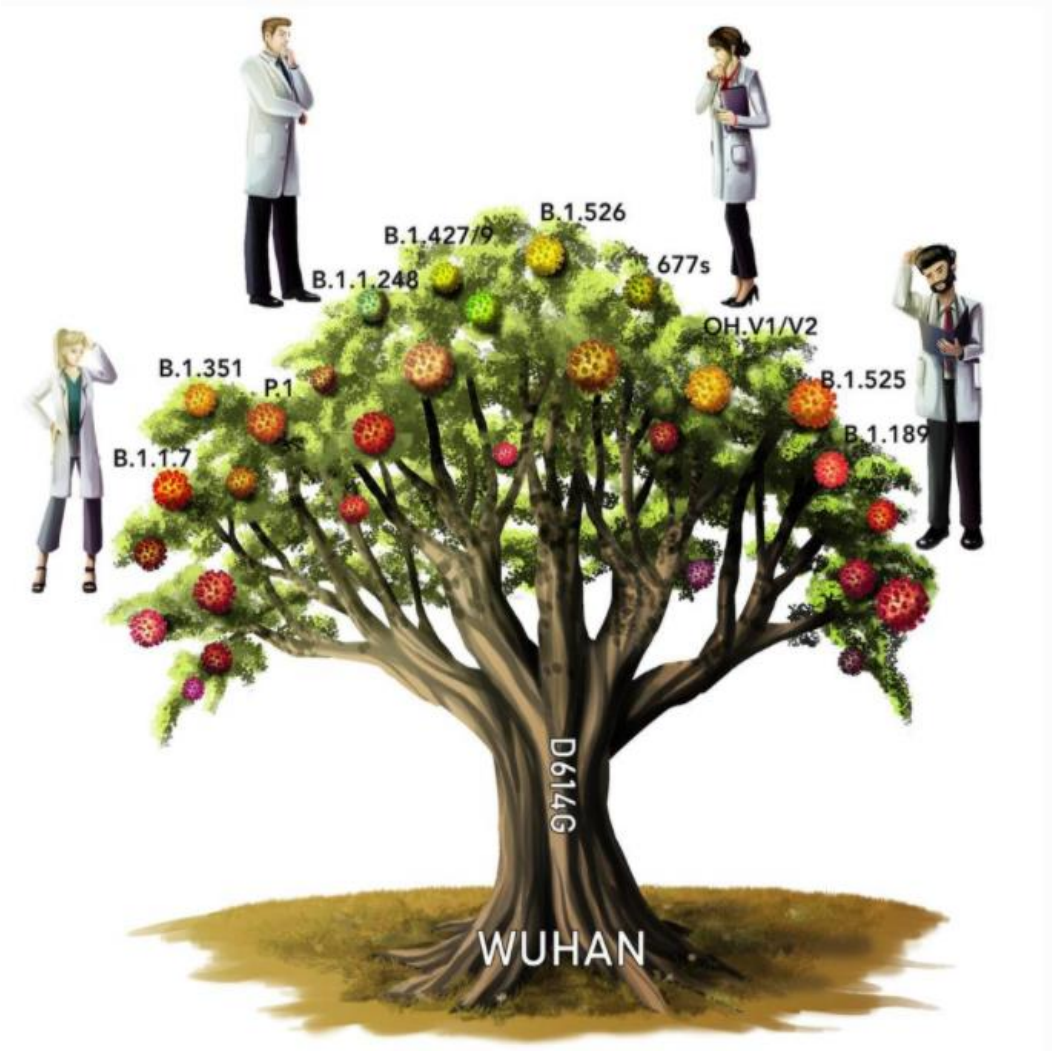
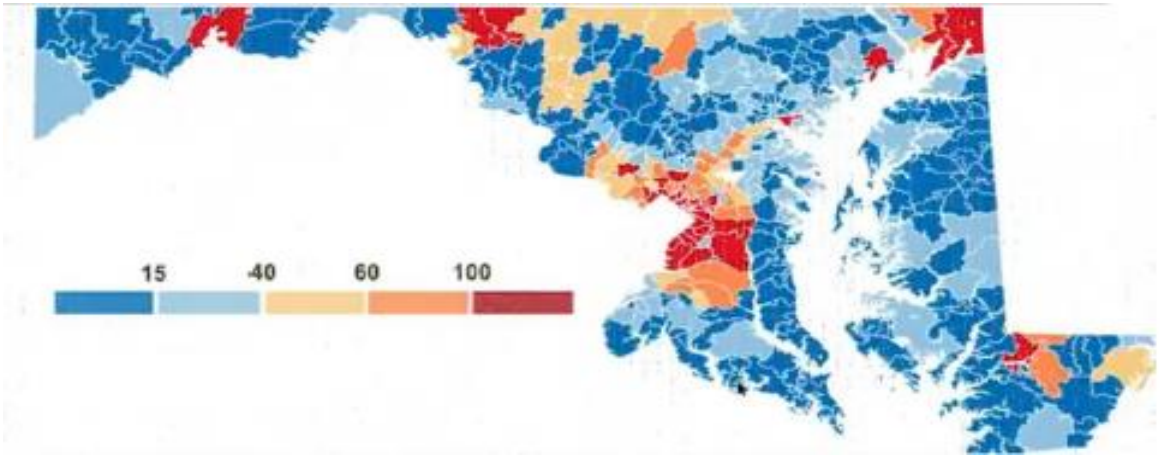
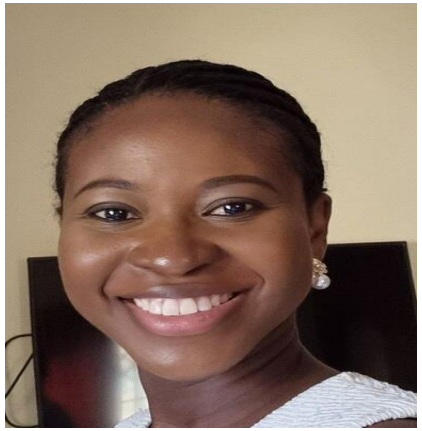
Resilience and Recovery: The Unfolding Story of COVID-19 in Maryland



Our Team

COVID-19 Data
Visualization for Maryland



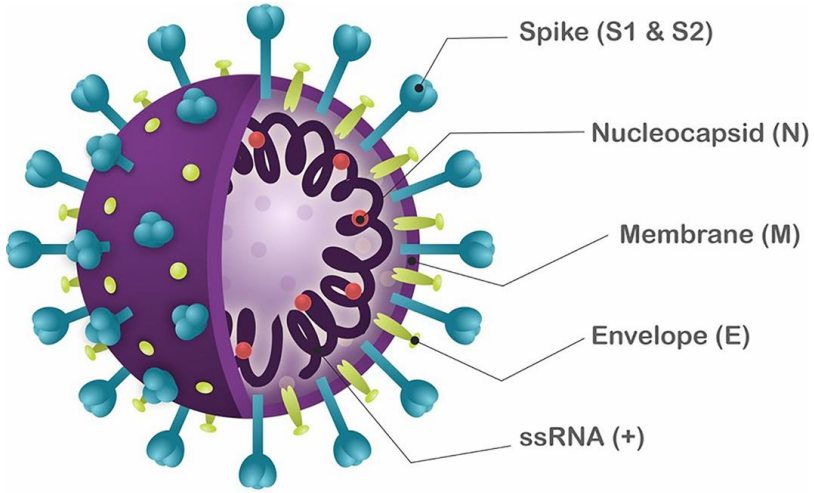


Andrea Nimako

Lynda Sempele

Kevin Ngala

Data Visualization Track – Housing Our Data in PostgreSQL



SARS-CoV-2

Identify Healthcare Issue

- Need for clear, actionable COVID-19 data visualization.

Brainstorming Process:

- Visual representation, Mind mapping, Creative thinking
- Key discussion points, titles consideration, Decision-making criteria.

Research and Gather Insights:

- Collect data on COVID-19 trends
- Analyze existing visualization tools and methods

Develop and Refine Ideas

- Find trends and identify impact of COVID-19 to plan and improve health policies and infrastructure during and post-pandemic.

