

# IOD MINI PROJECT ONE

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# DATASET

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- Public API for Covid-19 data by Johns Hopkins CSSE:  
<https://github.com/axisbits/covid-api>
- Supplementary dataset to map country's iso to region:  
<https://github.com/lukes/ISO-3166-Countries-with-Regional-Codes/blob/master/all/all.csv>

# Data Preparation

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- Extracted monthly data (last day of the month) from Jan 2020 to Feb 2023
- Only selected fields 'date', 'confirmed', 'deaths', 'iso', 'name' to store in db for later analysis

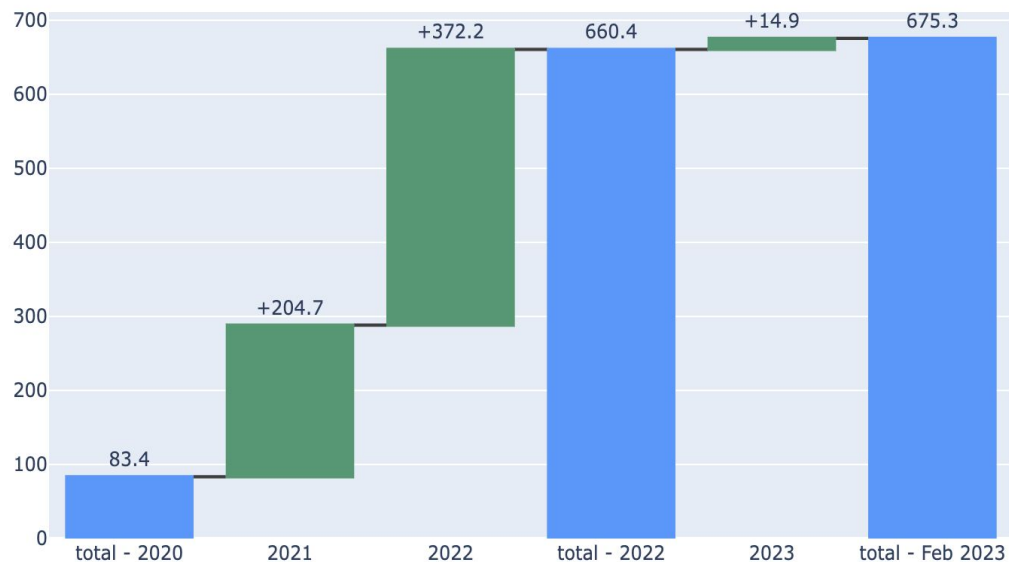
# Data Visualisation and Analysis

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- Only selected countries for analysis
  - Did not include covid cases that took place in cruise ships
- Map countries to respective regions
  - Regions: Europe, Americas, Oceania, Asia, Africa

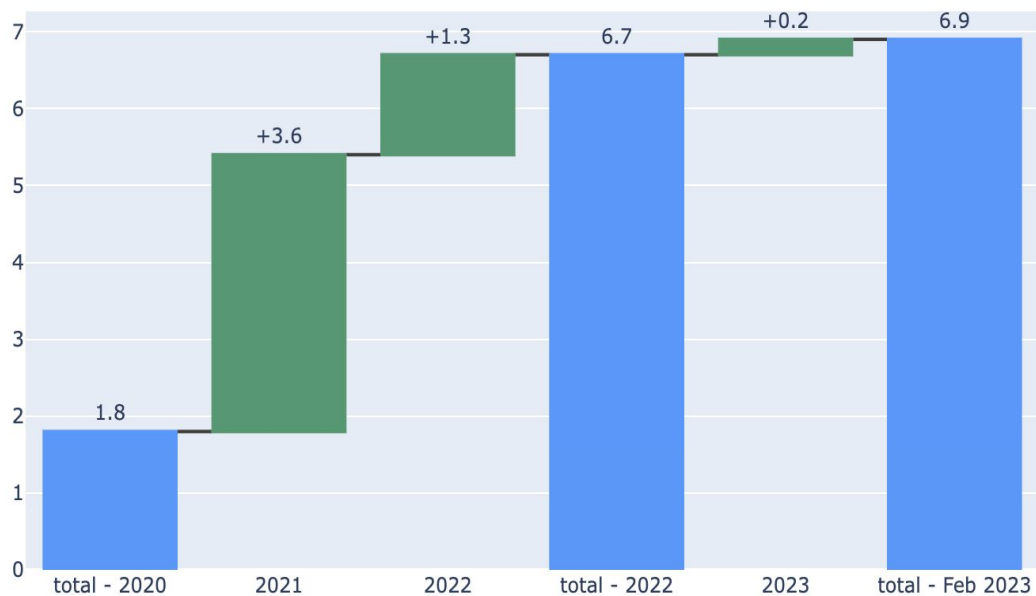
# Visualisation and Analysis of Covid Cases in Countries from Jan 2020 to Feb 2023

