Alzheimer's

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Outline

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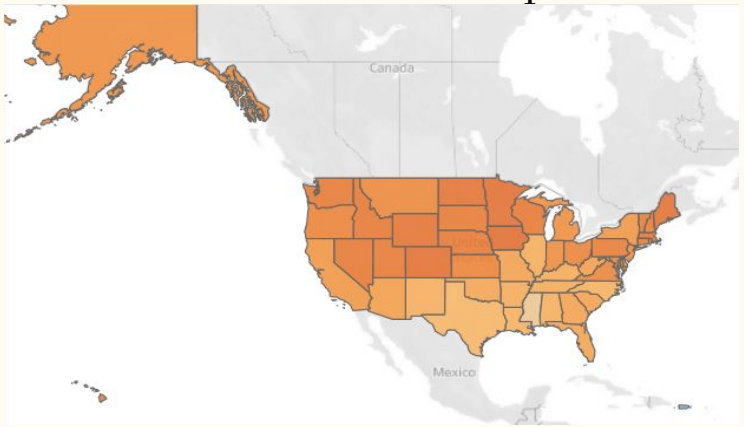
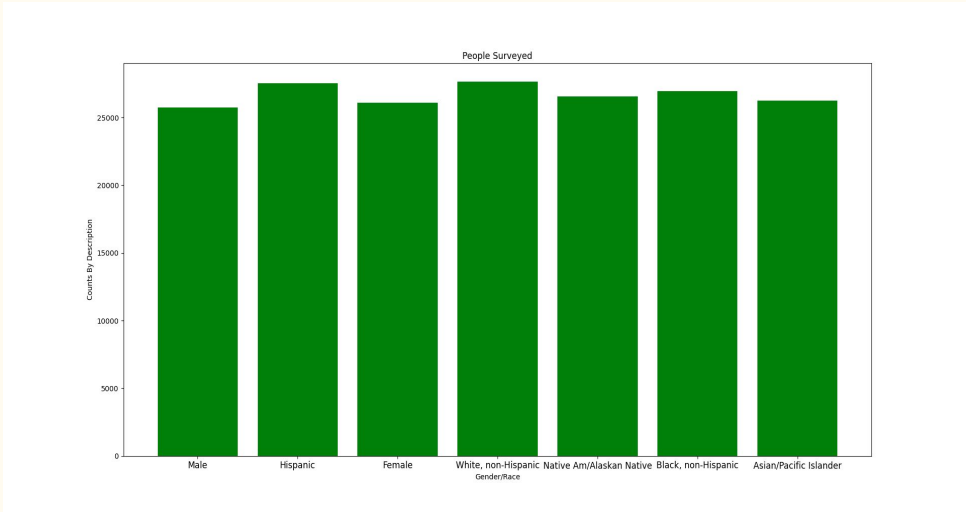
Background/Research Question/Introduction

Using the Center for Disease Control and Prevention's data sheet for Alzheimer's(2015-2020), we've visualized the conditions of Alzheimer's patients based on age, locations, living conditions, and gender along with heat maps showing cluster detection for each question and their data value.



Heat map of older adults who reported that as a result of subjective cognitive decline or memory loss that they need Assistance with day-to-day activities

