**NWS Project Notes**

## 2/8/2022

ACTIONS:

* Used R, the Google Trends API and Gtrends package in R to pull data on weather related search terms along with placebos.
* Built a coding structure that allowed within and across state indexing.
* 2 files are in the BlairRAWork->NWS Forecast Dropbox:
  + Trends\_WithinState.csv
  + Trends\_AcrossState.csv

Summary: Working with and understanding google trends can be a little challenging because their scaling, term limits. Values are calculated on a scale from 0 to 100, where 100 = the time or location with the most popularity as a fraction of total searches in that time or location (if comparing searches over time in one location, or multiple locations for a single time-period). If multiple locations (e.g. a states) is downloaded over time (e.g. monthly for 10 years), 100 = the highest state-month in the query.

The file Trends\_WithinState.csv contains the trends, or “hits”, for each search term (see codebook) over time relative to that term’s highest month within each state. In other words, every state will have one month where index=100 to reflect when that term was searched the most in the state-month series and the remainder of the index describes variation relative to that state-month. For example, the figures below shows Arizona search history for “forecast” in red and

Graphical user interface, chart, line chart

Description automatically generated

Graphical user interface, application, Word

Description automatically generated

From Google:

"Values are calculated on a scale from 0 to 100, where 100 is the location with the most popularity as a fraction of total searches in that location, a value of 50 indicates a location which is half as popular. A value of 0 indicates a location where there was not enough data for this term. Note: A higher value means a higher proportion of all queries, not a higher absolute query count”

Issues: