The effects of climate change are felt across the world, but the sheer scale of the impact is, frankly, often beyond an individual’s comprehension. This lack of context has made the changes in observed local weather a proxy for an individual’s perception of the impact of a warming planet. However, local weather patterns are impacted by factors beyond average global temperature creating confusion across the population as short-term patterns seem counterintuitive to concepts associated with a warming planet. Directly observable variables such as temperature, pressure, and precipitation as well as larger scale patterns such as the La Nino/La Nina conditions which both impact the northeast US. Our goal for this project is to examine how climate change and broader weather patterns have impacted observable and in major cities across the US. To do so we seek to answer the following SMART questions:

1. How has monthly average temperature in major US cities impacted rainfall since 2000?
2. How have global temperature changes impacted rainfall in major US cities since 2000?
3. Has the El Nino/La Nina weather pattern intensified in major US cities since 2000?
4. How have seasonal weather patterns changed in major US cities since 2000?

Potential data sources and references:

<https://water.weather.gov/precip/downloads/>

<https://oceanservice.noaa.gov/facts/ninonina.html>

<https://ggweather.com/enso/oni.htm>

<https://www.ncdc.noaa.gov/cdo-web/datasets>