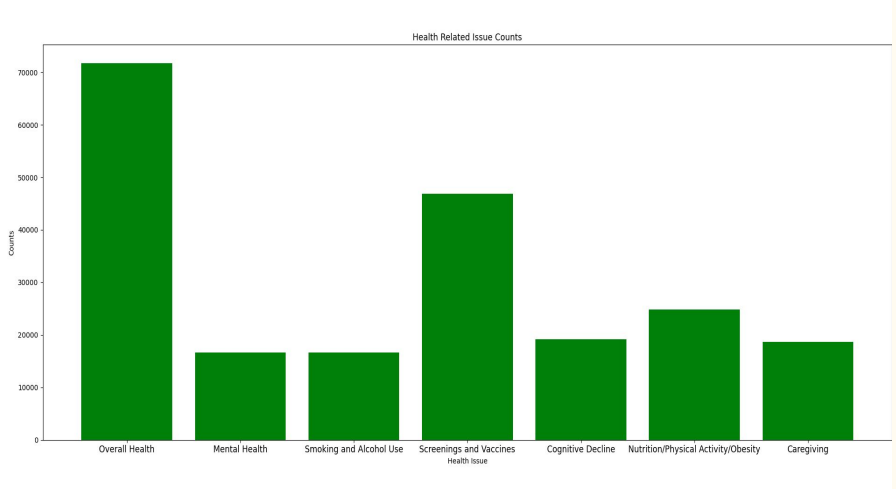


Timeline/Division of Labor

- Colin and Jake analyzed the data in-depth, creating charts and visualizing the data.
- Galo and Will took the visualized data to draw conclusions for the essay and powerpoint.
- We worked on and off during the months of November and December

Methodology

Through using Python, Excel and Tableau to create charts for data visualization and anomaly detection, we were able to form our conclusions. For example, we noticed in a chart for health topics that there was way more issues regarding Overall health, but dug further to find out that more topics were under that umbrella than others.

