**Proposal:**

**Topic/Industry:**

1. Climate patterns, extreme weather trends (use NOAA?) **[A, E, J, P]**

**Nature of the problem:**

* What is the relationship between weather/climate trends and real estate markets (and the insurance industry)?

**Scope:**

* Time Frame:
  + 2000-2020
* Region
  + United States

**What are we trying to answer:**

1. how have severe weather events changed over time? **[A, E (may need to narrow this one), P]**
   1. Changes in humidity/temp
   2. What categories of weather events (severe or otherwise) are we cataloging
   3. How severe or mild/improving are certain weather events/patterns
2. is there a correlation between certain weather/atmospheric events and insurance costs? **[A, E, P]**
3. what regions are most at risk for certain weather events? **[A, E]**
4. what is the effect of weather patterns on home prices? **[A, P, E]**

**Datasets: Redundant/Irrelevant | Usefull**

* 1. **Weather Data Sources**
     1. <https://www.ncdc.noaa.gov/cdo-web/>
        1. <https://www.ncdc.noaa.gov/cdo-web/webservices/v2>
           1. Api documentation, keywords, etc
        2. <https://www.ncdc.noaa.gov/cdo-web/datatools>
           1. Various data tools, databases, csv files

<https://www.ncdc.noaa.gov/stormevents/>

EXTREMELY useful, provides multiple different avenues of accessing csv files relating to climate, weather, atmospheric trends and extreme weather events (storms, floods etc)

* + - 1. <https://www.ncei.noaa.gov/access/metadata/landing-page/bin/iso?id=gov.noaa.ncdc:C00773>
         1. Can potentially offer a wide range of csv files related to severe weather events
    1. <https://www.weather.gov/documentation/services-web-api>
       1. National weather service, different api/documentation
    2. <https://openweathermap.org/api>
       1. Could use for extreme temperature variances (heat waves, blizzards, etc)
       2. Also includes sea level (might be useful for cities bordering the ocean)
    3. <https://www.kaggle.com/datasets/christinezinkand/us-billiondollar-weather-and-climate-disasters>
    4. <https://www.fema.gov/about/openfema/data-sets#disaster>
  1. **Financial Data Sources:**
     1. <https://www.census.gov/data/developers/data-sets.html>
     2. <https://www.kaggle.com/datasets/paultimothymooney/zillow-house-price-data>
     3. <https://www.zillow.com/research/data/>
     4. <https://www.madronavl.com/launchable/public-data-sources-real-estate>
     5. <https://fred.stlouisfed.org/series/TXSTHPI>
     6. <https://www.kaggle.com/datasets/ahmedshahriarsakib/usa-real-estate-dataset>
     7. <https://www.redfin.com/news/data-center/>
     8. <https://www.fhfa.gov/DataTools/Downloads/Pages/House-Price-Index.aspx>