Final Title:

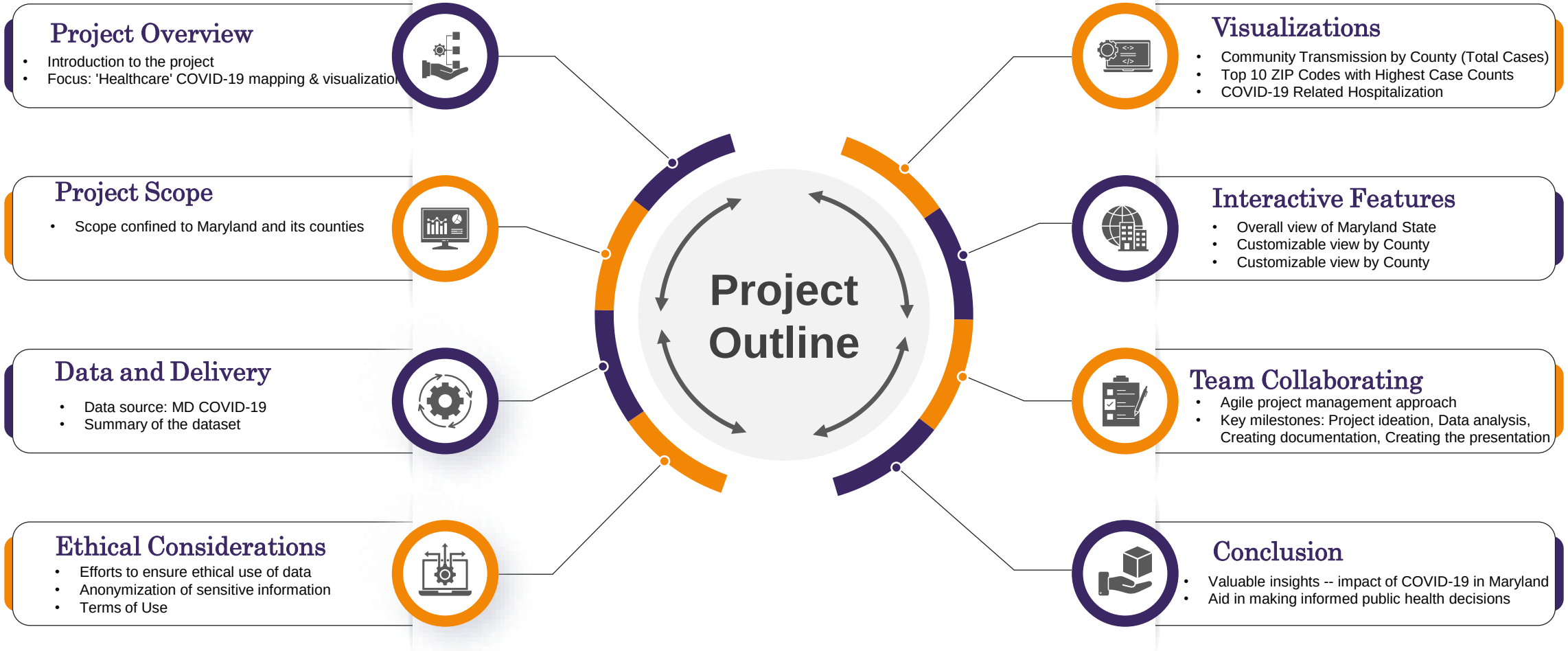
"Resilience and Recovery: The Unfolding Story of COVID-19 in Maryland."

GITHUB: covid-19-visualization

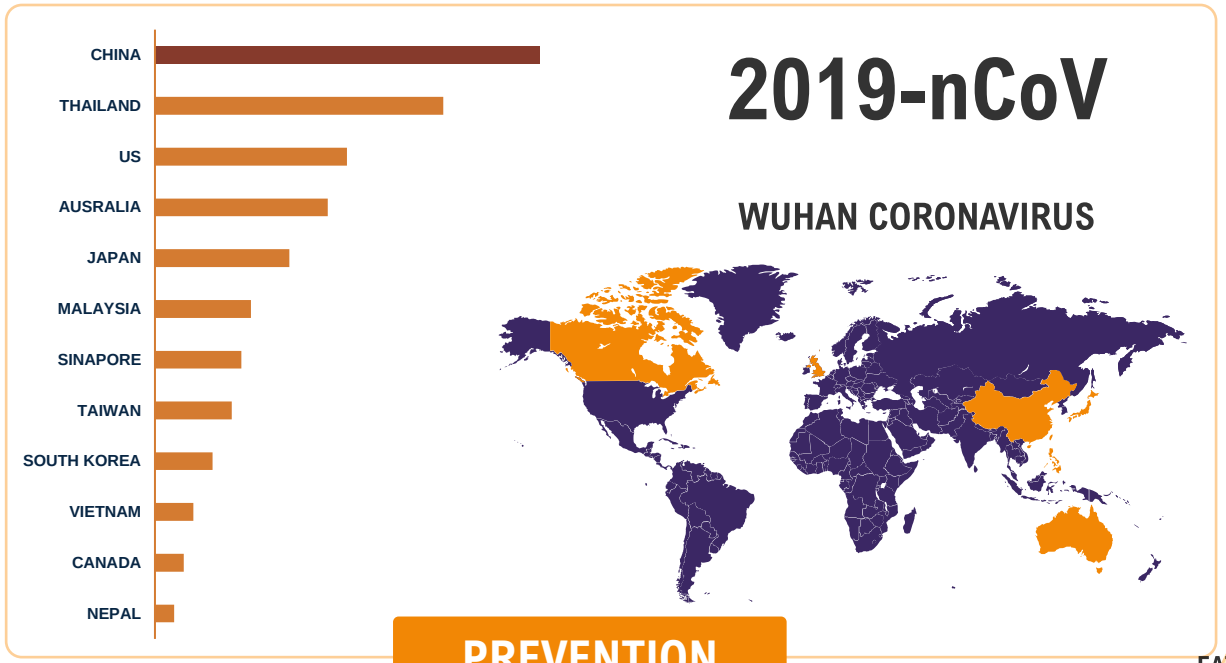
COVID-19 DATA VISUALIZATION FOR MARYLAND

