with us. I hope you find this task interesting and joyful. In case you have any questions, please come back to me.

Best, Sandra.