## Covid confirmed cases in millions



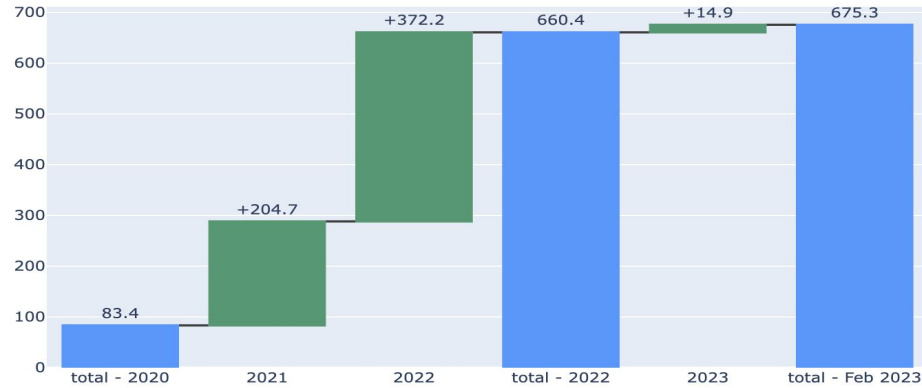
- Cumulative covid cases grew by 7x from 2020 to Feb 2023.
- Cumulative cases more than doubled in 2021, and again doubled in 2022.¶

## Covid death cases in millions



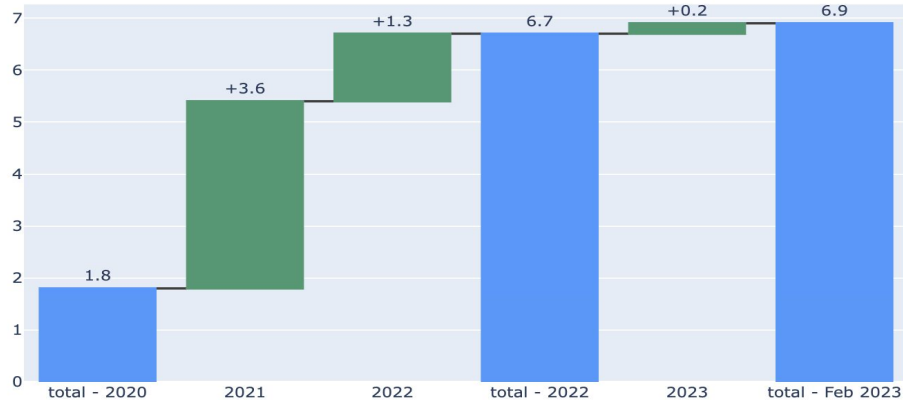
- No. of cumulative death cases increased by roughly 3x from Jan 2020 to Feb 2023.

