**Covid contact tracing app**

* **Retrieve a list of people who should be warned that they were in contact with a person who tested positive.**

**Explanation**:

The goal of this project is to maintain a list of people who should be warned that they might have come in contact with a covid positive person.

**Approach**:

* I joined ***Positives*** table with ***Attendance*** table on ***User*** to get the location details for all the users that were tested posited (this is a one to many relationship).
* Using the ***positive\_date*** column I filtered the dataset such that we only get the ***locations*** and the ***attendance\_users*** who might have come in contact with the covid patient in the last 7 days from the time he/she was tested positive
  + This was done by using the following logic:
    - *where date(presence\_date) >= positive\_date - 7 and date(presence\_date) <= positive\_date*
* Now I have the dates and the past 7 days location history of the covid patient. Using this information I joined the dataset back to the attendance table to get the location details and the user id’s for all the people who came in contact with a covid positive patient in the last 7 days.
  + The join was performed on location and date
* As a last step I compared the timestamps of when a covid positive patient was near someone from the Attendance table. If the difference is less than 0.5 hours at the same location I tagged them as ‘Alert’, these people should be alerted at the very least.
* Created a table alert\_list in the schema u\_0972430 and populated it with the above query – This is the list of all the users that came in contact with a covid positive patient at the same location within 30 minutes

**DB Connection:**

Host details: [data-interview-db.ce7oyzeskgrt.eu-west-1.rds.amazonaws.com](http://data-interview-db.ce7oyzeskgrt.eu-west-1.rds.amazonaws.com/)

Port: 5432

Source Datasets: ***Positives*** and ***Attendance*** are in public schema

Materialized Table: ***alert\_list*** is in the schema - ***u\_0972430***

**Visualization:**

I created a Tableau visualization using the newly materialized table ***alert\_list***

* The top 10 covid hotspots gives us information such as what locations had the largest number of people tested positive, if these locations are closed we might be able to slow the spread of the virus
* The second visualization tracks a list of all the events for up to 7 days before a person tested positive for covid. You can input a User ID and this gives the information for that person and his/her location history with dates.

**Link to the Tableau visualization:** [**https://public.tableau.com/views/CovidHotspots/CovidContactTracing?:language=en&:display\_count=y&publish=yes&:origin=viz\_share\_link**](https://public.tableau.com/views/CovidHotspots/CovidContactTracing?:language=en&:display_count=y&publish=yes&:origin=viz_share_link)