Data Visualizations and Maps with JavaScript

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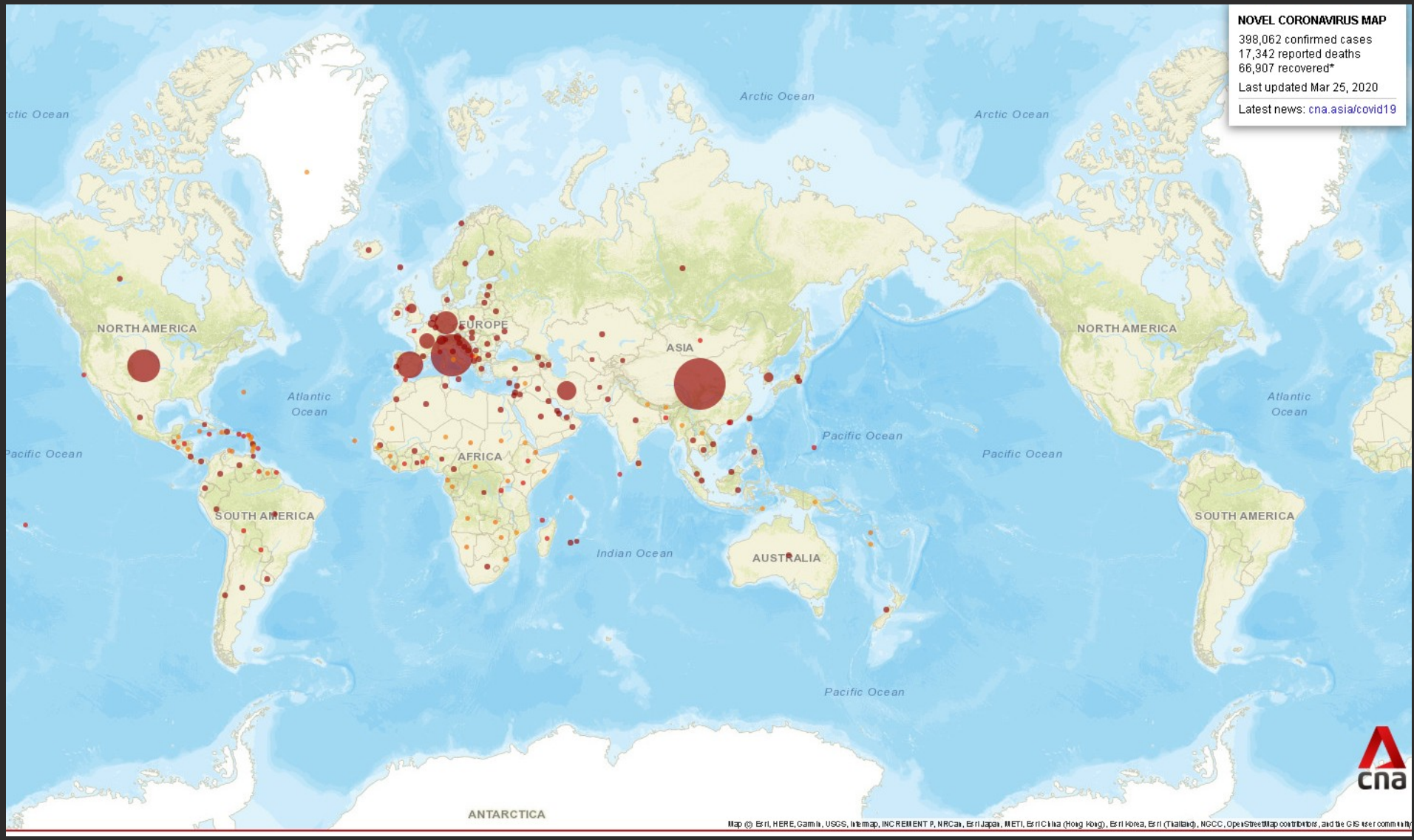
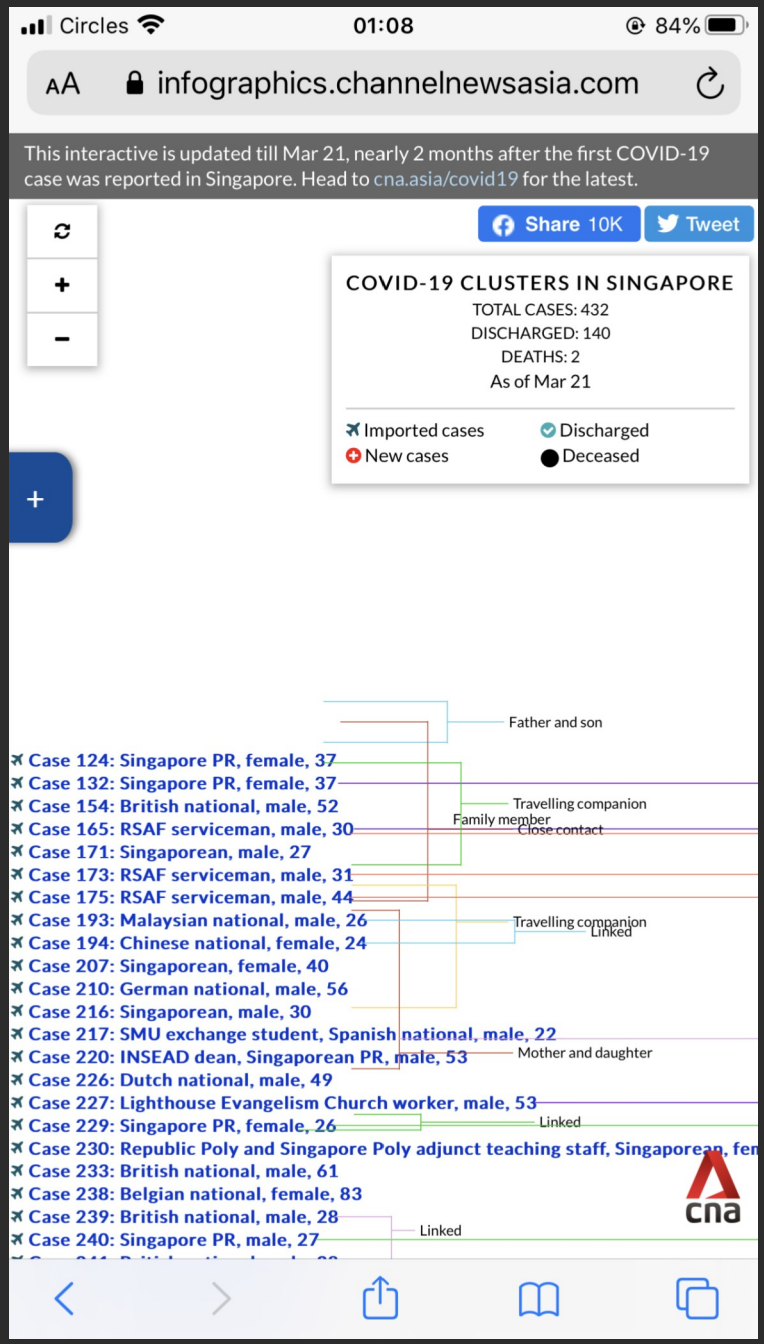


