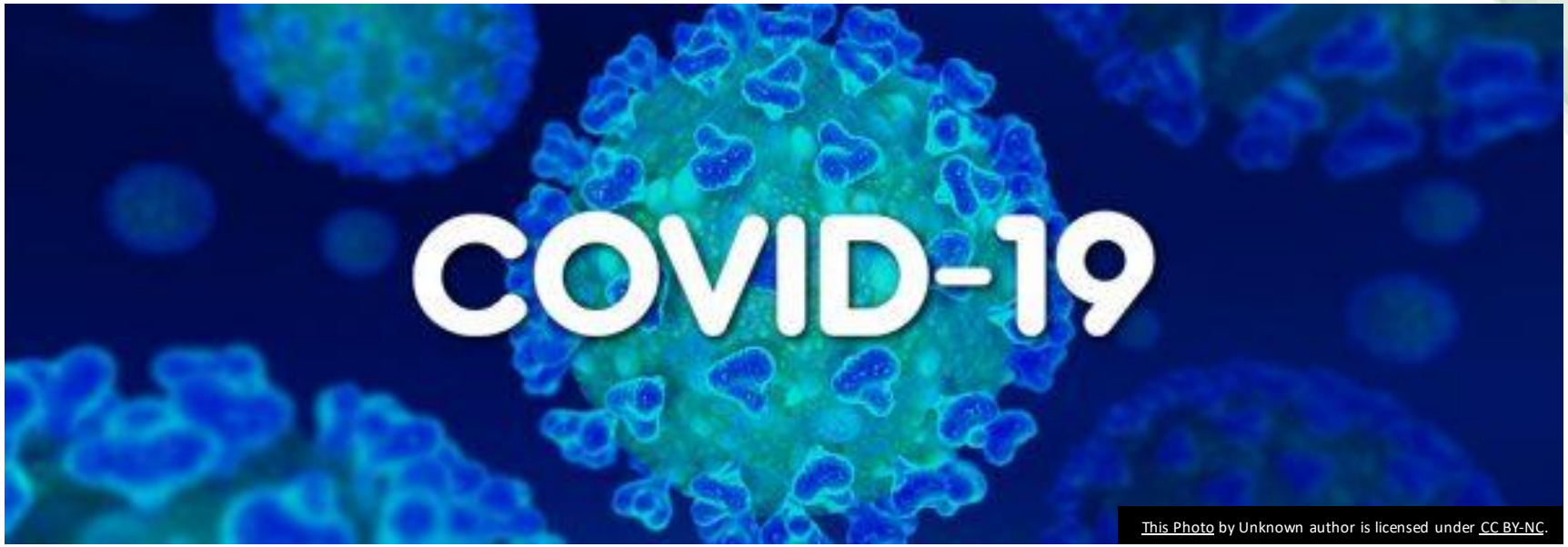

Analysis of Covid –19 Cases and Vaccinations in USA

Team K

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Data Source

https://open-fdoh.hub.arcgis.com/datasets/florida-covid19-case-line-data/about

https://covidtracking.com/race/about#download-the-data

https://www.nationalpopularvote.com/rural-states-are-almost-entirely-ignored-under-current-state-state-system

https://www.mayoclinic.org/coronavirus-covid-19/vaccine-tracker

https://usafacts.org/visualizations/coronavirus-covid-19-spread-map/

Data Description

The first dataset has 16 columns and 63,939 rows. We have taken this dataset from Florida Department of Health's website. It is a case line data of all counties of Florida from March 2020 to June 2020.

The second dataset is a vaccine tracker with data that comes from the CDC and the Florida department of health. This data was accumulated from June 2021 through September 27, 2021 and contains 5 columns and 137 rows.

Business Objective

Business Objective

Since the onset of COVID-19 at the beginning of 2020, many people worldwide have contracted the virus. Although a great number of people were able to recover, COVID-19 has proven to be extremely deadly. Several states within the U.S. have been identified as having a critically large number of recorded cases and deaths. The state of Florida is one of those critical states. Being able to understand all parameters and risk factors will greatly attribute to overcoming and surviving this deadly pandemic.

PRELIMINARY HYPOTHESIS 1

Hypothesis:

Black American twice as likely to catch coronavirus as compared to White Americans and therefore death rates are higher in Black Americans as compared to White Americans

Rationale: Black people are more likely to have preexisting conditions that make them more vulnerable to COVID-19 infection, less likely to have health insurance, and more likely to work in jobs that do not accommodate remote work.