George Washington University Data Analysis Bootcamp

Project 3 Overview



2019 Wuhan Coronavirus Showing Global Stats and Symptoms



TRANSMISSION

PREVENTION


Wear A Mask

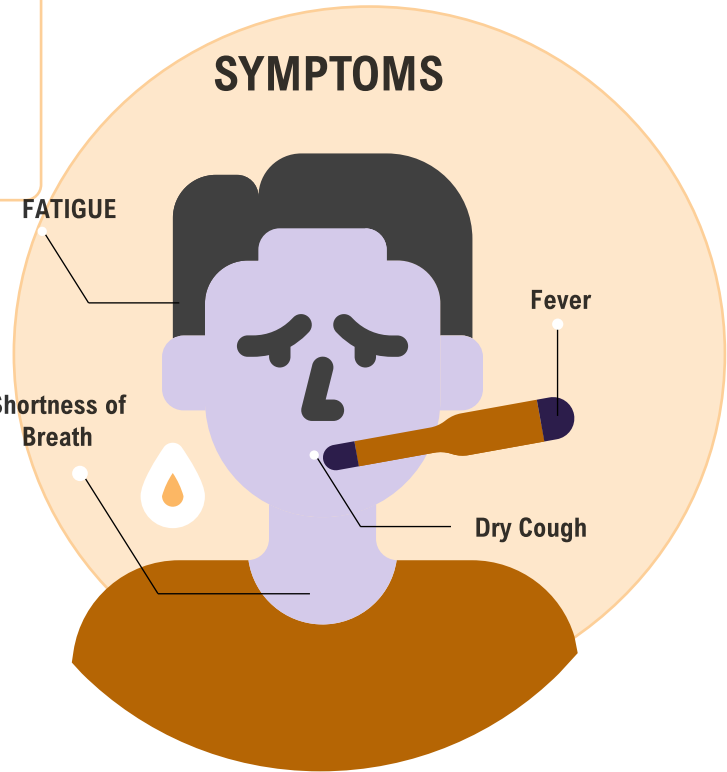

Cover Mouth And Nose When Coughing


Wash Your Hand Frequently

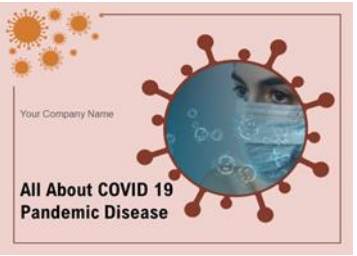

Seek Medical Care If Symptoms Appear


Avoid Market And Crowed Place

SYMPTOMS



Self Introduction & Presentation

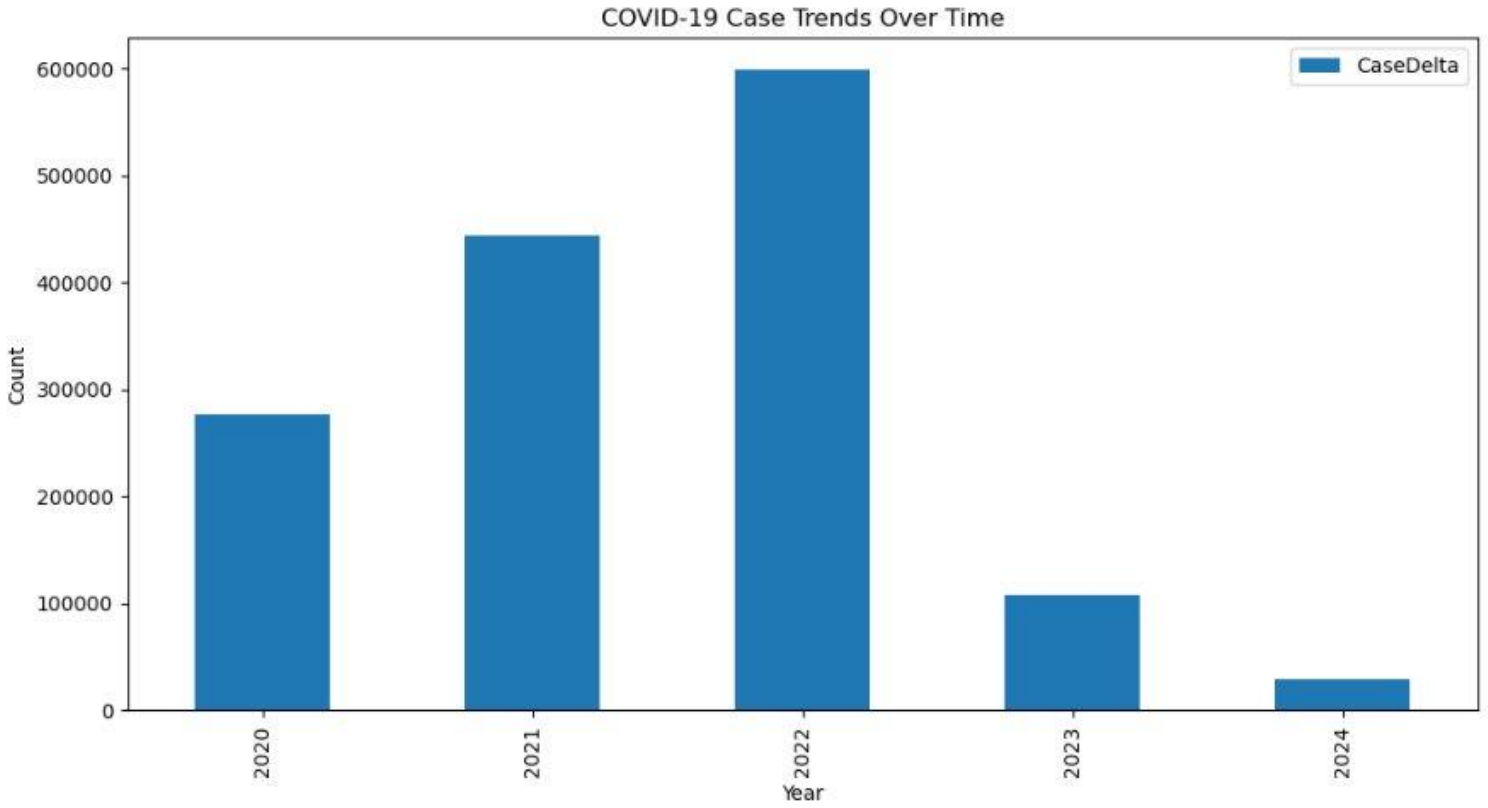


Lynda Sempele

- Understanding MD COVID-19 Trends by Age
- Maryland COVID-19 Trends by Age
- Maryland COVID-19 Testing trends
- MD COVID-19 Deaths by Age
- COVID-19 Testing Trend Over Time

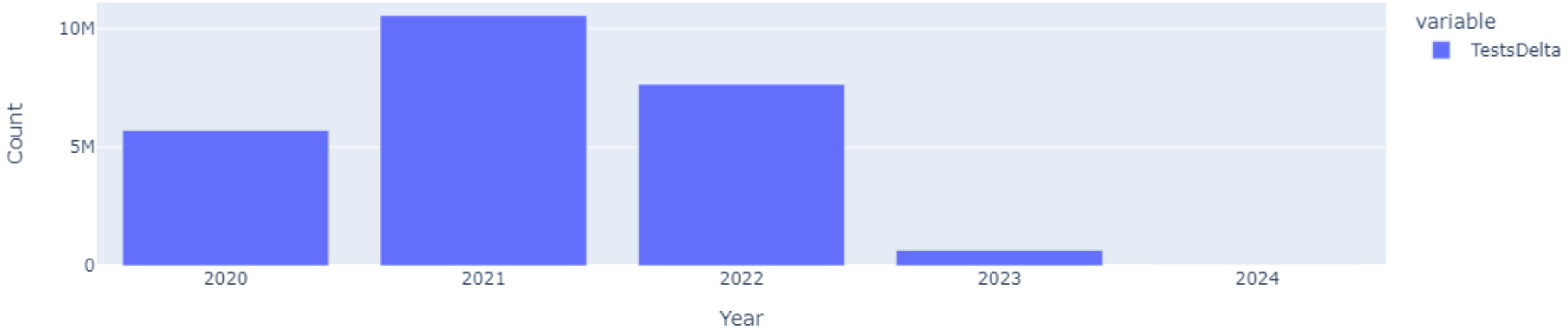
Understanding MD COVID-19 Trends by Count