https://infographics.channelnewsasia.com/covid-19/map.html

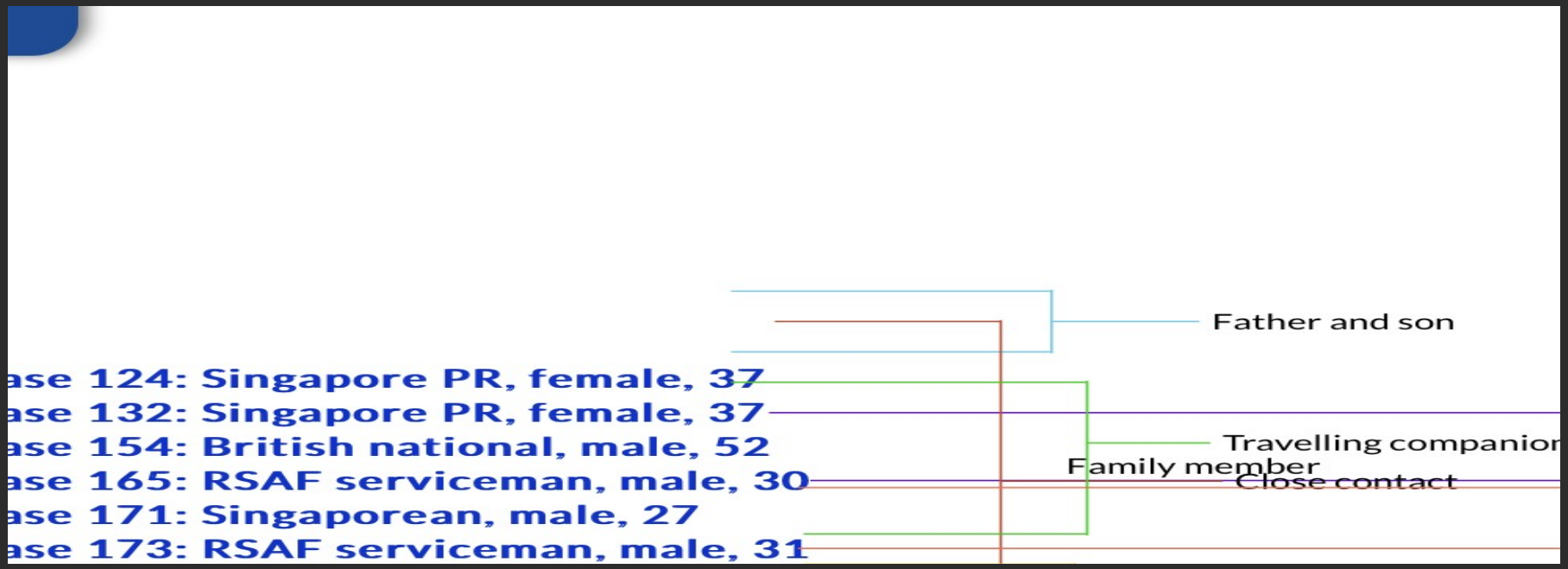
- Today I am going to showcase something similar that I have built and also a bar chart

- Blurry, but I will show the real thing later and its problems (e.g. grey area)

- There are problems with mine (mapbox?)- e.g. “New Zealan”

