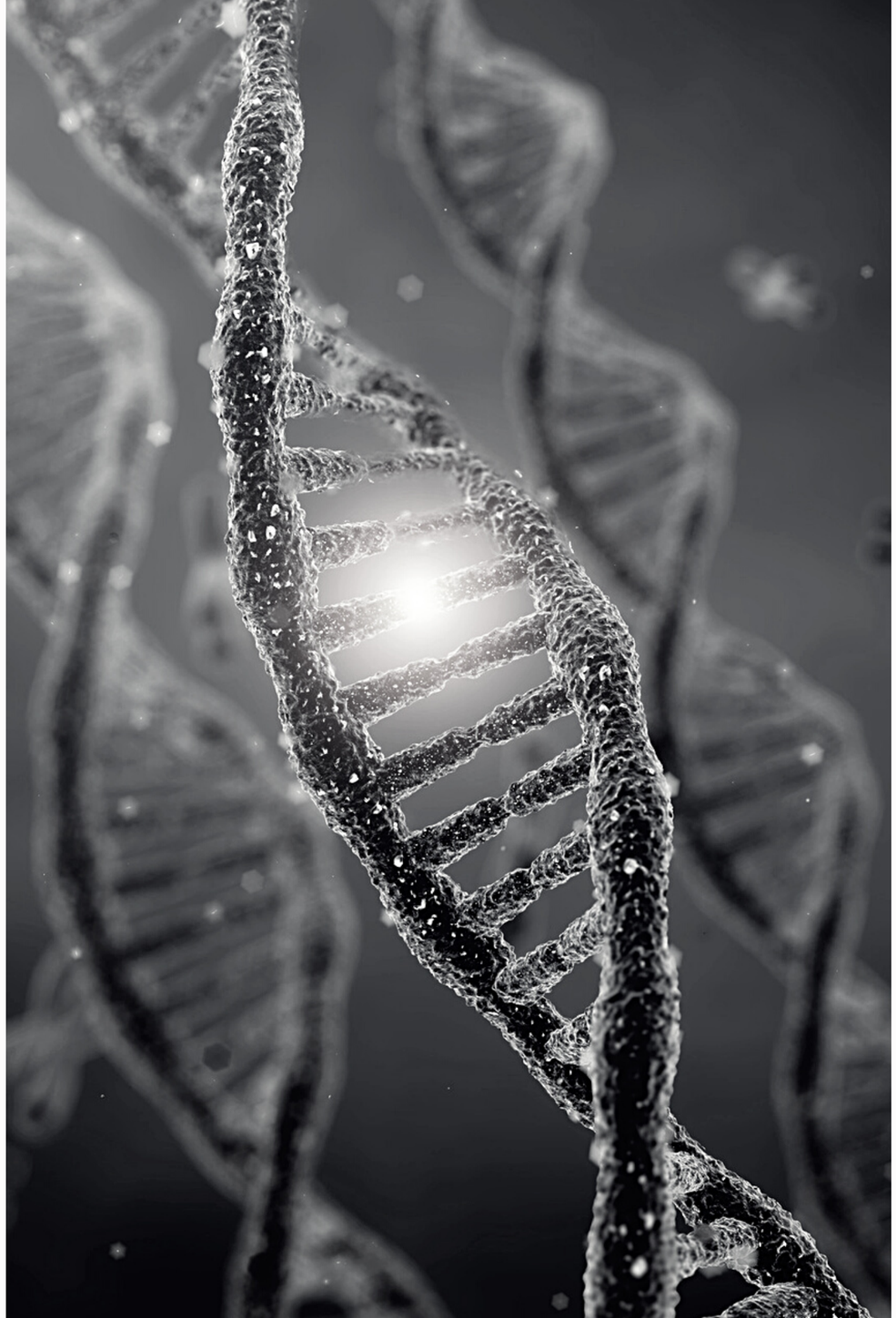


GROUP 5

Visualizing COVID-19 vaccination

DATA101 Final Project

Overview

The COVID-19 pandemic has largely affected business, protocols, and social behavior.

Responses to the pandemic vary greatly in different parts of the world. Since the pandemic is a global concern, being informed of its status via up-to-date information and statistics is vital for the public's general understanding and peace of mind.

We aim to explore and visualize vaccination data (and similar data) in different parts of the world in an attempt to illustrate the present landscape of the pandemic.

Our target audience is the general public.

The key insight is: what is the condition of the world's COVID-19 vaccination?

Our project aims to visualize the query, Are people getting vaccinated?, and explore its ramifications towards the wider context of the COVID-19 pandemic, such as its relationship with the frequency of new COVID-19 cases in a given area.

The General Public

Who are they?

As the state of the pandemic concerns the whole world, the general public simply refers to everyone.