COVID-19 Case Trends Over Time

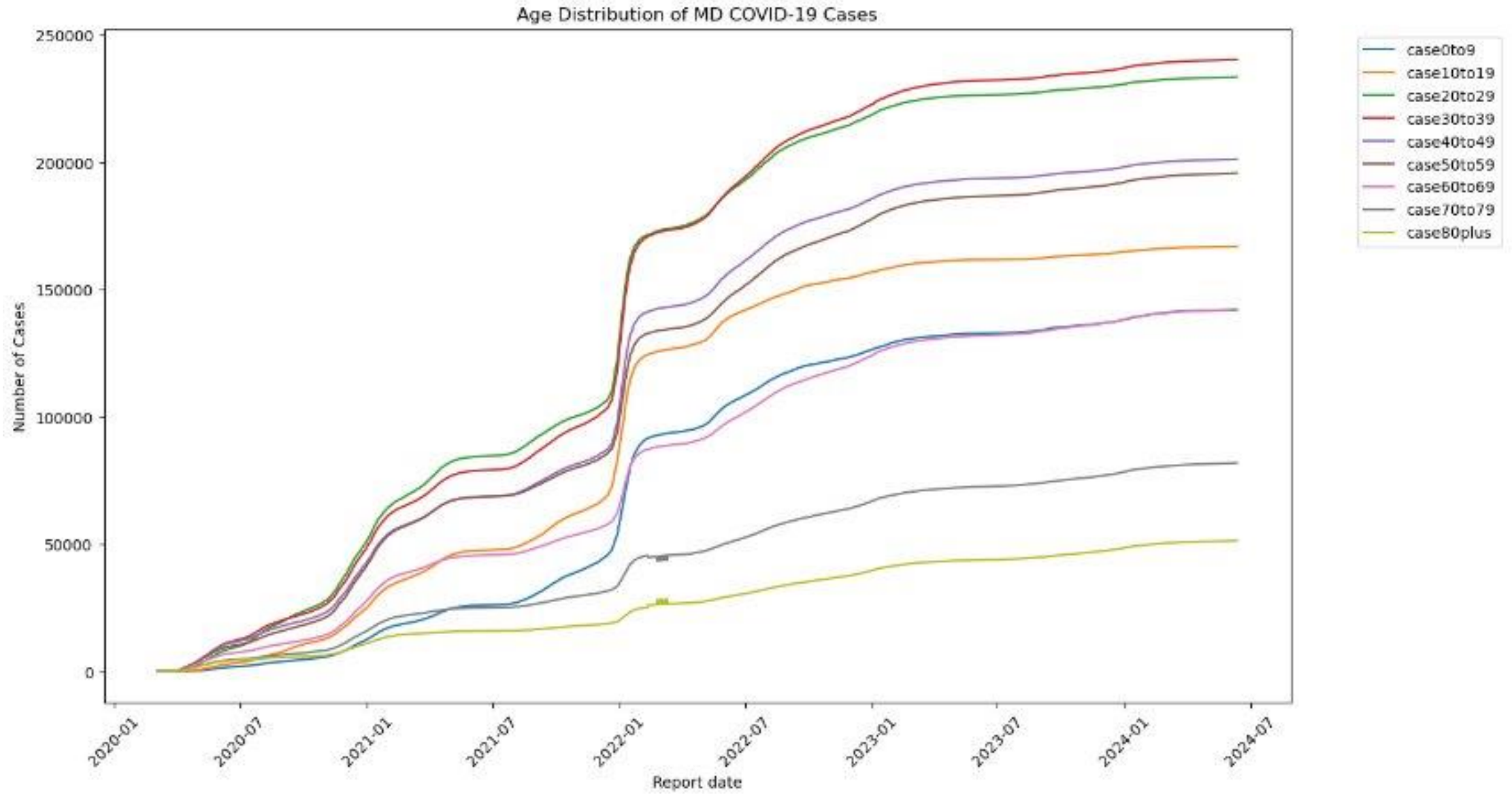


COVID-19 Testing Trend Over Time

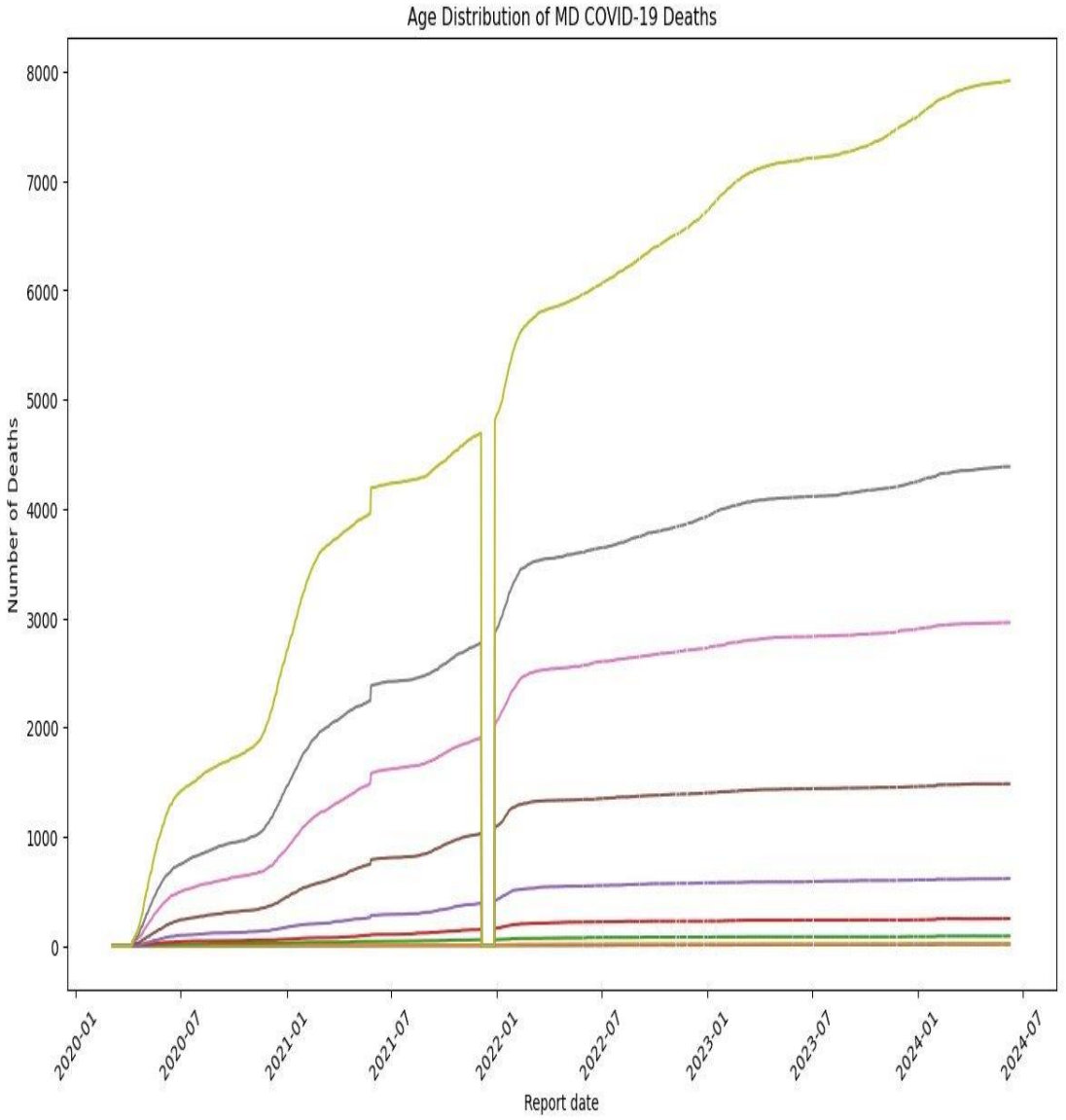
From 2020 through 2024

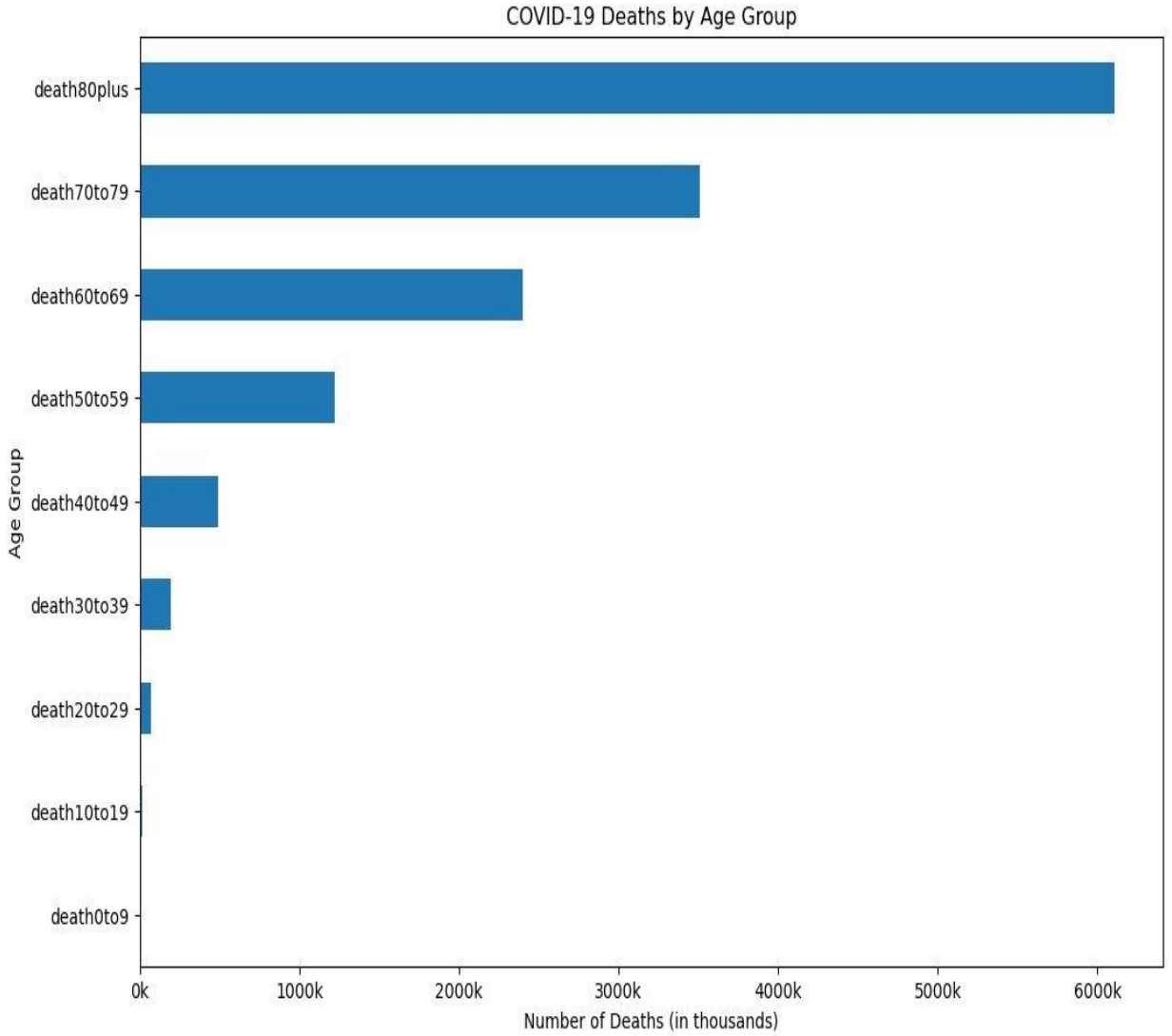


Distribution of COVID-19 Deaths by age



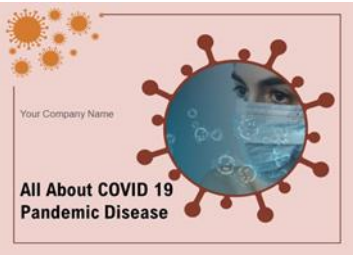
Distribution of COVID-19 Deaths by age






Maryland's COVID-19 story
continues- Gender and Race

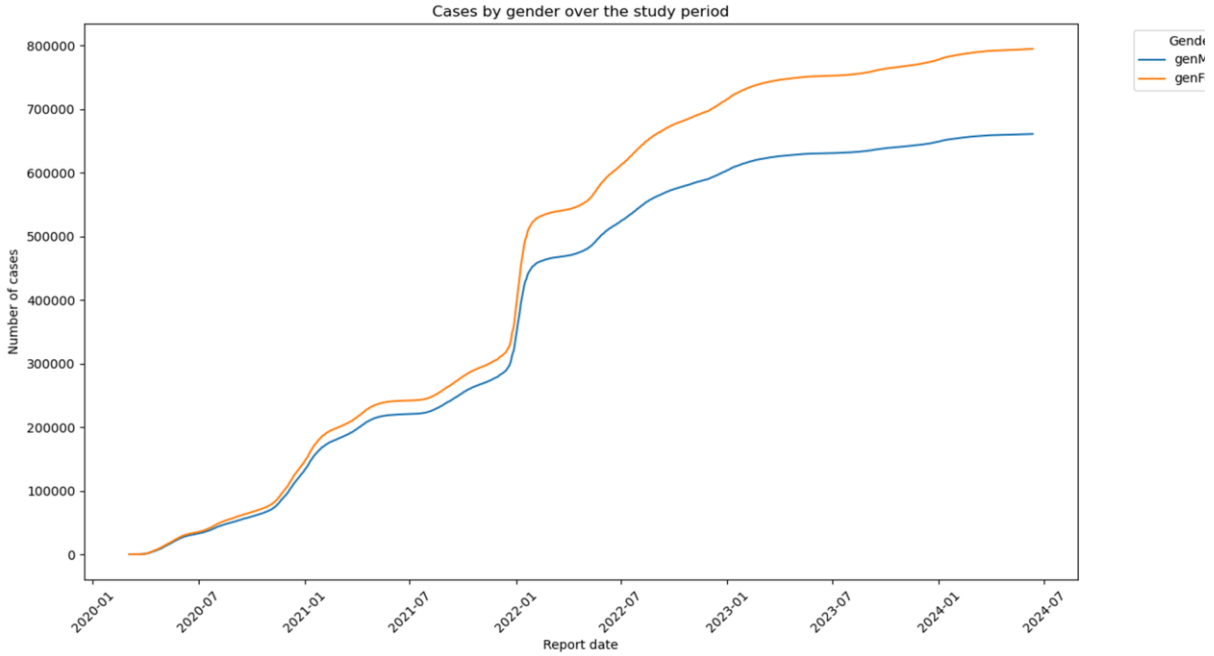
Self Introduction & Presentation