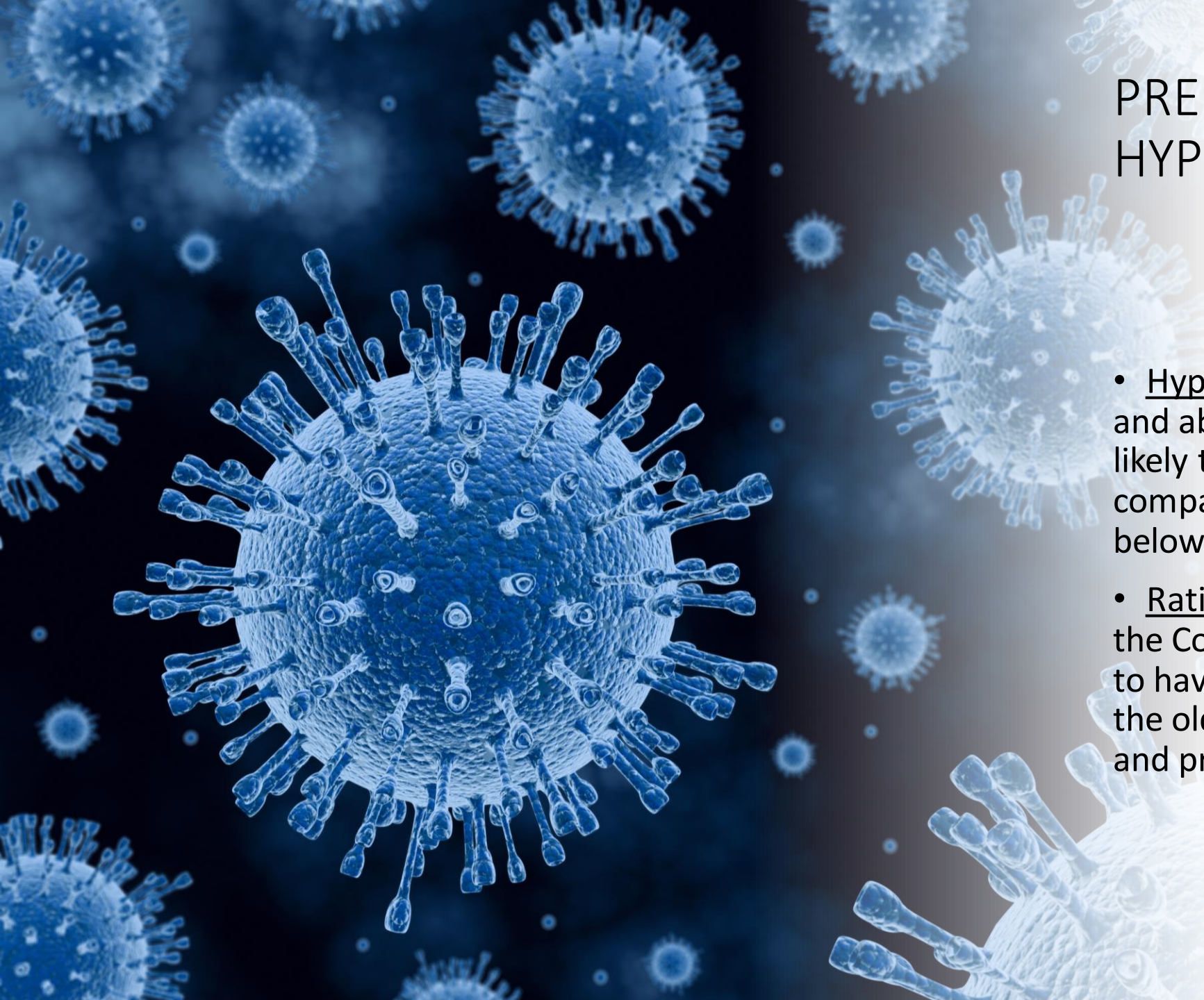
PRELIMINARY HYPOTHESIS 2

Hypothesis:

COVID cases are higher within the 25-34 Age Group due to travel.

Rationale:

Young people, referred to as millennials, typically have more free time with fewer major financial obligations. Therefore, they are more free to travel.

