**Executive Summary**

*This project aims to explore the patterns and impacts of tornadoes in Tennessee. The motivation behind this study is to better understand tornadoes, which are a captivating yet destructive natural phenomenon predominantly occurring in the United States. The central question focuses on identifying the most common times of the year for tornado occurrences in Tennessee, examining their sizes, and determining whether larger tornadoes cause more property damage on average.*

*To achieve this, the project will leverage data visualizations, including dashboards, maps, and line graphs, to analyze trends over time. The final output will highlight whether tornado frequency has increased in recent years and whether there is any correlation between tornado size and property damage. The analysis will also consider known assumptions and challenges related to data accuracy and completeness.*

**Motivation**

*Simply put tornadoes are a natural phenomenon. Thanks to the combination of cold air from North and warm air from the South and the land of the Unite States is so flat, they are almost soly found in the United States that are both a fascinating and terrifying. This project just gives me an excuse to learn more about them and read into their behaviors*

**Data Question**

* *What are the most common times of year for tornadoes in TN?*
* *How large are they in comparison to each other and do larger ones on average cause more property damage?*
* *What years had the most tornadoes?*
* *Which years had the most property damage, and do those 2 questions correlate?*
* *Which years had the deadliest tornadoes regardless of EF rating?*
* *What years had the most powerful?*
* *Based on the data has the number increased since the start, or has the opposite happened?*
* *What is the average size of each tornado category?*
* *Out of all tornadoes in the U.S., what percentage of them are found in Tennessee per year*

**Minimum Viable Product (MVP)**

*A slide show regarding the questions above, and any information found from cleaning and exploring the data further such as outbreaks, damage reports and comments on events that occurred from 1950 to today*

**Schedule (through <date of demo day>)**

1. Get the Data (11-20-24)
2. Clean & Explore the Data (11-24-24)
3. Create Presentation of your Analysis (12-17-24)

* Should be a presentation, but could include a Jupyter Notebook, SQL script text files, powerpoint presentation, and/or dashboard in Excel, Tableau, or PowerBI

1. Internal demos (12-19-24)
2. Demo Day!! (1-6-2024)

**Data Sources**

[*https://www.weather.gov/ohx/tntornadostats*](https://www.weather.gov/ohx/tntornadostats)

[*https://www.ncei.noaa.gov/access/monitoring/tornadoes/*](https://www.weather.gov/oun/efscale)

[*https://data.tennessean.com/tornado-archive/*](https://data.tennessean.com/tornado-archive/)

[*https://www.weather.gov/oun/efscale*](https://www.weather.gov/oun/efscale)**Known Issues and Challenges**

*Whittling down how many tornadoes there were each day as, in much of the data I’ve collected, it show tornado reports rather than a true count of tornadoes*