Covid confirmed cases in millions



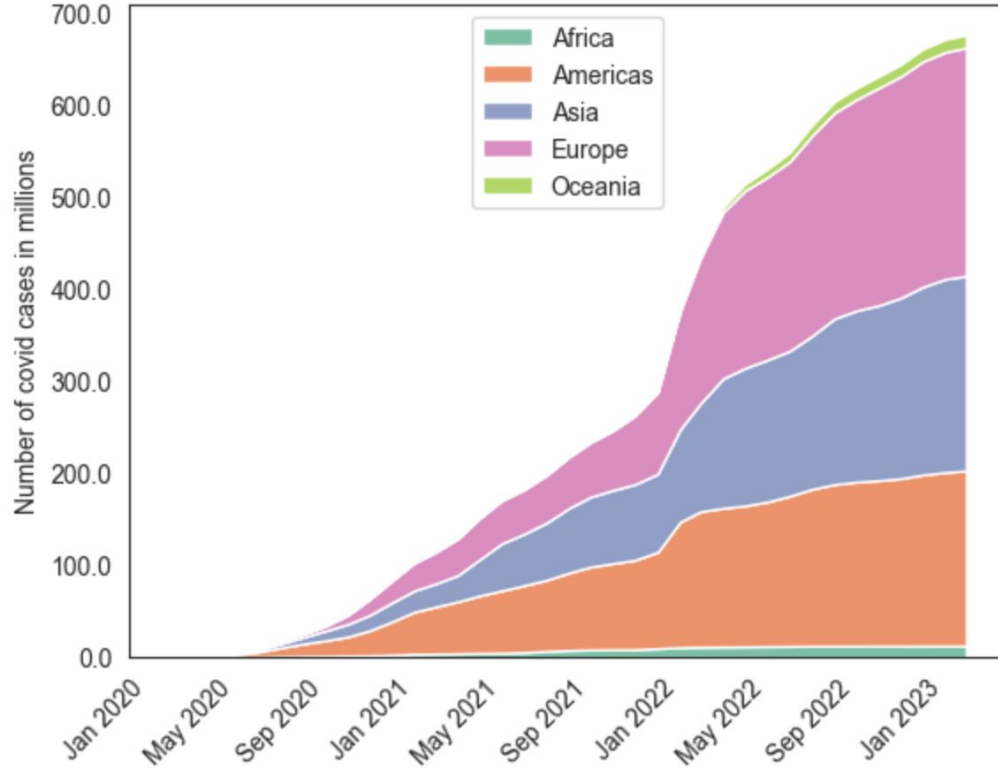
- No. of new covid death cases was lower in 2022 (+1.3M) vs 2021 (+3.6M) even though new confirmed cases in 2022 (+372.2M) was higher than 2021 (+204.7M).
- This translates to a lower fatality rate for FY 2022 (0.003) vs FY 2021 (0.018).