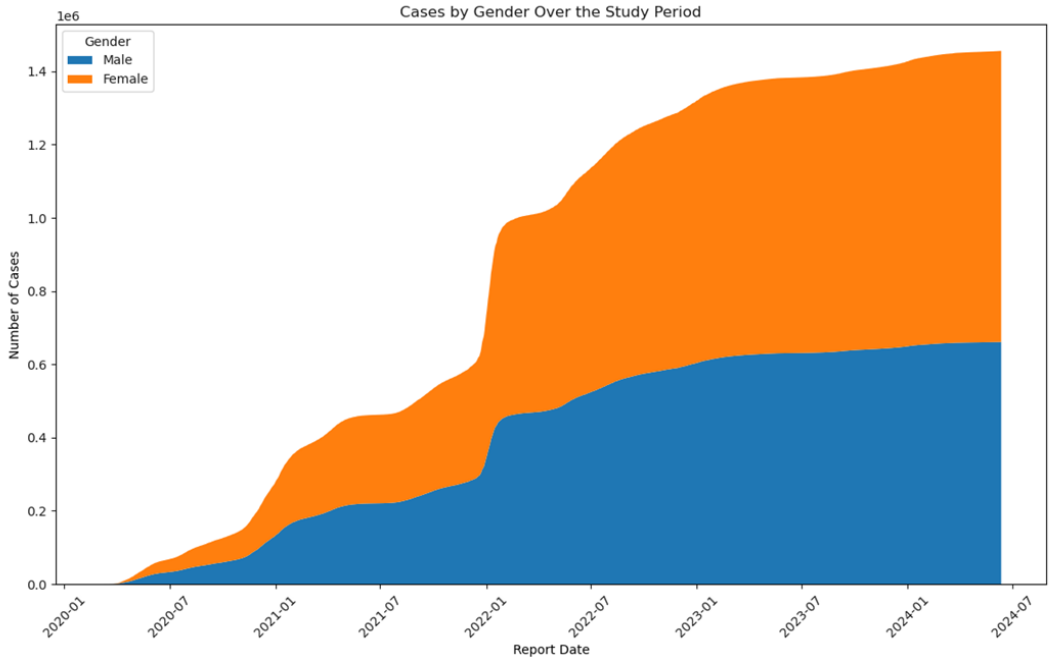
Andrea Nimako

- Maryland COVID-19 case distribution by gender
- Maryland COVID-19 deaths distribution by gender
- Maryland COVID-19 case distribution by Race
- Maryland COVID-19 death distribution by Race
- Diving deeper into Maryland's COVID story

Maryland Covid-19 cases by gender



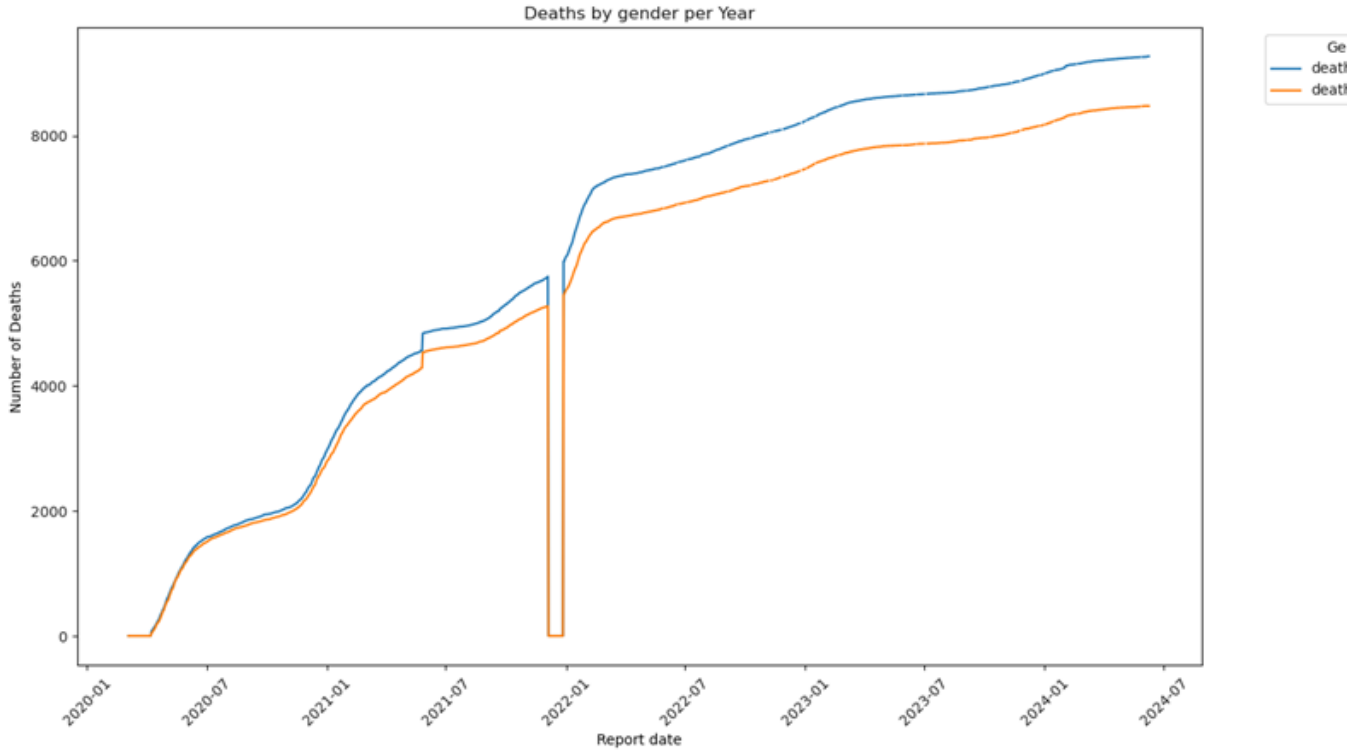
- Similar numbers recorded initially
- Cumulative counts show there have been more cases amongst females than males