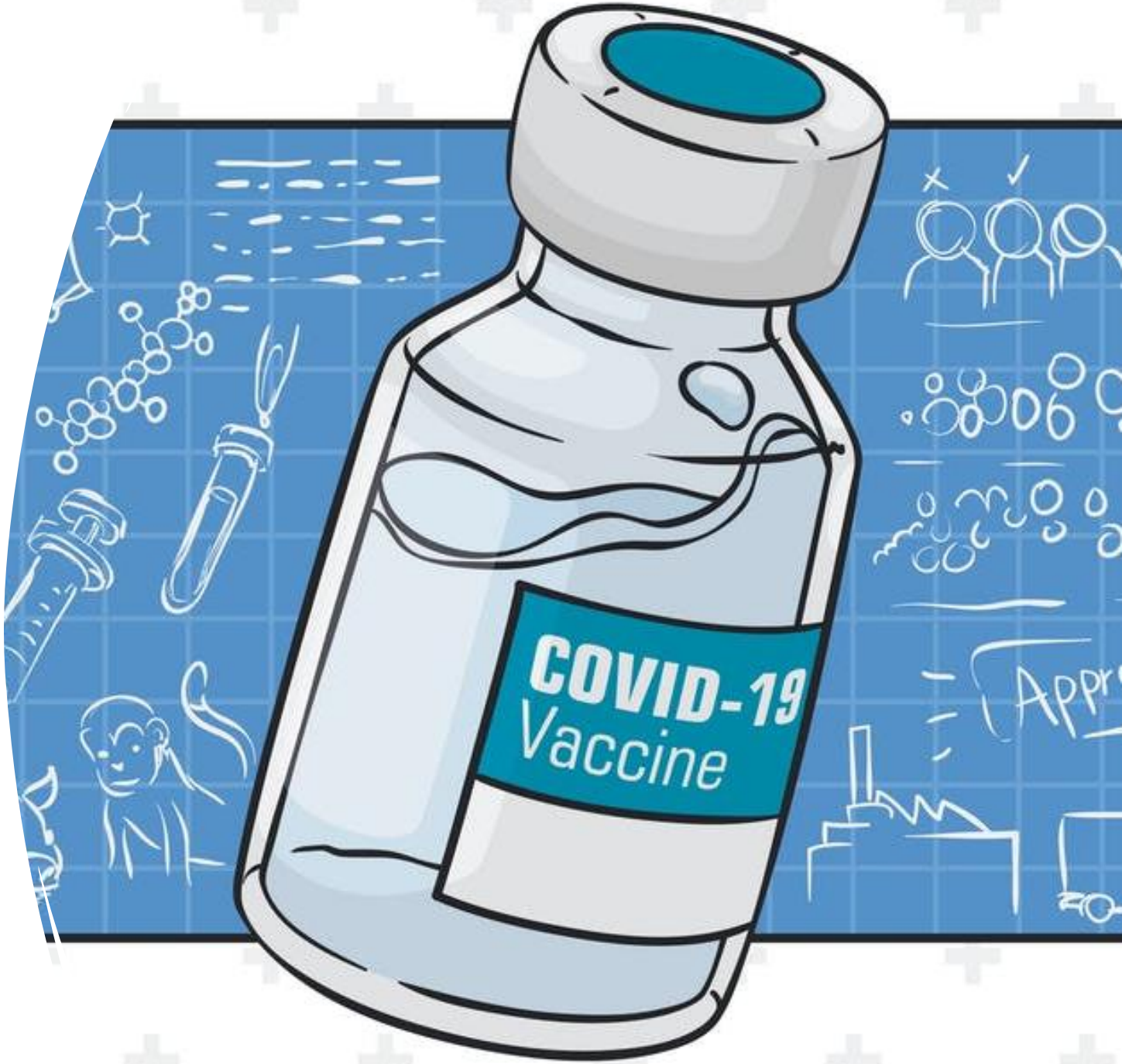


PRELIMINARY HYPOTHESIS 3

- Hypothesis: In age groups 55-64 and above, both genders are more likely to be hospitalized and die compared to age groups 25-34 and below.
- Rationale: Since the beginning of the Covid pandemic, it was known to have had a higher impact within the older age groups due to age and preexisting conditions.

PRELIMINARY HYPOTHESIS 4

- **Hypothesis**: Rural area with higher population will have more covid cases
- **Rationale**: Rural area often have a higher proportion of residents who lack of health insurance and have limited access to health care facilities and less educated



PRELIMINARY HYPOTHESIS 5

- **Hypothesis**: Population with higher percent of fully vaccinated areas has less infection rate while compared to single dose vaccinated
- **Rationale**: people who are fully vaccinated against COVID-19 are less likely to become infected and are at substantially reduced risk from severe illness and death from COVID-19 compared with unvaccinated people

HIGH LEVEL APPROACH

1. Define business objective
2. Source and collect data
3. Developing Hypothesis and Rationale
4. Process and clean data
5. Perform exploratory data analysis (EDA)
6. Statistical Analysis
7. Summarize and Interpret Data
8. Creating Data Visualization
9. Interpreting the results

EXPECTED OUTCOME

After testing all the preliminary hypotheses and analyzing and visualizing datasets, we expect to find whether or not any correlation exists between various parameters included in the dataset. We will also try to get some insights and try to interpret the results after performing various data analysis process.

KEY REFERENCES

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Thank You!