Literacy

The general public is largely diverse in technical, statistical, and visual literacy.

The primary visualization challenge, therefore, is to visualize our data with methods simple enough to be consumed and absorbed by the general public without sacrificing statistical integrity and information accuracy.

Visualization Problem

Visualization Problem

Data that can answer the question is present in different datasets

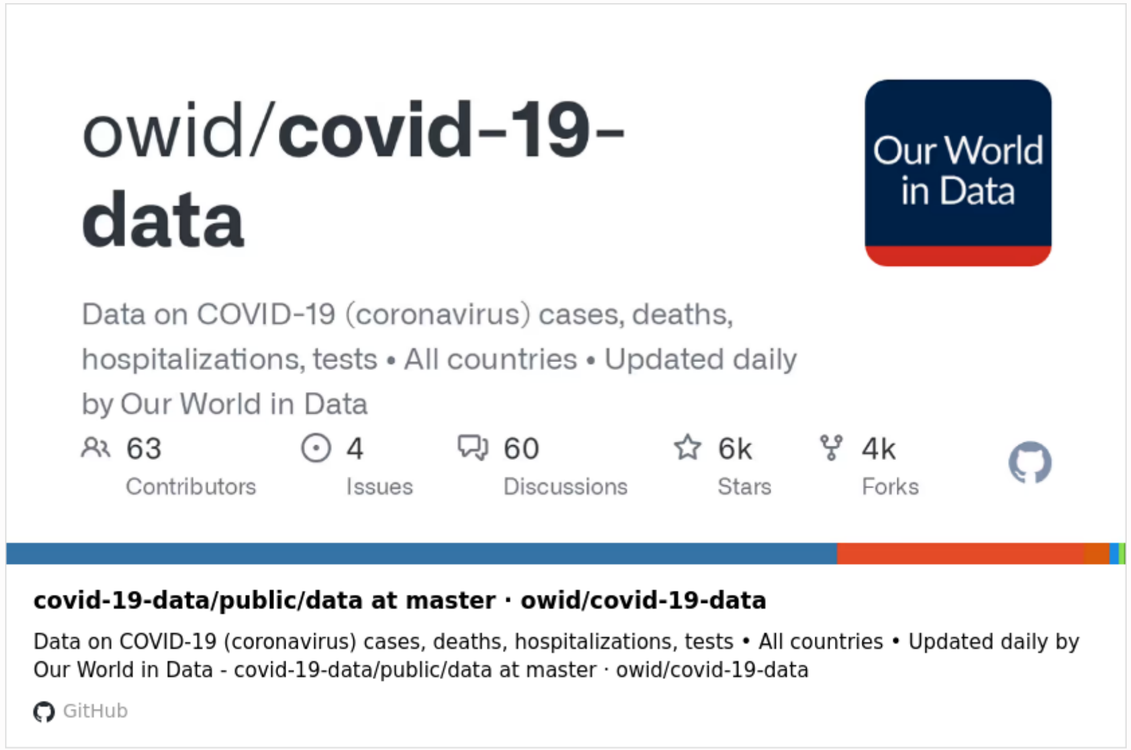
The Data is not in an easily readable format

Data should be made interactive to allow people to explore the data

Datasets

COVID-19 Dataset

- maintained by the Our World in Data
- composed of different types of information that was collected throughout the whole duration of the COVID-19 pandemic
- collections to be used in this project are called “Confirmed Cases and Deaths”, and “Vaccinations”
- available through “.xlsx”, “.csv”, and “.json” formats.



Confirmed Cases and Deaths

- retrieved from the COVID-19 Data Repository by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University which scrapes from multiple sources such as WHO, ECDC, BNO News, etc.

