## Overview and Motivation

Income inequality has steadily grown since the mid 1970’s. In 1975 the top 1% of earners captured 8.9% of new income created, their lowest share in the past 100 years. Since then the percentage of total income for top earners (both in the top 10% and top 1%) has increased, peaking at 50% and 22% respectively just prior to the 2008 financial crisis (Saez, 2016). Total income for top earners dropped post 2008, but quickly recovered. From 2008 to present the top 1% of earners have more than made up for losses in the crisis increasing their income from 2008 to 2012 by 34.7% while the bottom 99% saw incomes increase by a modest 0.8% during the same time period (Saez, 2016).

Why is this concerning? Income inequality isn’t just about money, it is about quality of life. The gap in life expectancy between those in the top 1% and those in the bottom 1% is 14.6 years (Chetty, Stepner and Abraham, 2016). Millions of Americans cannot afford health insurance and lack access to health care, affordable housing, and even food. This is a life and death issue.

In December of 2017 congress passed and President Trump signed into law tax cuts for the wealthiest of Americans. Among many, especially those at the top there seems to be an unwillingness to accept the data at its face value, that as the richest prosper the middle and lower class struggle. One of these reasons may be that most people can’t internally visualize just how skewed the income distribution is. Most papers on income inequality present graphics such as line and bar charts, but fail to create compelling and interactive visualizations that drive home the reality of income inequality. Our goal is to create a visualization that will drive home both the reality and the scale of income inequality.

## Related Work

In the past, we have learned about disparities that are present in both class as well as race from schooling as well as politics. It is clear that a large percentage of our societal burdens are caused by factors that are a direct result of unfair income differences. In class we have also watched visualizations about the distribution of wealth in the USA and just how mind boggling it is.

## Questions

How has income distribution over time affected the USA?

What events have influenced the income rates of different percentages of america?

How does race factor into income in the USA?

## Data:

The all data was parsed from various excel sheets and data files from the census website. We decided that because of availability we would include race in our visualization aside from just data for all races. This adds a different angle to our project and helps delineate some of the points that represent the thesis of the project about unjust disparities in society involving money. The raw data was manipulated by hand to generate well formed csv files and are then loaded into the project on initialization.

## Exploratory Data Analysis

Looking at our data and exploring major historical events that happen in corresponding years we can see very interesting trends that have occured over time. There are several articles that discuss events and how this affected income, taxes, and the wealth gap. On further exploration, our data sources also had racial statistics available readily so we believed it would benefit our project to include them to further drive the thesis of unfair policies in the USA.

## Design Evolution

Although wealth disparity is more of a problem in the USA compared to income disparity, wealth visualizations have been done frequently, for example the video about wealth that we watched in class is a great example. We decided to focus more on income and tax rates, with some highlights about wealth. Our main data focus however, changed to income, and with the ease of access racial disparities in income.

## Implementation

## Evaluation