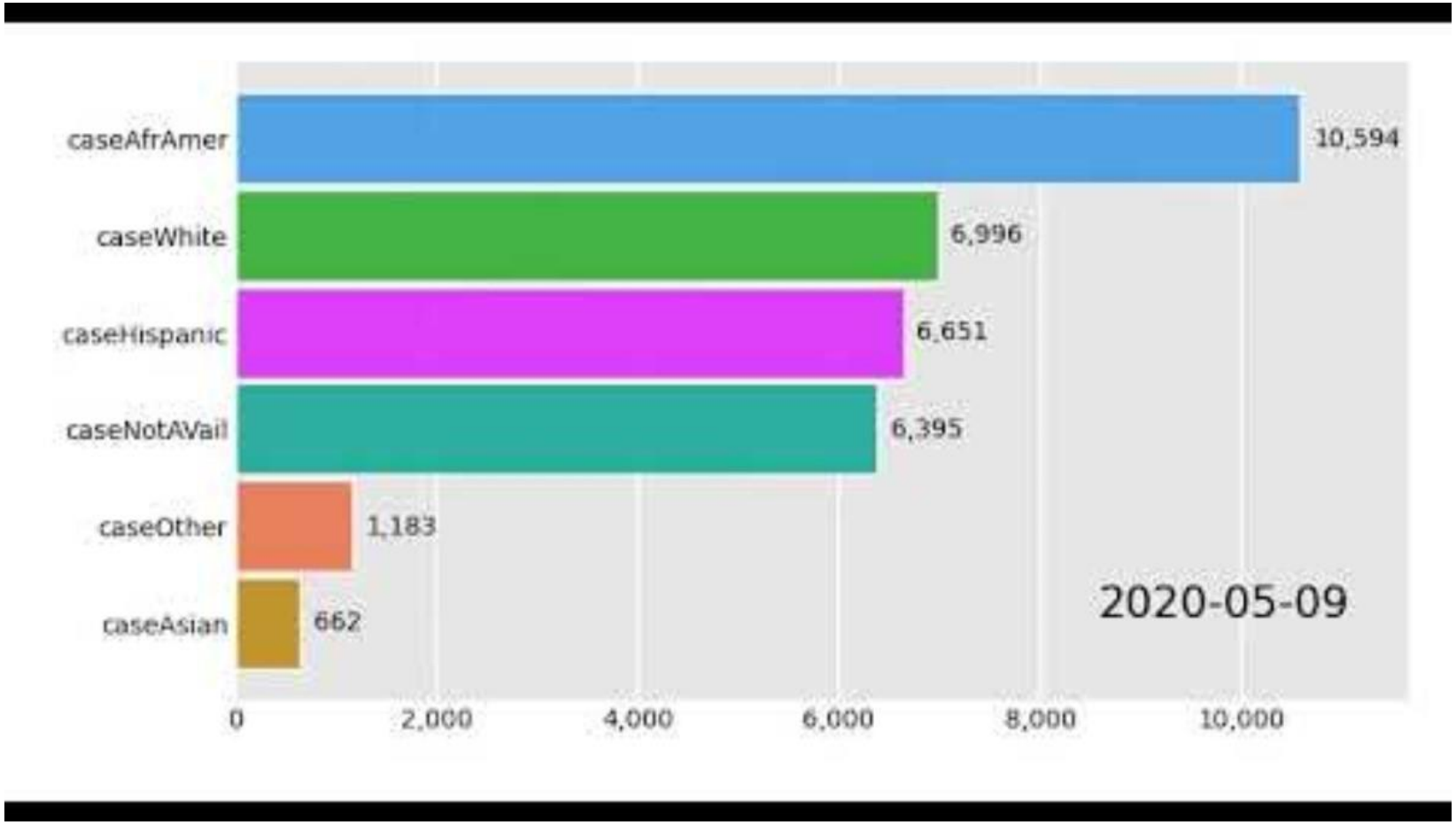
Maryland Covid-19 deaths by gender

- Overall, slightly more deaths were recorded for men than in women
- Not surprising!- according to the Population Reference Bureau

(https://www.prb.org/resources/the-gender-gap-in-u-s-mortality/)

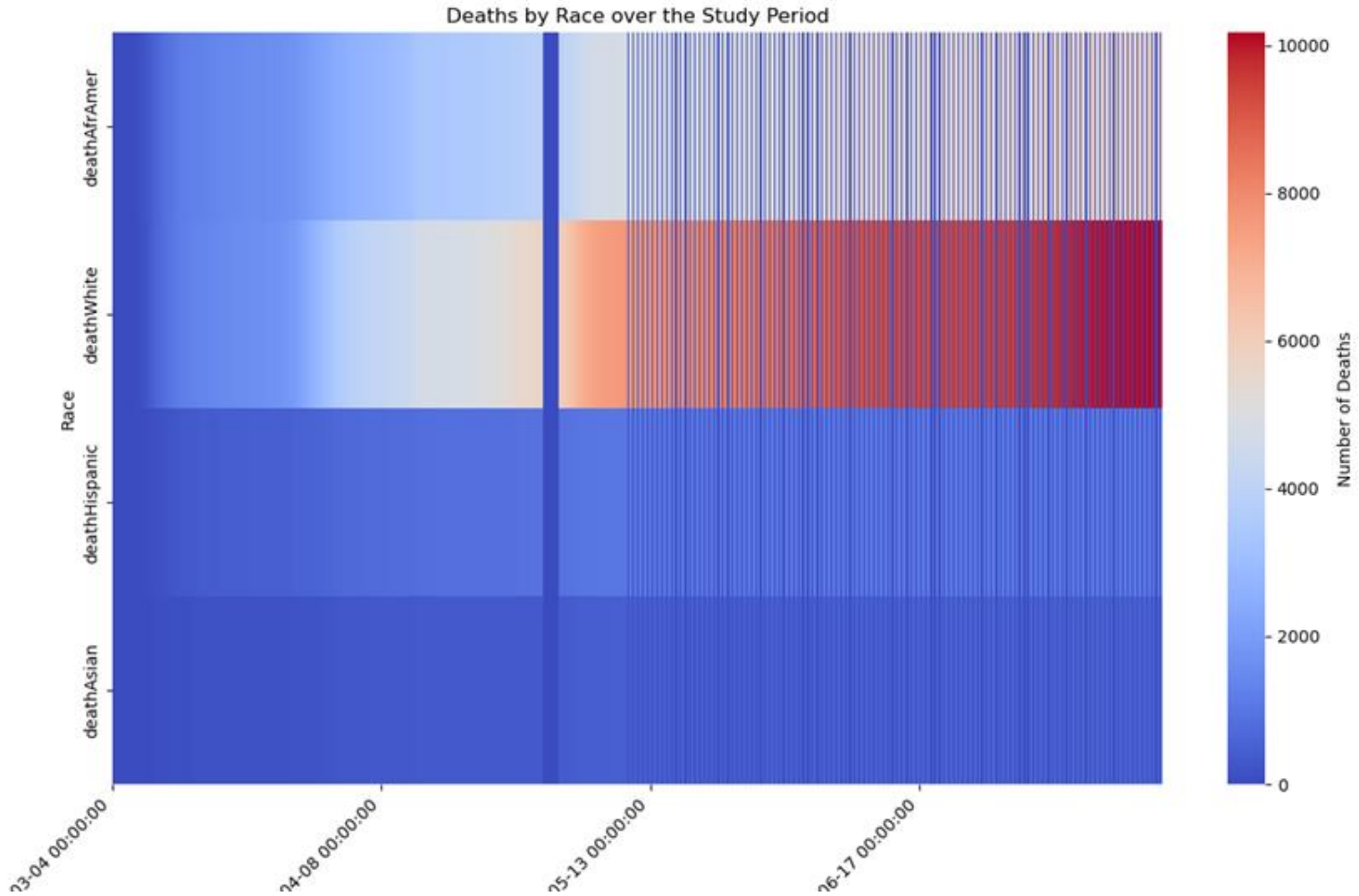


Maryland Covid-19 Cases by Race



Maryland Covid-19 deaths by Race

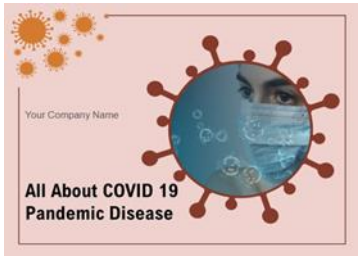
- Highest deaths recorded amongst whites, closely followed by African- Americans
- Asians recorded the lowest number of deaths



Still want more details?.....