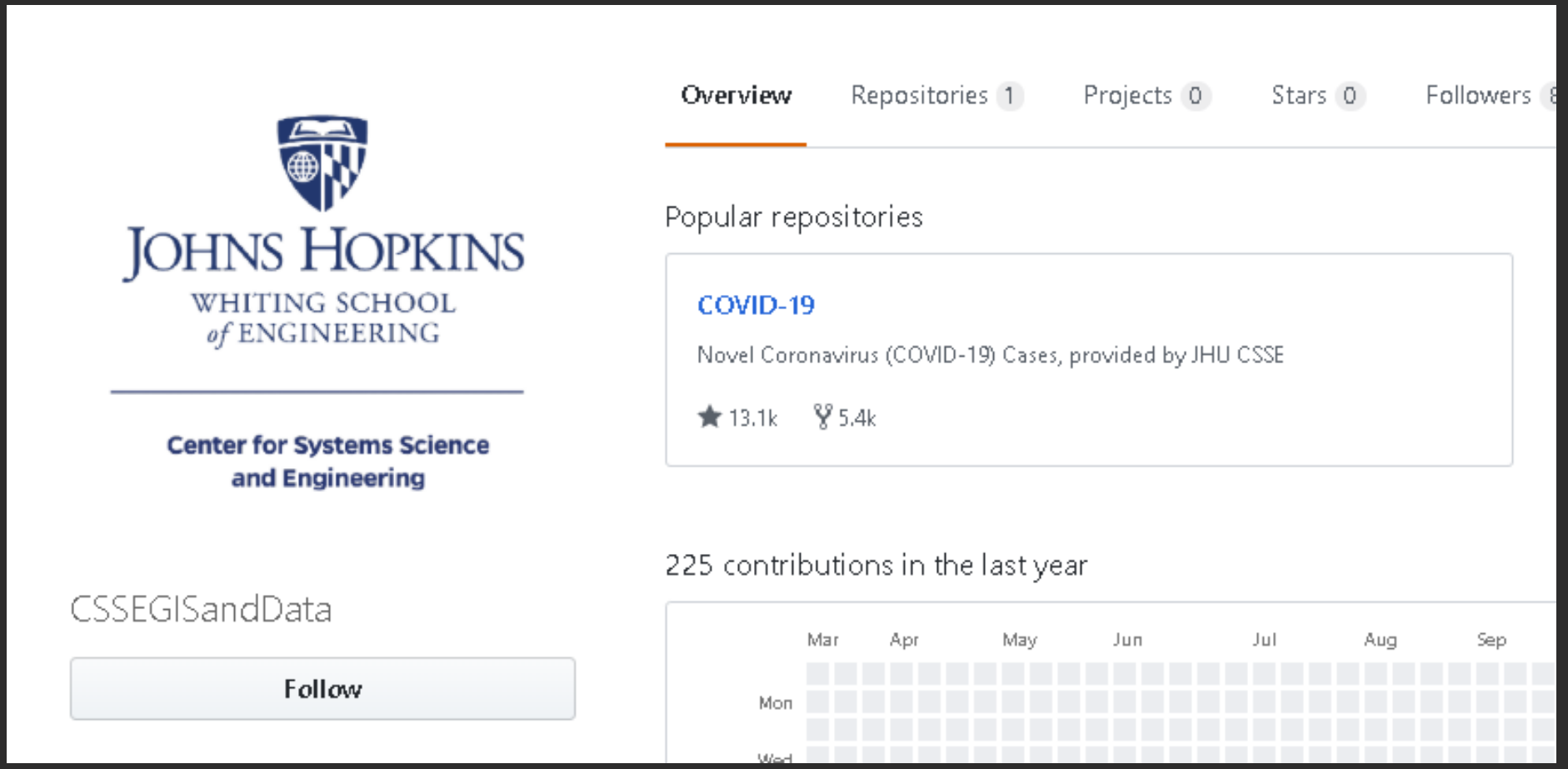


https://infographics.channelnewsasia.com/covid-19/coronavirus-singapore-clusters.html?cid=covid19_desktop-banner_19022020_cna



https://infographics.channelnewsasia.com/covid-19/coronavirus-singapore-clusters.html?cid=covid19_desktop-banner_19022020_cna