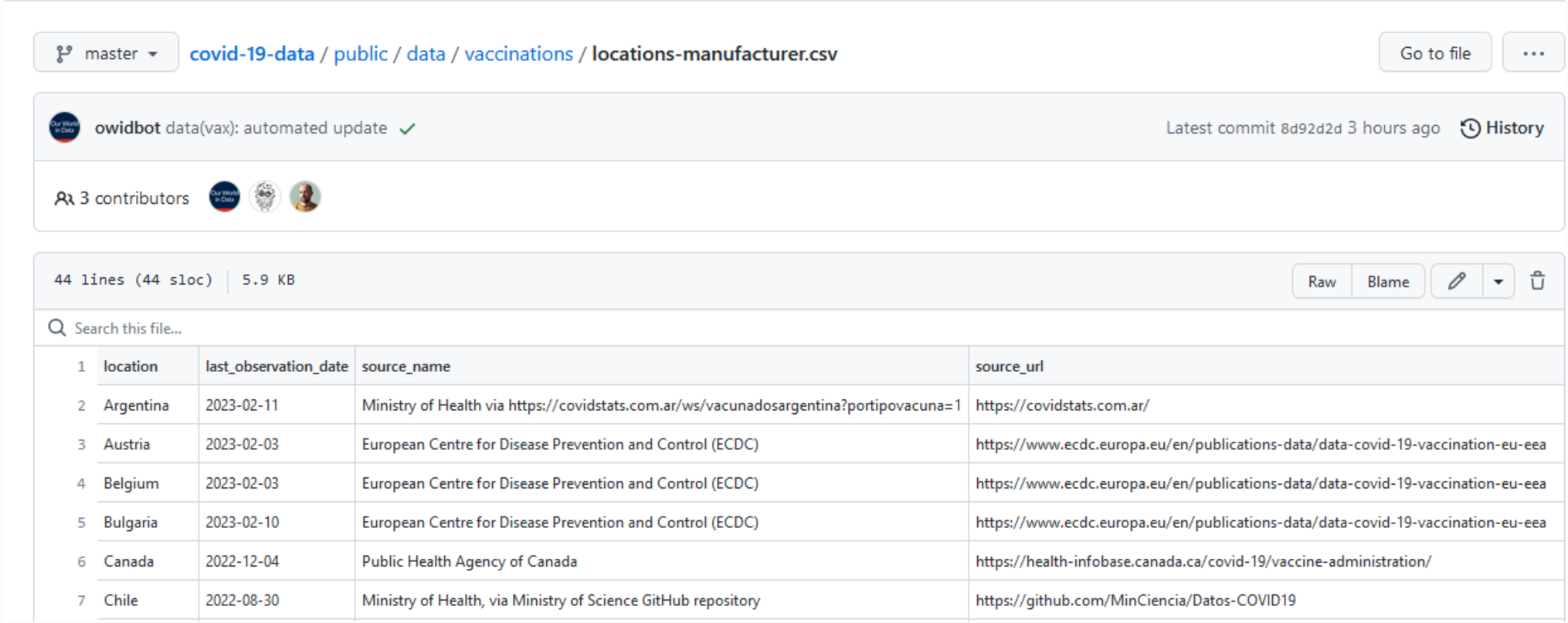
- Johns Hopkins University Center for Systems Science and Engineering (JHU CSSE) operates the data repository for the 2019 Novel Coronavirus Visual Dashboard. The dataset is also supported by ESRI Living Atlas Team at JHU APL.

DATA SOURCES: This list includes a complete list of all sources ever used in the data set, since January 21, 2020. Some sources listed here (e.g. ECDC, US CDC, BNO News) are not currently relied upon as a source of data.

- Aggregated data sources:
  - World Health Organization (WHO): https://www.who.int/
  - European Centre for Disease Prevention and Control (ECDC): https://www.ecdc.europa.eu/en/geographical-distribution-2019-ncov-cases
  - DXY.cn. Pneumonia. 2020. https://ncov.dxy.cn/ncovh5/view/pneumonia?from=dxy&source=&link=&share=
  - QQ News https://news.qq.com/zt2020/page/feiyan.htm#/
  - US CDC: https://www.cdc.gov/coronavirus/2019-ncov/index.html
  - BNO News: https://bnonews.com/index.php/2020/02/the-latest-coronavirus-cases/
  - WorldoMeters: https://www.worldometers.info/coronavirus/
  - 1Point3Arces: https://coronavirus.1point3acres.com/en
  - 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 reported for each state.)
  - Los Angeles Times: https://www.latimes.com/projects/california-coronavirus-cases-tracking-outbreak/
  - The Mercury News: https://www.mercurynews.com/tag/coronavirus/
- US data sources at the state (Admin1) or county/city (Admin2) level:
  - Alabama: Department of Public Health
  - Alaska: Department of Health and Social Services
  - Arizona: Department of Health Services
  - Arkansas: Department of Health
  - California: Department of Public Health
    - Mariposa County
    - Alameda County

Vaccinations

- scraped for each country from multiple sources and then processes this data by the Our World in Data team daily



master covid-19-data / public / data / vaccinations / locations-manufacturer.csv Go to file ...