- Data can be derived per **day** *by county* and *by race*
- link-Deeper dive into Maryland's COVID trends

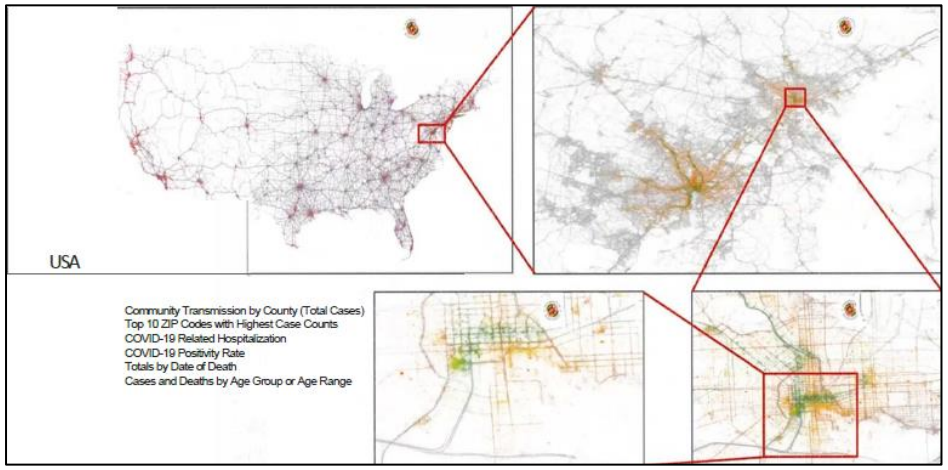
Self Introduction & Presentation

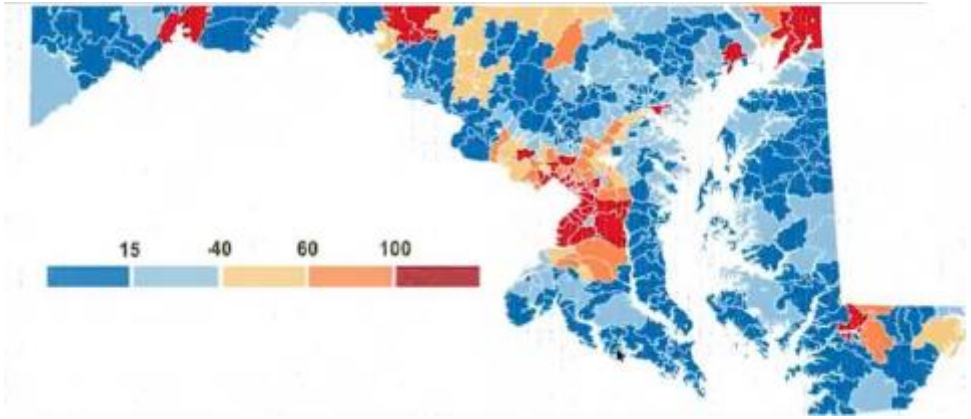


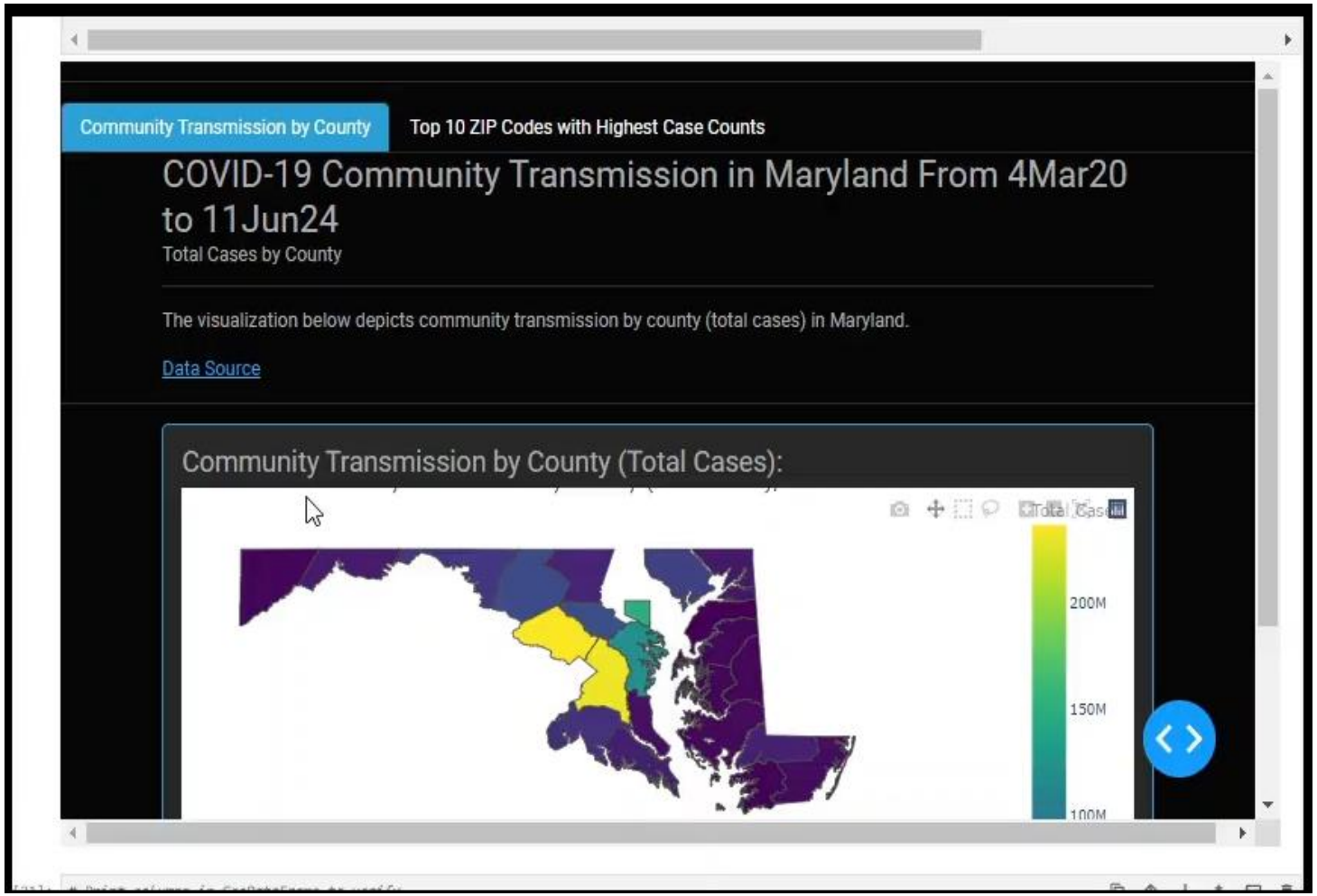
Kevin Ngala

- Community Transmission by County (Total Cases)
- Top 10 ZIP Codes with Highest Case Counts
- COVID-19 Related Hospitalization
- Totals by Date of Death
- COVID-19 Positivity Rate