Covid death cases in millions



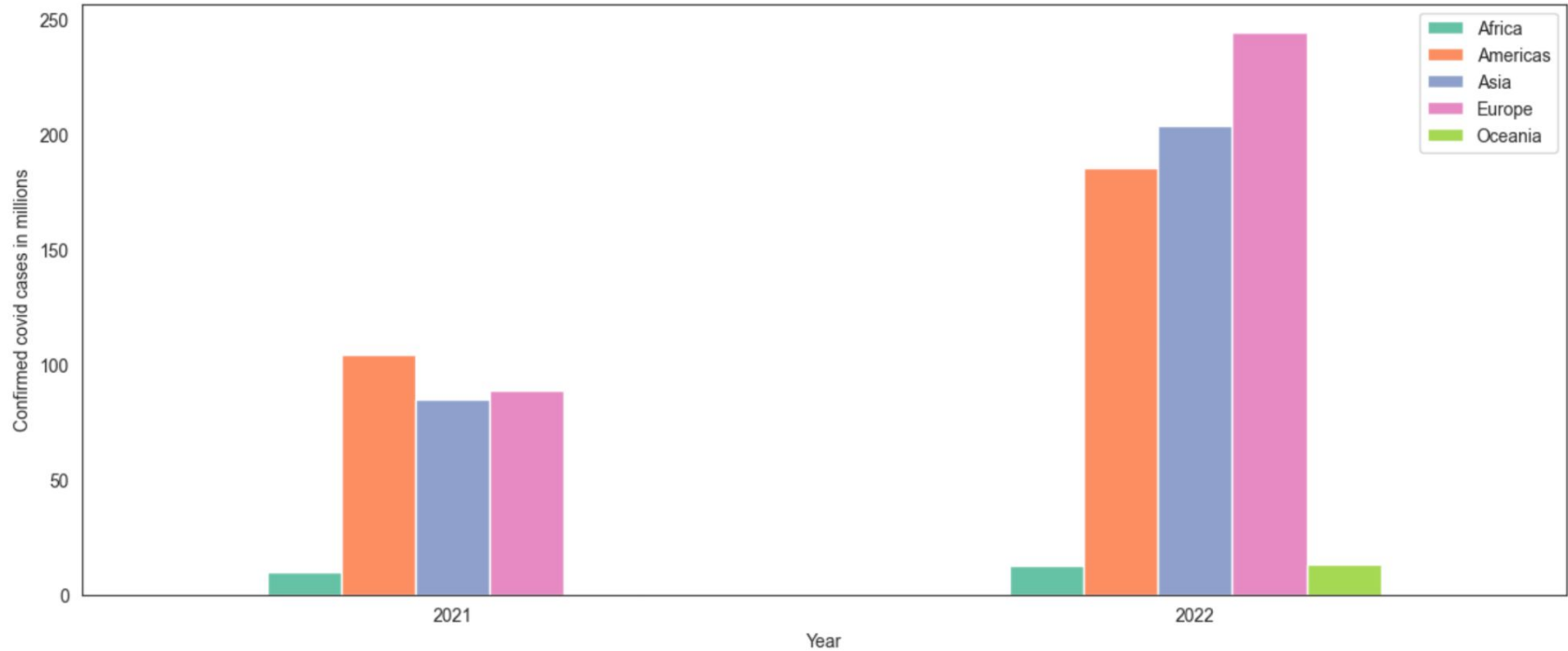


Culmulative covid confirmed cases from Jan 2020 to Feb 2023

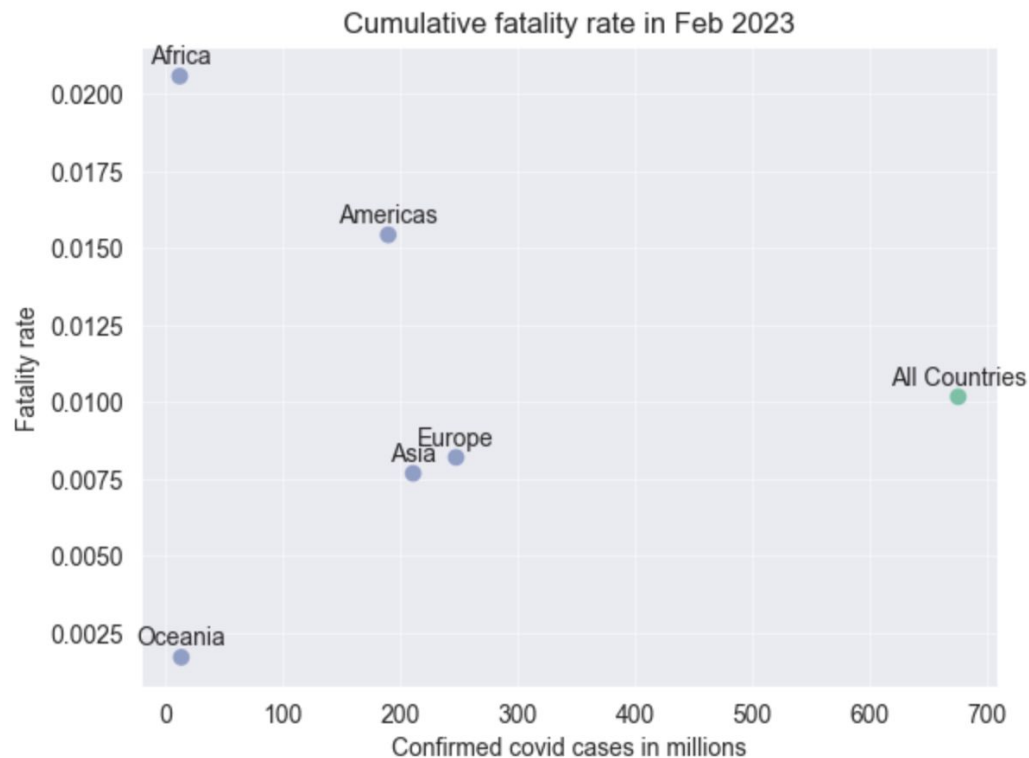


- Americas had the most covid cases before 2022.
- In 2022, the proportion of covid cases among the regions shifted as Asia