Analyzing Mpox: Understanding Epidemiology, Public Health Impact, and Mitigation Strategies

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Problem Statement:

Monkeypox, which was previously rare and mostly confined to specific regions, has recently seen an increase in cases and spread to new areas. This emergence presents a challenge for public health systems that are not fully prepared for a disease that was once considered uncommon. I will evaluate confirmed cases from 2022 and compare them to confirmed cases from 2024 because there was a mild epidemic in that year.

Possible Impact of Your Analysis:

This analysis of monkeypox can significantly improve public health preparedness, policy-making, and healthcare responses. By detailing trends and mitigation strategies, it helps public health authorities manage outbreaks more effectively and guides policymakers in creating targeted interventions. The findings also boost public awareness and education, reduce stigma, and encourage international collaboration. Additionally, the analysis identifies gaps and opportunities for innovation, driving further research and investment in effective treatments and prevention.

Dataset(s):

https://worldhealthorg.shinyapps.io/mpx_global/#1_Overview

2022-24 Mpox Outbreak: Global Trends. Geneva: World Health Organization, 2024

This is a public US government dataset, and can be used by anyone.

It contains information about location, test result, iso3, and test date entry.

Project Scoping Document
Name

Christian Ramirez-Flores

Business Problem:

Monkeypox (Mpox) outbreak that emerged prominently in 2022 and continued into 2024. This outbreak marks a significant shift in the epidemiology of the disease, with notable increases in cases across non-endemic countries.

Business Impact:

Research, supported by relevant data and graphs, can enhance public health awareness about Mpox. By examining which countries or regions are most affected, we can identify potential solutions by comparing them with areas that are less impacted. This comparison can help develop effective strategies to mitigate outbreaks in the more severely affected regions.

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Method(s):