- Everybody makes mistakes
- I will talk about d3.js again later



https://github.com/CSSEGISandData

- Notice only one repository

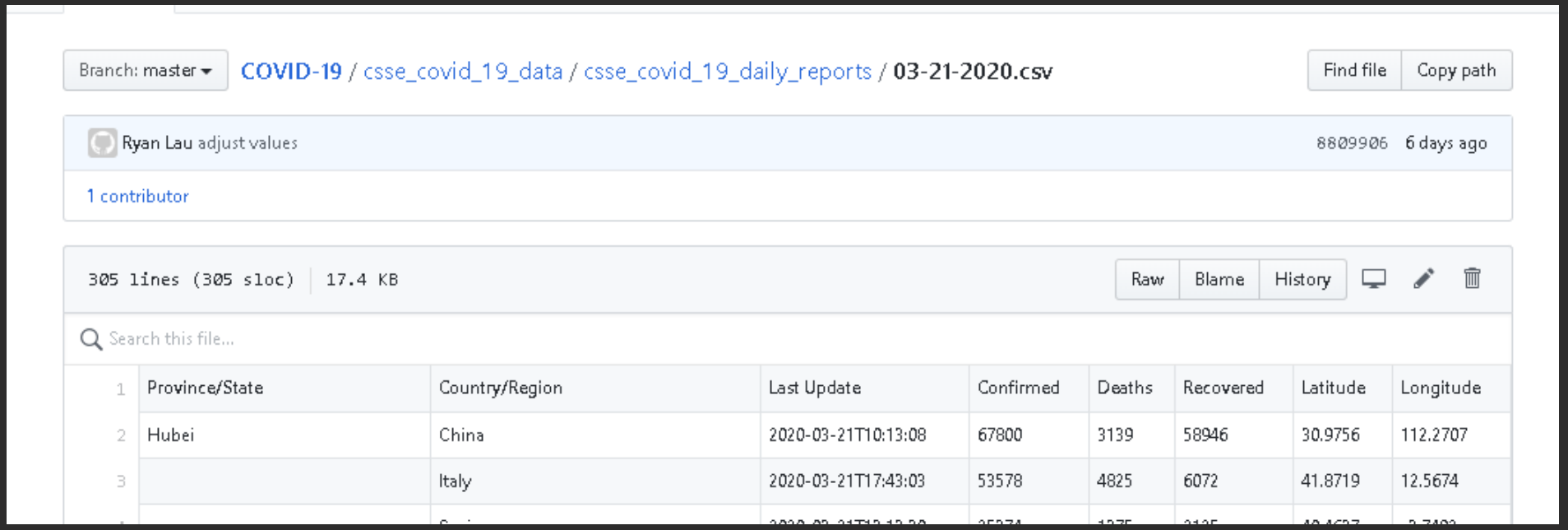
- Source of a lot of data that you see online, in the news and public APIs.

- I feel very grateful for this work.

Data Sources:

- World Health Organization (WHO): https://www.who.int/
- DXY.cn. Pneumonia. 2020. http://3g.dxy.cn/newh5/view/pneumonia.
- BNO News: https://bnonews.com/index.php/2020/02/the-latest-coronavirus-cases/
- National Health Commission of the People's Republic of China (NHC): http://www.nhc.gov.cn/xcs/yqtb/list_gzbd.shtml
- China CDC (CCDC): http://weekly.chinacdc.cn/news/TrackingtheEpidemic.htm
- Hong Kong Department of Health: https://www.chp.gov.hk/en/features/102465.html
- Macau Government: https://www.ssm.gov.mo/portal/
- Taiwan CDC: https://sites.google.com/cdc.gov.tw/2019ncov/taiwan?authuser=0
- US CDC: https://www.cdc.gov/coronavirus/2019-ncov/index.html
- Government of Canada: https://www.canada.ca/en/public-health/services/diseases/coronavirus.html
- Australia Government Department of Health: https://www.health.gov.au/news/coronavirus-update-at-a-glance
- European Centre for Disease Prevention and Control (ECDC): https://www.ecdc.europa.eu/en/geographical-distribution-2019-ncov-cases
- Ministry of Health Singapore (MOH): https://www.moh.gov.sg/covid-19
- Italy Ministry of Health: http://www.salute.gov.it/nuovocoronavirus
- 1Point3Arces: https://coronavirus.1point3acres.com/en
- WorldoMeters: https://www.worldometers.info/coronavirus/
- COVID Tracking Project: https://covidtracking.com/data. (US Testing and Hospitalization Data. We use the maximum reported value from "Currently" and "Cumulative" Hospitalized for our hospitalization number report ed for each state.)

https://github.com/CSSEGISandData



Branch: master ▾ COVID-19 / csse_covid_19_data / csse_covid_19_daily_reports / 03-21-2020.csv

Find file | Copy path

Ryan Lau adjust values 8809906 6 days ago

1 contributor

305 lines (305 sloc) | 17.4 KB

Raw | Blame | History

Search this file...

