# SDS 4135 - Project 4

Due November 13

## Tornados

A large tornado swept through the St. Louis area in May of 2025, destroying trees and landscapes in Forest Park, and homes and businesses in several parts of the city, with the worst damage in the northern part.

Your task in this project is to explore the patterns of tornados in the United States, using a dataset of tornados dating back to 1950.

You have a bit more freedom in this project to explore questions that you find interesting. You should produce analyses of the data that address some of the questions below. You do not need to answer all of them. It's better to pick a few and do thorough analyses, rather than do a fleeting analysis of all of them.

- How does the spatial pattern of tornados change throughout the year?
- How has the overall pattern of tornados changed over time?
- How has the intensity and frequency of tornados changed over time?
- How does the spatial distribution of the strongest tornados compare to that of weaker tornados?
- What time of day are tornados most likely to occur, and how does that vary spatially and over the course of the year?
- How have tornado deaths varied over long time trends?
- How do tornado deaths vary with time of year and time of day?

Feel free to explore other aspects of the data you find interesting.

Your report should include several well-produced visualizations of the data and your analyses.

## Data

There is a file `tornados/1950-2024_actual_tornados.csv` that has a row for each tornado. The file `SPC_severe_database_description.pdf` describes each column.