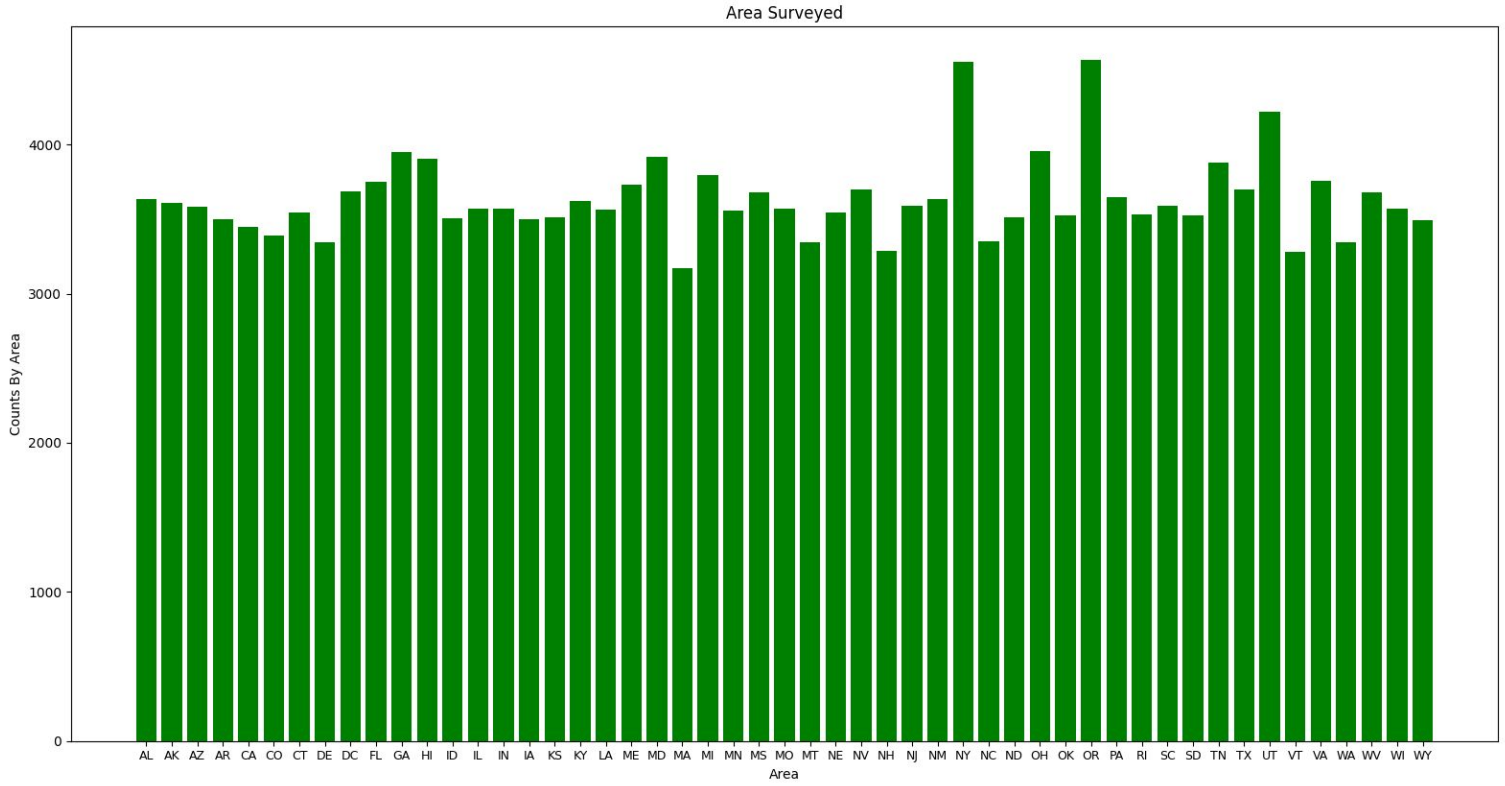


Implementation Demo

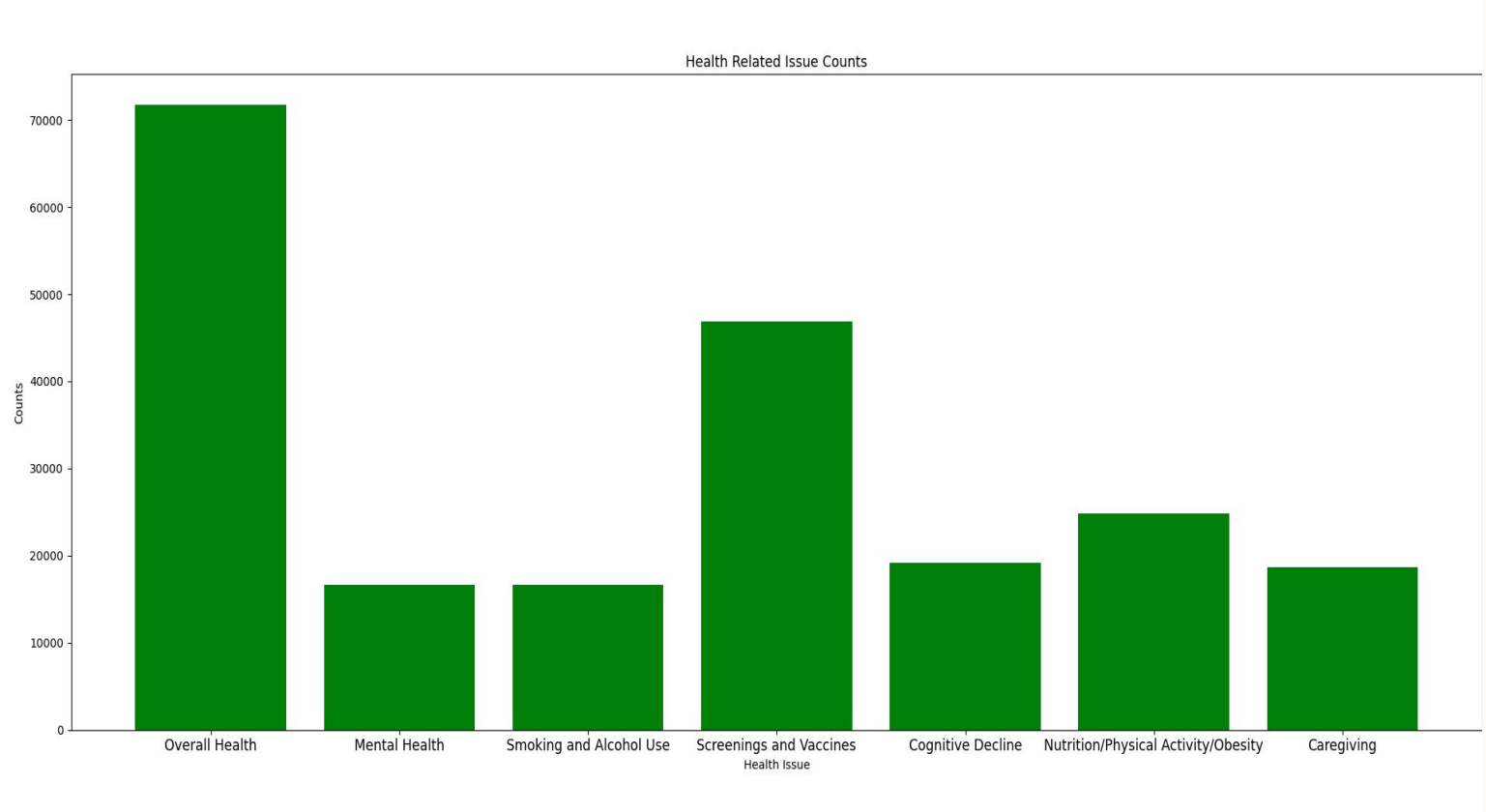
Geographic heat maps

Surveyed By State

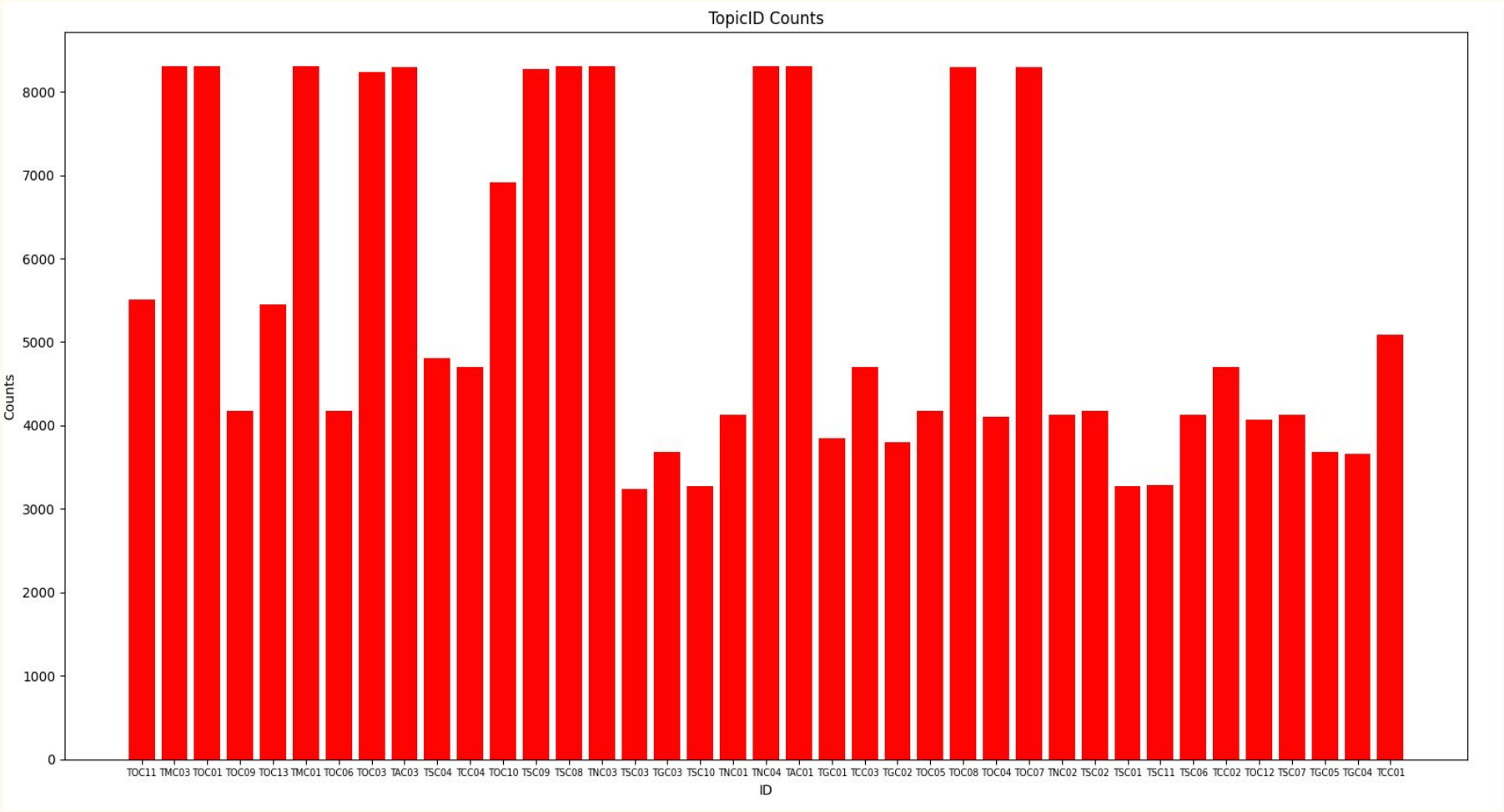
NY & OR were the two highest



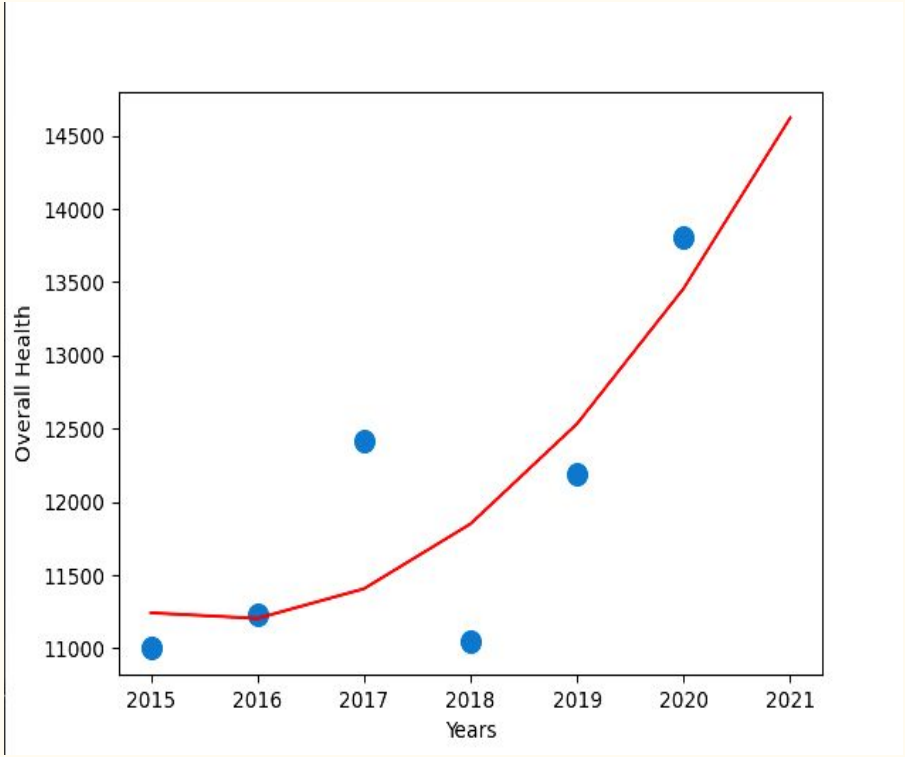
Health Issues



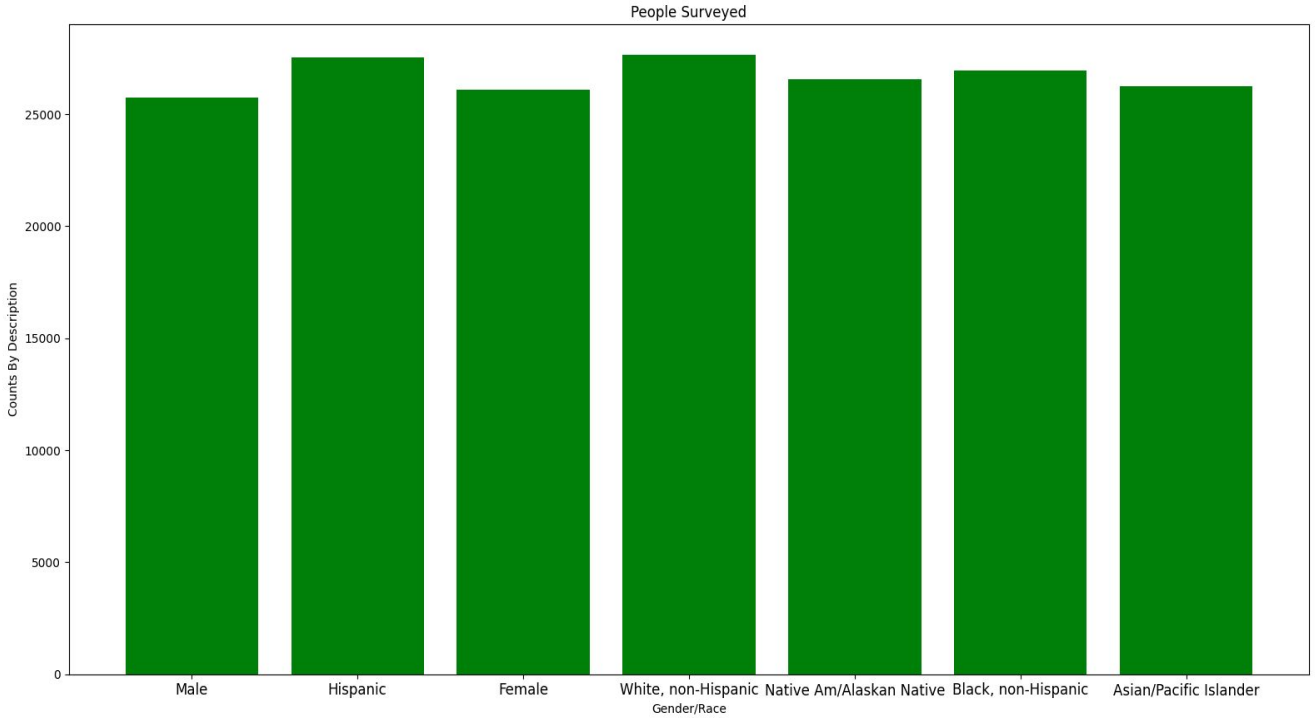
TMC03 - Lifetime diagnosis of depression TOC01- Physically unhealthy days (mean number of days)



Overall Health 2021 Prediction



Groups Surveyed



Technical Challenges

- Through the project, technical challenges include how the data should be compared with each other. The manipulation of how to present the data troubled us in the early parts of the project and it took time to really understand how to classify the data.

- Also handling large amounts of data was a struggle. Previously we were only used to miniscule amounts of data in the labs we've done in class, so it was definitely a challenge trying to interpret the 214,000 entries.

Conclusion/Results/Discussion

- Between males and females, there was no proof of any group having an abnormally large amount of Alzheimer's.
- The growth in the amount of patients with Alzheimer's has grown each year from 2015 - 2020, except 2018 which had a dip.
- A chart based on yearly growth was developed showing a prediction of a rise of Alzheimer's patients in 2021
- The rise of COVID-19 may play a huge hand in accelerating the Alzheimer's disease in a person
- White Americans have a higher chance than any other group to get Alzheimer's(based on online research and our graph supports it)
- A person's state does not influence their chances of getting Alzheimer's

References

- https://www.alz.org/alzheimers-dementia/what-is-alzheimers

- https://thedaily.case.edu/new-study-risk-factor-for-developing-alzheimers-disease-increases-by-50-80-in-older-adults-who-caught-covid-19/#:~:text=The%20findings%20showed%20that%20the,period%20following%20infection%20with%20COVID.