	Province/State	Country/Region	Last Update	Confirmed	Deaths	Recovered	Latitude	Longitude
2	Hubei	China	2020-03-21T10:13:08	67800	3139	58946	30.9756	112.2707
3		Italy	2020-03-21T17:43:03	53578	4825	6072	41.8719	12.5674

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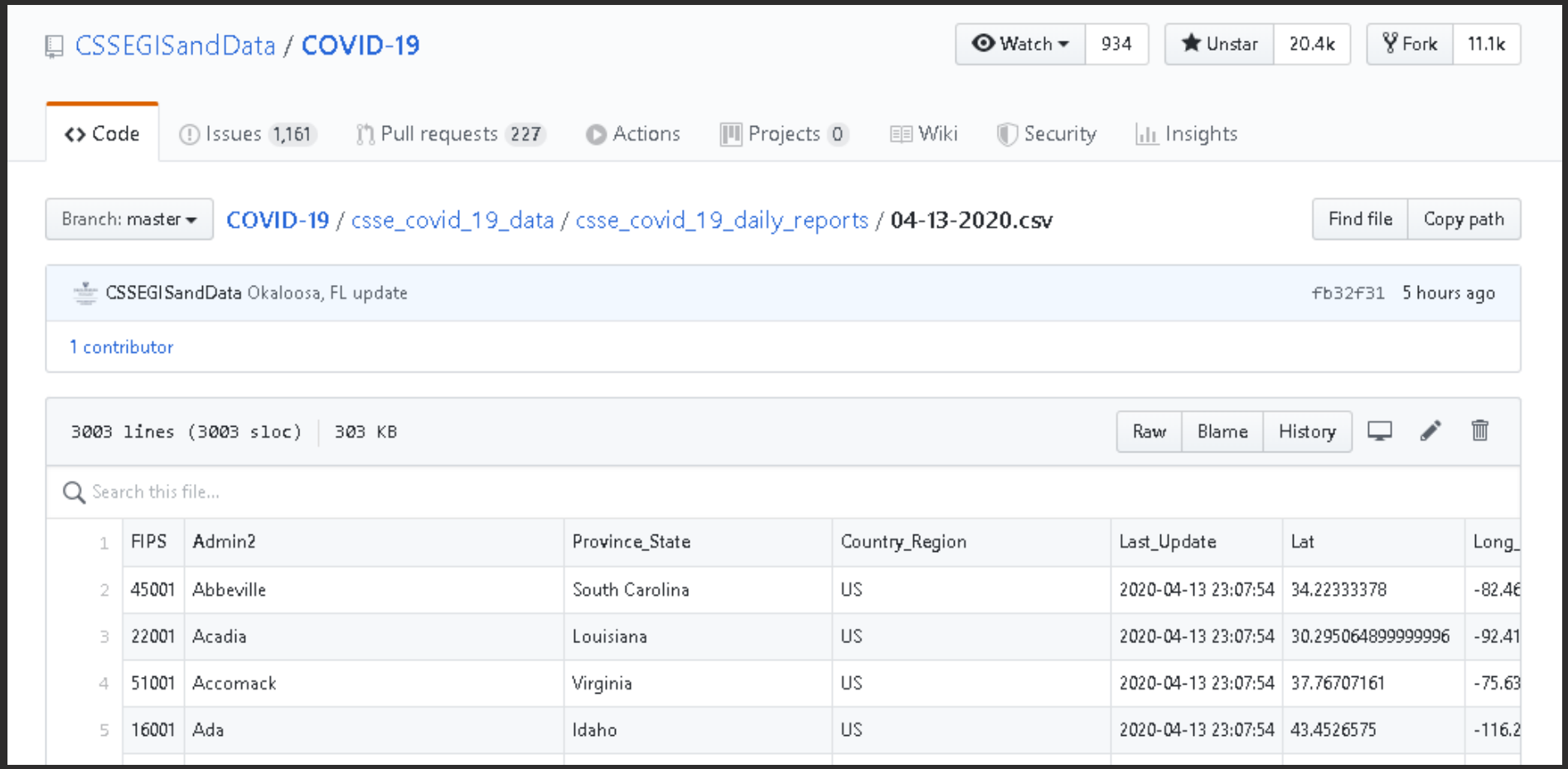


https://github.com/CSSEGISandData

Number of calls to the Tokyo Novel Coronavirus Call Center

772 inquiries

Latest figure (Day-over-day change: +255 inquiries)