Variables and comparisons
Comparing results from 2022 to 2024 data. If there is data for 2023, I'll try to source and cite it. Explain that "Mpox" evolved into a "clade 1b" strain, and that is what is currently spreading around in 2024.
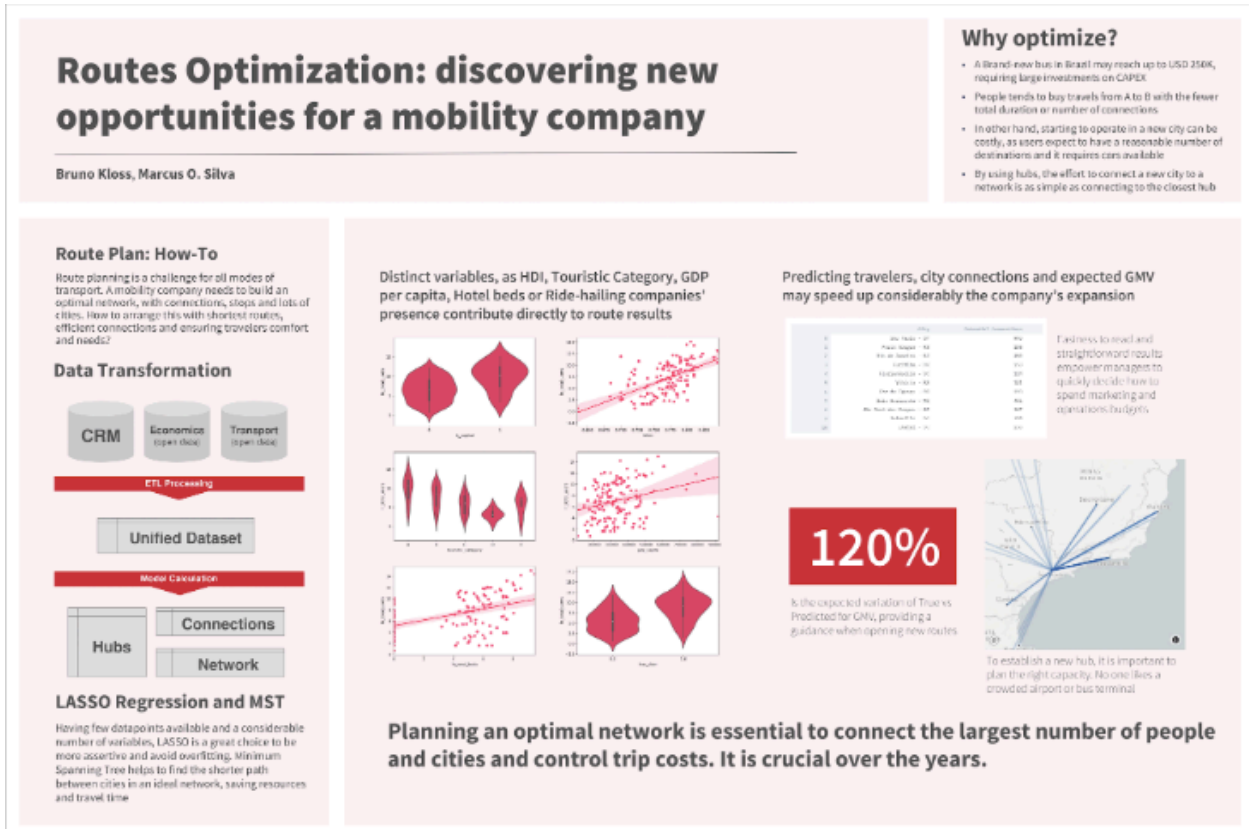Compare mortality rates between the two strains, clade I and clade II.
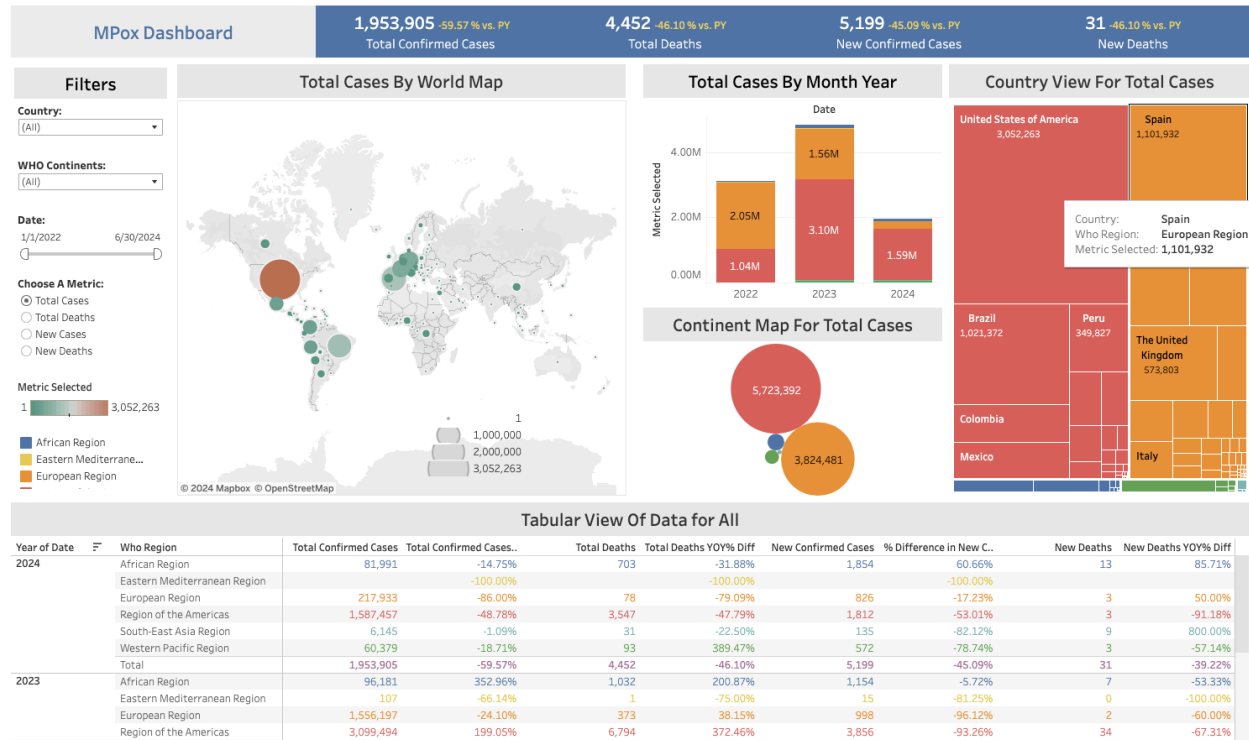
Create a Datafolio
Create a Dashboard (Tableau)
Checking null values and filling them/removing them according to information provided.
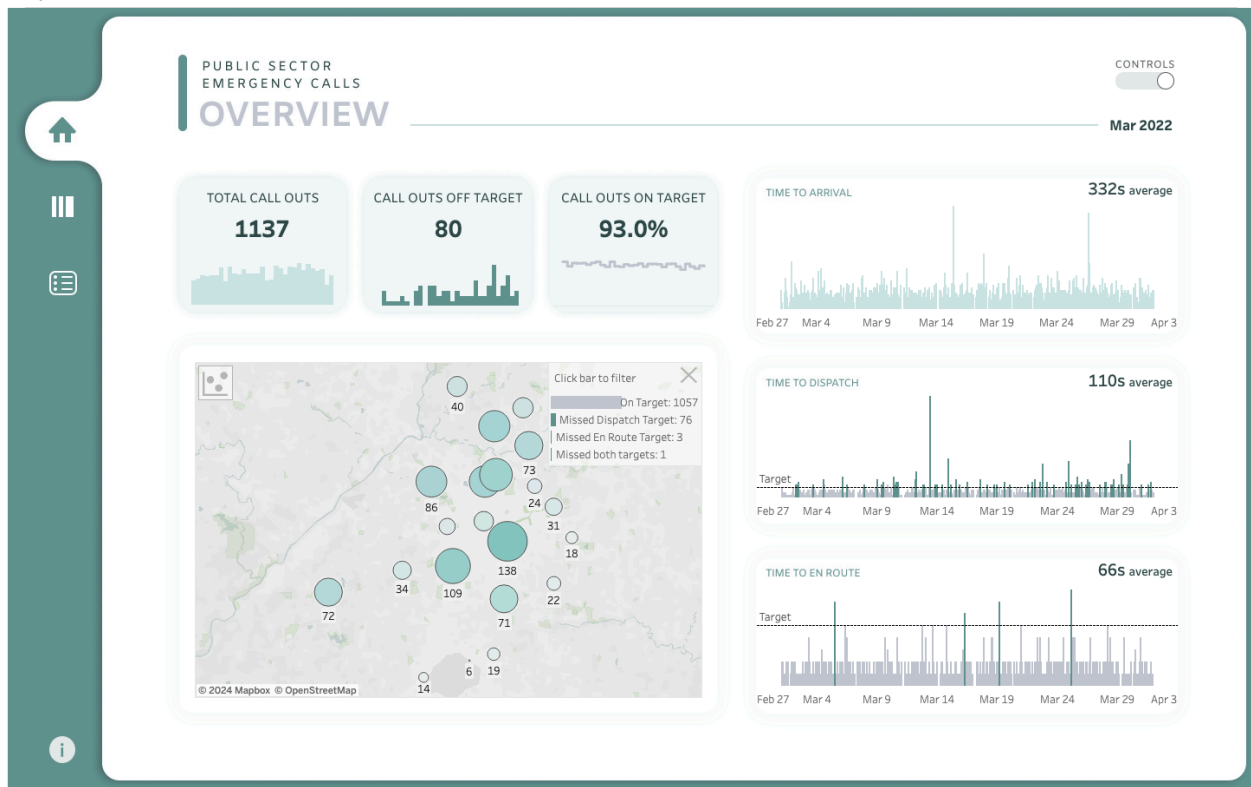
Datafolio example for inspiration

Dashboard:

[Maybe something like this?](#) Really not sure about the layout, but this is something for inspiration.

["Menu layout"](#)

I've seen a lot of these side navigations being used, so I want to try and use that layout. Maybe have a section explaining everything between the two strains and mortality rate??

Milestones:

What do you expect to do to achieve success in your project?

Comparison between the 2022 outbreak and the 2024 outbreak. Explain the strains.
Present the importance of being sanitary and

Timeline:

Week	Tasks
Week 1	Figure out comparing variables and create visuals. *Try to create a rough draft dashboard.*
	Seeing if there's anything missing from the dataset and researching for possible

	values.
Week 2	Find information on both strains to explain very well. Revise dashboard to fit information if need be. Create description for both strains and result/description should be final.
Week 3	Check progress and where I'm at to see what needs to be worked on. Double check everything Dashboard: - Everything should be color coordinated - Organized and spaced out evenly - Information should all be correct with correct aliases