and Europe both saw sharp increase in cases while Americas saw a smaller increase in cases.¶

Cumulative covid confirmed cases

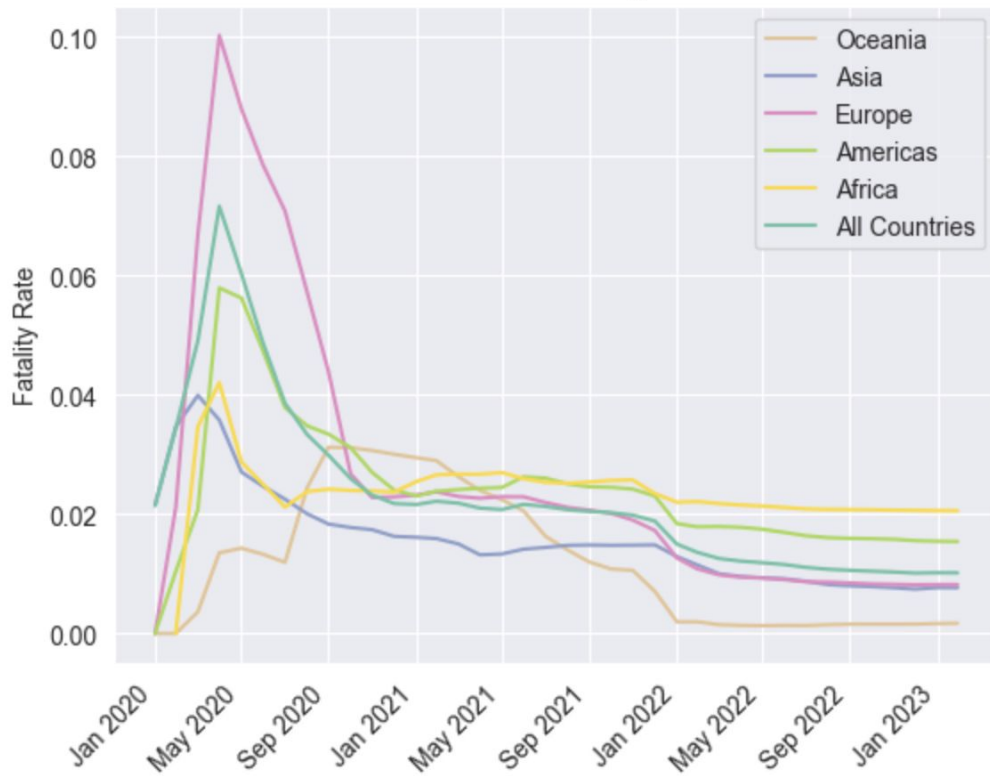


- Europe and Asia surpassed Americas in number of confirmed covid cases in 2022, with Europe in the first place, followed by Asia.¶



