**Aaron Nelson Capstone**

**Executive Summary**

Embarking on the exploration of the enduring idea that life's only certainties are death and taxes, this project seeks to unveil whether there's a significant connection between individuals' tax contributions and their life expectancy. I am particularly intrigued by the prospect of understanding if there are variations in life expectancy between regions with different tax burdens. Through the examination of various tax categories—federal, state, property, and sales, etc.—the aim is to determine how taxes might influence life expectancy. Beyond these considerations, the project also plans to delve into the intricate dynamics of how government spending from tax revenues might impact life expectancy, especially in critical areas like healthcare and social programs. Acknowledging the inherent complexity, this effort is driven by the desire to comprehensively grasp the relationship between taxes and life expectancy in a straightforward and accessible manner.

**Motivation**

My motivation for this project stems from a curiosity sparked by the commonly heard phrase "death and taxes." Repeated over the course of my life, like many others, I had simply accepted these concepts as inevitable certainties. However, upon reflecting on this expression, I began to question the underlying assumption. Taxes, ostensibly, are intended to enhance our quality of life. Therefore, the logical connection would suggest that an increase in taxes could lead to an improvement in quality of life, subsequently increasing life expectancy. If this assumption doesn't hold true, it raises the intriguing possibility that we might be figuratively taxed to death. In such a scenario, understanding how tax dollars are being spent becomes crucial to unraveling this complex relationship.

**Data Question**

 What is the relationship, if any, between taxes and regional mortality?

 Do higher or lower taxes influence life expectancy?

 How do specific types of taxes, such as federal, state, property, and sales taxes, affect life expectancy?

 In what ways does the government's allocation of tax money impact life expectancy?

**Minimum Viable Product (MVP)**

1. Create a storyboard using PowerBI that shows if there is a correlation between different types of taxes and regional life expectancy.
2. As best as possible, show correlation between different types of taxes such as sales tax, estate tax, income tax, etc.
3. Include in the storyboard data a breakdown that shows what percent of tax money is spent on various categories such as medical services, road, police, housing, etc.
4. Have the storyboard be interactive so that user is able to select certain types of taxes or government expenditures to see their effect on life expectancy.

**Schedule (through 1/4/2023)**

1. Get the Data (11/24/2023)
2. Clean & Explore the Data (12/4/2023 -12/08/2023)
3. Create Presentation of your Analysis (12/20/2023)
4. Internal demos (1/2/2024)
5. Demo Day!! (1/04/2024)

**Data Sources**

[Download Center: StatsAmerica](https://www.statsamerica.org/downloads/default.aspx)

<https://taxfoundation.org/data/all/state/sales-tax-rates-2019/>

<https://taxfoundation.org/data/all/state/state-individual-income-tax-rates-brackets-2019/>

https://www.irs.gov/statistics/soi-tax-stats-individual-income-tax-statistics-2019-zip-code-data-soi

<https://www.census.gov/data/datasets/2019/econ/local/public-use-datasets.html>

https://www.census.gov/data/tables/2019/econ/qtax/historical.html

**Known Issues and Challenges**

* Many of the files from the IRS website are .xlsx files types that will require converting to be usable.
* Tax data is massive and can be broken down into many different categories as well as income brackets. For this reason, determinations will have to be made whether to average out all the tax information for a region or attempt to break it down by specific income brackets. Most likely it will need to be averaged out across all the income brackets. This also makes sense because it might not be possible to find mortality rate by income bracket.
* Because tax rates change on a yearly basis, and are different between regions, it is best to do this study over a single year instead of multiple years. While there will be small changes affecting that year, because taxes are always changing, this still works better than looking at rates over multiple years where changes might be more drastic.
* Because of covid and its effect on mortality from 2020 onward, it is best to pick a year prior to covid for this study. For this I will be using data from 2019 as it is still relatively recent, but the mortality rate has not been skewed by a pandemic. Also, because the data is several years old it is more readily available.