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ECNS 460

Project Proposal

### **Topic Description**

Extreme weather events seem to be happening more frequently, take Hurricane Milton for example. This is an important factor to consider when deciding where one wishes to reside. We wish to look at the extreme weather events in a particular region/state in order to determine where a person may be best suited to live. As of now our project will focus on Florida, as they are experiencing severe hurricanes currently. We will be creating an interactive app that displays historical data on extreme weather/natural disasters to potential home buyers. We may also implement what future models may suggest

### **Tentative Analysis/Product Plan**

We are building a product - hopefully some sort of interactive web app. Our goal is to display historical data on natural disasters and extreme weather events to potential home buyers. This will be displayed in a layout where one can search by zip code or county. We will first determine which state/region we will focus on. The next step will be to gather data, where we will work to build data sets and fill in gaps as we proceed. We anticipate the greatest challenge to be putting weather data into relation with county/zip code.

## Challenge we are Choosing

The challenge we are choosing is to create a Shiny app or another interactive web app alternative.

**Dataset Description -** Include the source URL, what kind of variables are contained in each dataset (no need for a full list), the timespan and spatial coverage of the datasets, and how the datasets are related to each other.

<https://coast.noaa.gov/hurricanes/#map=5.55/27.784/-83.825&search=eyJzZWZyY2hTdHJpbmciOiJGbG9yaWRhLCBVU0EiLCJzZWZyY2hUeXBlljoiZ2VvY29kZWQiLCJvc21JRCi6IjE2MjA1MCIsImNhdGVnb3JpZXMiOlsiSDUIiLCJINCIsIkgzliwiSDIiLCJIMSIiIIRTIiwiVEQiLCJFVCJdLCJ5ZWZFYcyI6W10slm1vbnRocyI6W10slmVuc28iOltldLCJwcmVzc3VyZSI6eyJyYW5nZSI6WzAsMTAzMF0sImluY2x1ZGVVbmtub3duUHJlc3N1cmUiOnRydWV9LltdLCJidWZmZXliOiYwLCJidWZmZXJvbmI0IjpbIk5hdXRpY2FsIE1pbGVzIl0sInNvcnRTZWxlY3Rpb24iOnsidmFsdWUiOiJ5ZWZyY2hUeXBlljoiZ2VvY29kZWQiLCJvc21JRCi6IjE2MjA1MCIsImNhdGVnb3JpZXMiOlsiSDUIiLCJINCIsIkgzliwiSDIiLCJIMSIiIIRTIiwiVEQiLCJFVCJdLCJ5ZWZFYcyI6W10slm1vbnRocyI6W10slmVuc28iOltldLCJwcmVzc3VyZSI6eyJyYW5nZSI6WzAsMTAzMF0sImluY2x1ZGVVbmtub3duUHJlc3N1cmUiOnRydWV9> - this is data on historical hurricanes that have passed over Florida. We will need to find a way to webscrape this data so that it is usable. This contains variables such as name, wind speed, category, and pressure. This has data from 1851 to current.

[https://floridadisaster.com/history#google\\_vignette](https://floridadisaster.com/history#google_vignette) - This has data on different types of weather events in Florida such as hurricanes, freezes, fires, tornadoes, and floods. Each event has a date included and a description of the disaster. This has data from 1953 to current.

We will seek more data, but these sources provide a good baseline. These data lists are related because they both contain data on extreme weather in Florida.