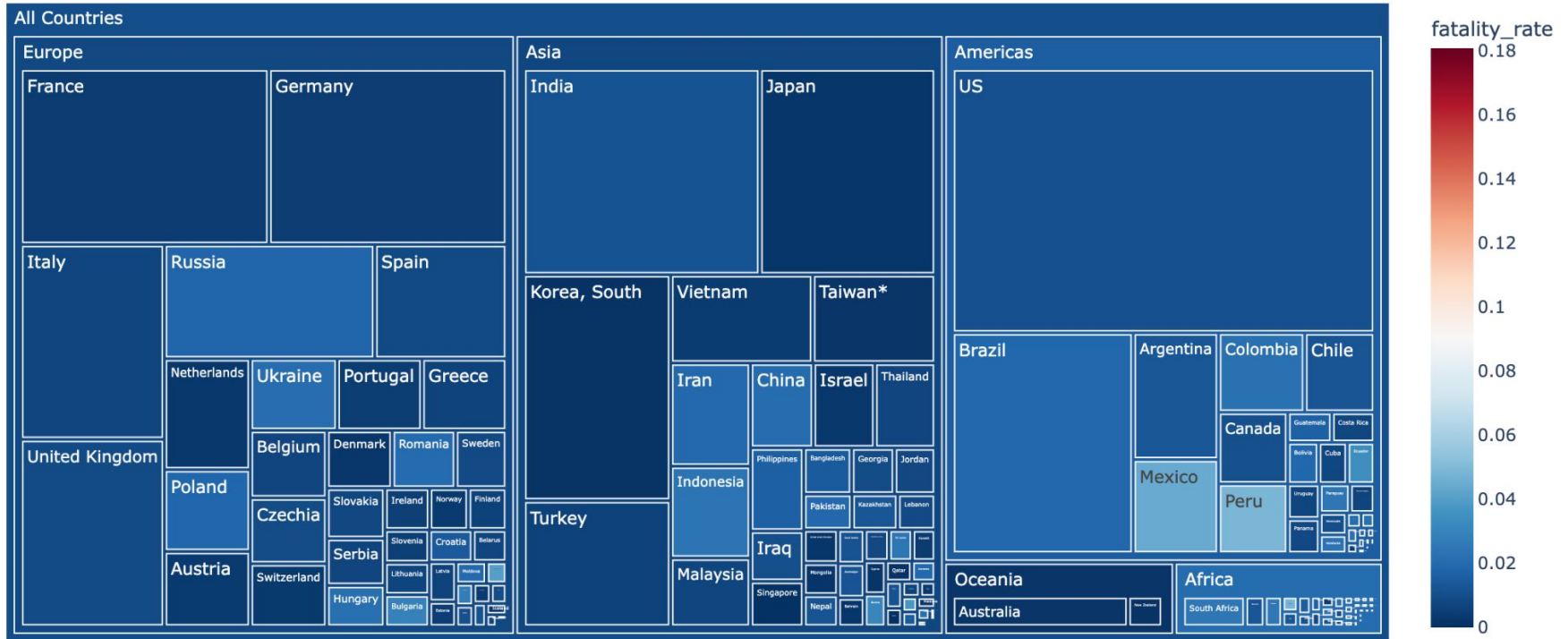
- The cumulative fatality rate in Feb 2023 for all countries combined is around 0.01.
- Africa's fatality rate is twice of that, making it the region with the highest fatality rate.
- Oceania, on the other hand, has the lowest fatality rate, at less than 0.0025.

Cumulative fatality rate



- Most regions saw a peak in fatality rate before May 2020 except Oceania which saw its fatality rate peaked at around Sep 2020.
- There is a noticeable drop in fatality rate around Jan 2022, and the fatality rate remained steady to lower since then.¶

## Cumulative covid confirmed cases and fatality rate in Feb 2023



- Countries with high number of confirmed covid cases have cumulative fatality rate of less than 0.1 in Feb 2023

**THE END**