owidbot data(vax): automated update ✓ Latest commit 8d92d2d 3 hours ago History

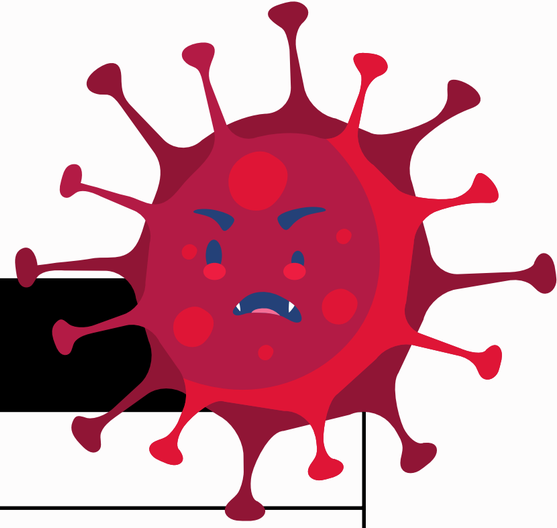
3 contributors

44 lines (44 sloc) | 5.9 KB Raw Blame

Search this file...

	location	last_observation_date	source_name	source_url
2	Argentina	2023-02-11	Ministry of Health via https://covidstats.com.ar/ws/vacunadosargentina?portipovacuna=1	https://covidstats.com.ar/
3	Austria	2023-02-03	European Centre for Disease Prevention and Control (ECDC)	https://www.ecdc.europa.eu/en/publications-data/data-covid-19-vaccination-eu-eea
4	Belgium	2023-02-03	European Centre for Disease Prevention and Control (ECDC)	https://www.ecdc.europa.eu/en/publications-data/data-covid-19-vaccination-eu-eea
5	Bulgaria	2023-02-10	European Centre for Disease Prevention and Control (ECDC)	https://www.ecdc.europa.eu/en/publications-data/data-covid-19-vaccination-eu-eea
6	Canada	2022-12-04	Public Health Agency of Canada	https://health-infobase.canada.ca/covid-19/vaccine-administration/
7	Chile	2022-08-30	Ministry of Health, via Ministry of Science GitHub repository	https://github.com/MinCiencia/Datos-COVID19

Structure of the Dataset

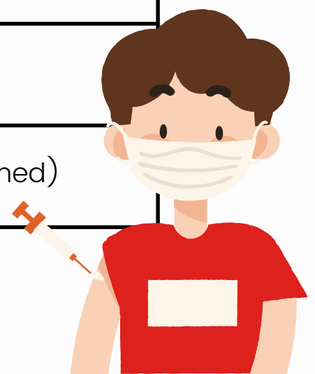


- Each row represents the data at that country at that specific observation date

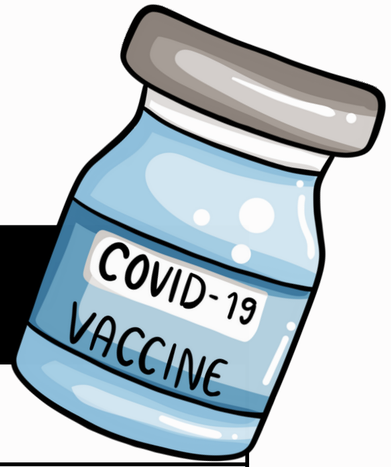
Confirmed Cases and Deaths (243,726 rows/observations) https://raw.githubusercontent.com/owid/covid-19-data/master/public/data/jhu/full_data.csv		
date	object	date of the observation
location	object	name of the country
new_cases	float64	New confirmed cases of COVID-19.
new_deaths	float64	New deaths attributed to COVID-19
total_cases	float64	Total confirmed cases of COVID-19.
total_deaths	float64	Total deaths attributed to COVID-19
weekly_cases	float64	New confirmed cases of COVID-19 (7-day smoothed)
weekly_deaths	float64	New deaths attributed to COVID-19 (7-day smoothed)
biweekly_cases	float64	New confirmed cases of COVID-19 (14-day smoothed)
biweekly_deaths	float64	New deaths attributed to COVID-19 (14-day smoothed)

Structure of the Dataset

Vaccinations (155,824 rows/observations) https://github.com/owid/covid-19-data/blob/master/public/data/vaccinations/vaccinations.csv		
location	object	name of the country
iso_code	object	ISO 3166-1 alpha-3 – three-letter country codes
date	object	date of the observation
total_vaccinations	float64	total number of doses administered
people_vaccinated	float64	total number of people who received at least one vaccine dose.
people_fully_vaccinated	float64	total number of people who received all doses prescribed by the initial vaccination protocol.
total_boosters	float64	total number of COVID-19 vaccination booster doses administered
daily_vaccinations	float64	new doses administered per day (7-day smoothed)
daily_people_vaccinated	float64	daily number of people receiving a first COVID-19 vaccine dose (7-day smoothed)



Structure of the Dataset



Vaccinations by Manufacturer (55,989 rows/observations) https://github.com/owid/covid-19-data/blob/master/public/data/vaccinations/vaccinations-by-manufacturer.csv		
location	object	name of the country
date	object	date of the observation
vaccine	object	name of manufacturer and vaccine
total_vaccinations	float64	total number of doses administered

Thank you!