Proposal Title: COVID-19 Positive Cases by Age Distribution

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# Which Domain?

What domain is this data going to come from? Please list 10 references (with a brief annotation) to use to make sense of what you are doing with these data.

COVID-19 also known as Coronavirus has been the top health issue that the whole faces for the past 12 months. This disease strikes at such an inscrutable tone that prompts health experts to race for a vaccine to put it to an end. This highly contagious disease has infected millions of people around the world, and it has taken the lives of thousands in a short interval of time. This health crisis has forced the whole world to adopt control measures that way they can control the spread of the virus. These measures have significantly impacted the way that humankind conduct businesses throughout the world. As a result, the strict control measures have taking a huge toll on the global economy that significantly stressed it to a point that make economists speculate that we are entering a depression. For this project, I collected a dataset from data.gov that account for the number of COVID-19 cases by age distribution among Maryland residents. The data will be analyzed to investigate what role age plays in contracting COVID-19, which age group is less susceptible to COVID-19, and which age group is more prominent to contract COVID-19.

# Which Data?

What is the dataset you will be examining? Please provide a codebook if there is one or a link to the dataset as well as a detailed description.

Selecting a dataset is very crucial to accomplish this milestone for the project. The dataset I will be examining is called MD COVID-19 - Cases by Age Distribution, and it was retrieved from data.gov. It is a collection of positive COVID-19 test results that have been reported each day by the local health department via the ESSENCE system. The collection lists positive COVID-19 cases among Maryland residents by age: 0-9; 10-19; 20-29; 30-39; 40-49; 50-59; 60-69; 70-79; 80+; Unknown. Below is a link to the data source,

https://catalog.data.gov/dataset/md-covid-19-cases-by-age-distribution

# Research Questions? Benefits? Why analyze these data?

How are you proposing to analyze this dataset? This is about your approach. Here, you’ll be proposing your research questions as well as justifications for why you’d offer these data in this way.

To analyze the dataset, I will take the following steps into considerations:

1. Define my questions. The questions will be measurable, clear, and concise. Also, I will design them to either qualify or disqualify potential solutions to specific problem or opportunity.
2. Set Clear Measurement Priorities. In this step, I will decide what to measure, and how to measure it.
3. Collect the data
4. Data analysis. In this step, I will manipulate the data in several different ways, such as plotting it out and finding correlations. The plots will be of types bars, lines, histograms, and so forth to display the results of my analysis. Also, I will calculate the mean, maximum, minimum, and standard deviation of the data.
5. Interpret Results. An interesting thing that I will keep in mind while interpreting the results is that I cannot ever prove a hypothesis true: rather, I can only fail to reject the hypothesis. This statement implies that chance could always interfere with my results no matter how much data I collected. As I interpret the results of my data, I will ask myself these key questions:

* Does the data answer my original question? How?
* Does the data help me defend against any objections? How?
* Are there any limitation on my conclusions, any angles I have not considered?

# What Method?

What methods will you be using? What will those methods provide in terms of analysis? How is this useful?

To study COVID-19 cases, I will use a dataset called MD COVID-19 - Cases by Age Distribution that recorded positive COVID-19 cases among Maryland residents. The data recorded positive COVID-19 cases for different age groups. I will conduct exploratory data analysis, investigate if correlation in positive cases from one age group of the data set to the next exist. The presence of correlation will imply persistence in positive cases, which can be predictable based on safety measures to some extent. Also, I will include all positive cases, and I will display them by different age groups.

# Potential Issues?

What challenges do you anticipate having? What could cause this project to go off schedule?

My worries for this project are to be able to predict the outcomes that I intend to through predictive analysis. I have not yet done any analysis of the data, and I hope that the data set is a good fit that can help me solve the research questions. It can sometime be a challenge to come up with expected results base on the data set selected. I am moving forward with it, and I hope that it does not come with issues that will challenge the algorithms I will be working with.

# Concluding Remarks

Tie it all together. Think of this section as your final report’s abstract.

The mysterious appearance of COVID-19 in early winter of 2019 that accompanied millions of infections around the world, which resulted in millions of innocent lives being lost in a short interval of time has raised concerns that left authorities stranded as to how to contain the spread of this deadly disease. In the early onset of the pandemic, authorities adopted lockdown measures while conducting studies with the intent to better understand why and how COVID-19 spreads and kills. One of the most frequent COVID-19 studies is its transmission among age groups. COVID-19 researchers have found that age plays a critical role when it comes to contracting COVID-19. Studies have showing that people are more likely to get infected when congregating, and older folks are more susceptible to contracting Coronavirus as opposed to younger ones. Thus, should older folks really be more cautious around people- even when they are in company of their own family members? Or are infections essentially random events that occur at about the same rate in all age group over the long run.

These questions can be answered by studying COVID-19 cases by age distribution among Maryland residents, as based on the data.gov database.

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