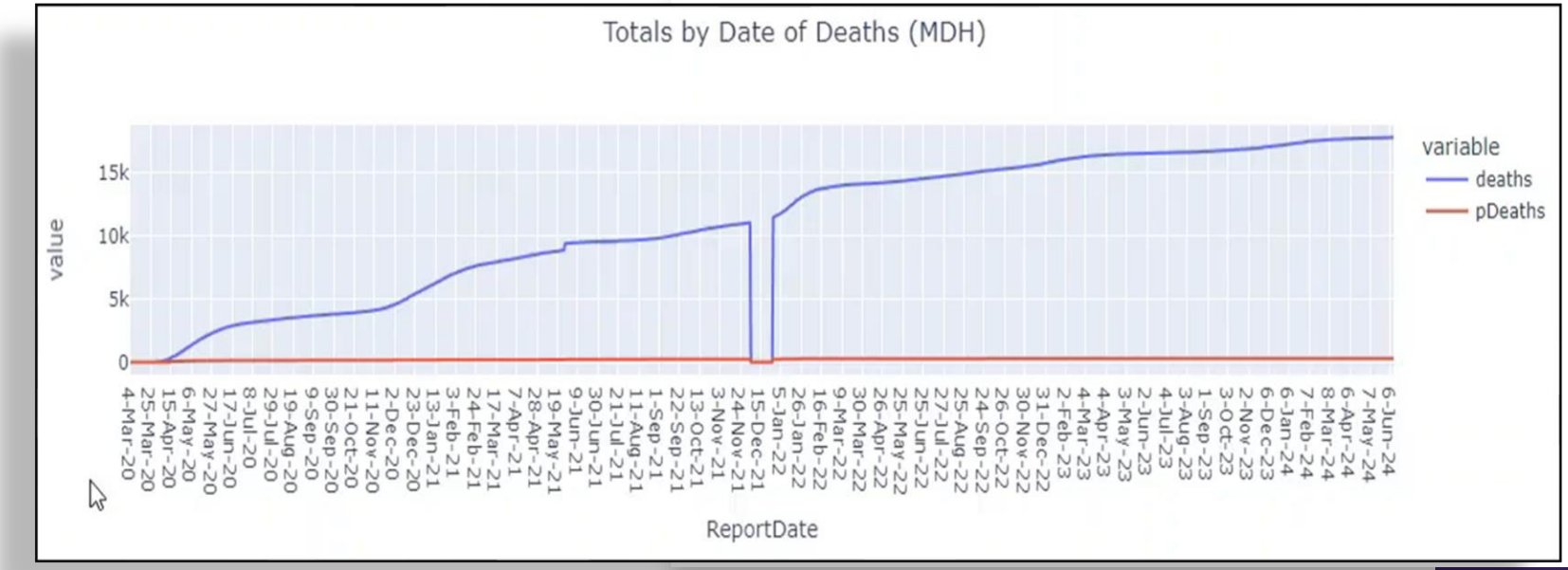
Community Transmission by County (Total Cases)



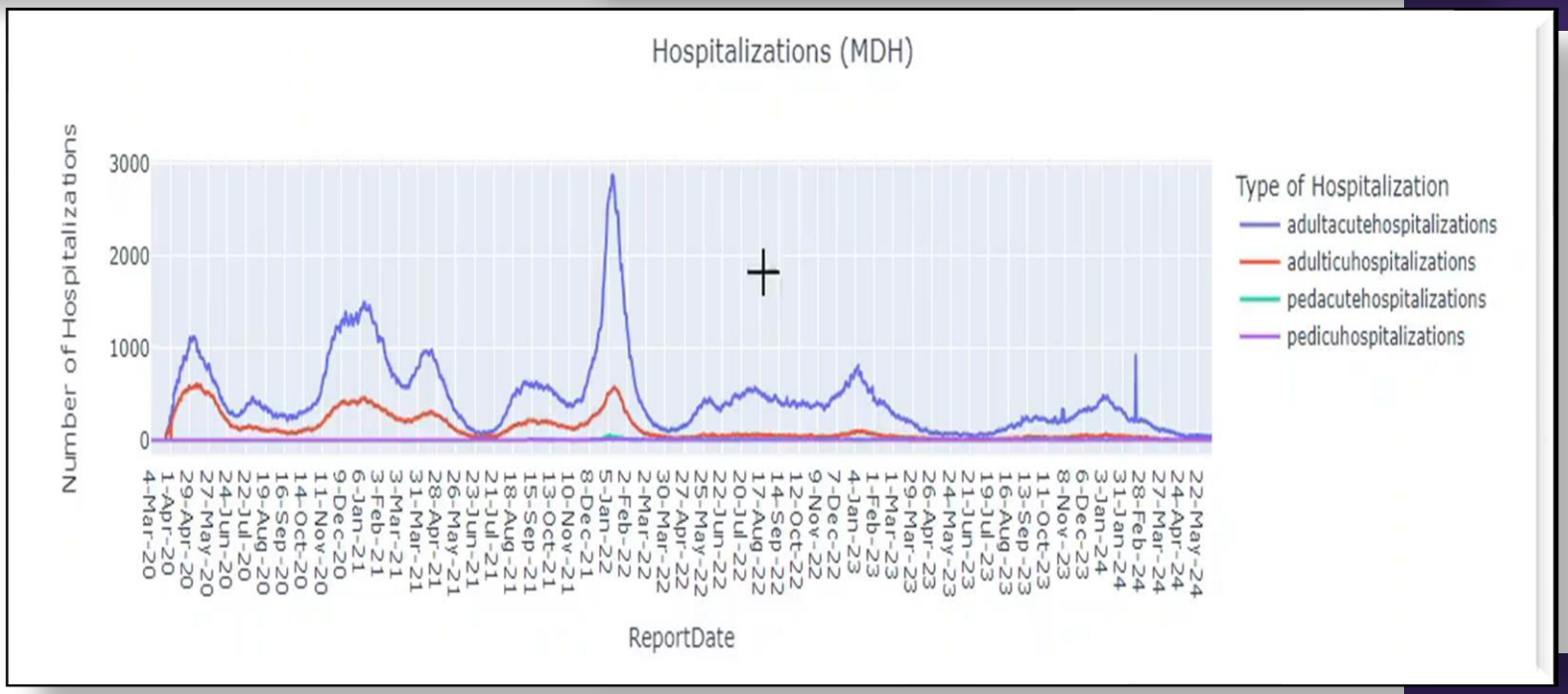




Total Covid-19 by Date of Death



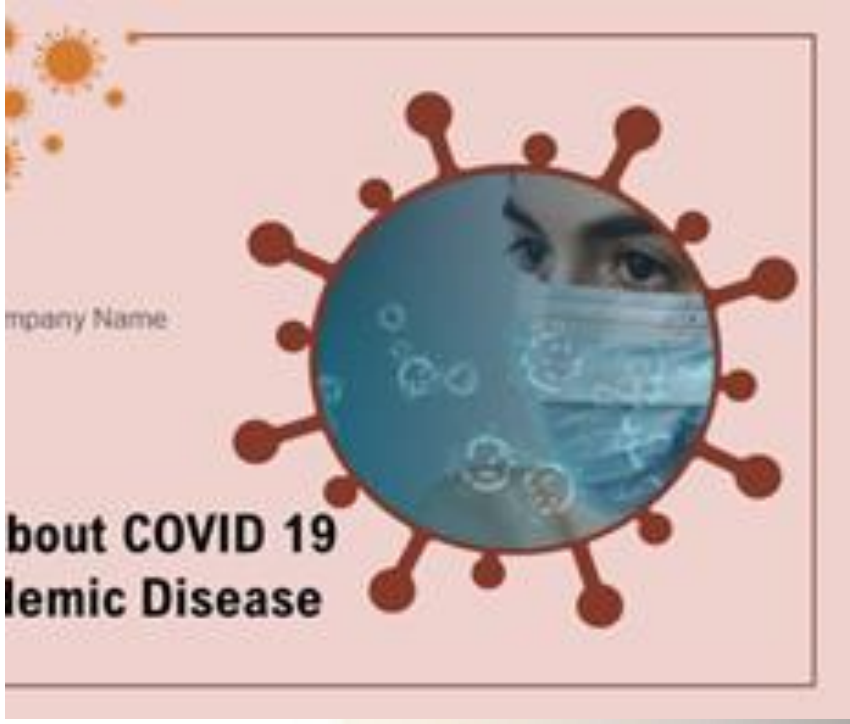
Total by Date of Hospitalization



LIBRARIES USED

- Pandas
- Numpy
- Matplotlib
- Seaborn
- ffmpeg
- bar chart race

GITHUB: covid-19-visualization



Conclusion

Project Overview
Focus on 'Healthcare' COVID-19 mapping and visualization

Data and Delivery
Data source: MD COVID-19 - MASTER Case Tracker and Summary of the dataset

Ethical Considerations
Efforts to ensure ethical use of data
Anonymization of sensitive information

Interactive Visualizations
Community Transmission by County (Total Cases)Top 10 ZIP Codes with Highest Case CountsCOVID-19 Related Hospitalization Totals by Date of Death
Cases and Deaths by Age Group or Age Range

Thank You For Your Attention

REFERENCES

- Centers for Disease Control and Prevention. (2024, April 12). Underlying Medical Conditions Associated with Higher Risk for Severe COVID-19: Information for Healthcare Professionals. https://www.cdc.gov/coronavirus/2019-ncov/hcp/clinical-care/underlyingconditions.html
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- Maryland Department of Health. (n.d.). MD COVID-19 - MASTER Case Tracker [Data set]. Open Data Portal. opendata.maryland.gov
- Bureau of Labor Statistics, U.S. Department of Labor. (2021). Impact of the coronavirus pandemic on establishments and employment by industry. Retrieved from https://www.bls.gov/opub/btn/volume-9/impact-of-the-coronavirus-pandemic-on-establishments-and-employment-by-industry.htm