BY DAY | TOTAL

Get Open Data

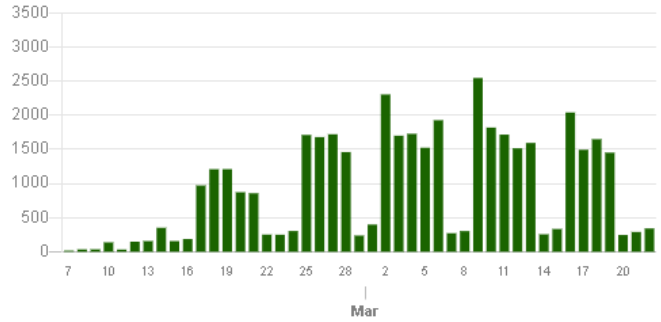
Last update: 2020/03/24 10:00

Number of calls to the Novel Coronavirus Hotline

341 inquiries

Latest figure (Day-over-day change: +51 inquiries)

BY DAY | TOTAL

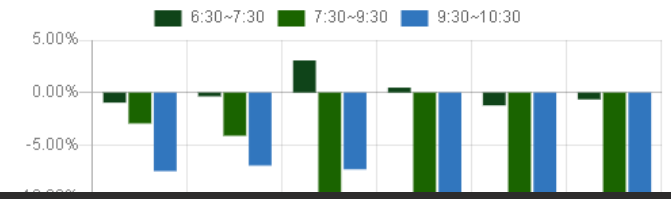


Get Open Data

Last update: 2020/03/24 10:10

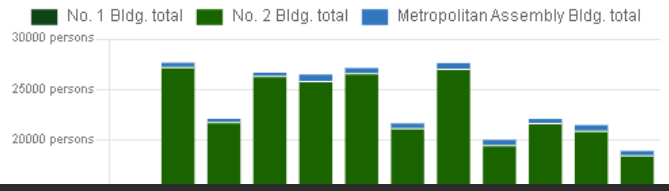
Estimated number of Toei subway passengers

Relative figure based on the average number of users from January 20 to 24.
*Total number of passengers passing through the ticket gates of the four Toei subway lines



Number of visitors to the Tokyo Metropolitan Government buildings

* Weekly number of visitors on days the building was open to the public, excluding Sat., Sun., and holidays.



stopcovid19.metro.tokyo.lg.jp/en/

Some Commonly Used Map Libraries

- Leaflet
- OpenLayers

Considerations

- I’ll show the exact point at which I got stuck when using OpenLayers later.

- Ended up using leaflet for speed and it looks like the result I wanted to get.

Some Commonly Used Map APIs

- mapbox
- Google Maps Platform

Considerations

- Pricing

- Google Maps: You can also set daily quotas to protect against unexpected increases.

- Important to pick the right tool for the right job- don’t be like me if you can avoid it.

- Leaflet right now links nicely with mapbox

- Security (no comparison)

Considerations (Cont.)

- Plugins: L.GridLayer.GoogleMutant for linking leaflet to Google Maps

- From the plugins other Map APIs:
  - Apple's MapkitJS
  - Bing Maps

You can have a look at this and other plugins

- Other commonly compared features I’m not going to go through.

- If there is a plan that facilitates open-sourcing projects like this that would be best.

Before the demo

- If you take data from a repository or an API, be prepared for the data format to change and break your entire app.

- This will tend to happen if you automate pulling/fetching the data.

Before the demo (cont.)

- Not going to pull from a dynamic API because it is often not guaranteed to be accurate.

- It should also adapt to changes everyday or at shorter intervals. The shorter the interval, the better.

- If you intend to work at a news organization or a medical institution in the future this might be helpful for you.

- This is also helpful for data-viz in general.

Before the demo (cont.)

- Add choose primary location (for tables and bar charts). Save to localstorage.

- There are enough existing visualizations online on COVID-19 already. Please don't add more unless you can maintain it well. This repository is just a learning tool, it is not something to be deployed or put in production.

Demo

- Leaflet
- OpenLayers
- d3.js
- Chart.js

...

End of Talk

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wlwl2.com