US Tornadoes

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Purpose of Project

Analyze historical tornado data to determine how many and what degree of tornadoes have affected the country since 1950 through 2021.

Data and Data Cleaning

The dataset had over 67,000 entries spanning between 1950 and 2021!

Example columns:

- The year that it occurred
- The magnitude
- The injuries and fatalities

We noticed some problems with the dataset:

- Types had to be changed (date column became datetime)
- Columns had to be renamed ("yr" became "year")
- Duplicates had to be removed

Research Questions

1. Which year has had the most number of tornadoes?
2. Which magnitude has had the most number of tornadoes?
3. Is there a correlation between the length and magnitude of the tornado?
4. Which magnitude has had the most fatalities?

Live Demo

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Limitations & Bias

- Limitations
  - Multiple tornadoes on the same day at the same area with the same magnitude
    - Hard to show on the map
- Population Bias
  - Hard to report a touchdown area in a remote location, only the surrounding areas would know it hit in the vicinity

Conclusions

We observed that Texas and the nearby areas are more prone to tornadoes.

- 2015 had the most number of tornadoes (241).
- Magnitude 0 has had the most number of tornadoes.
- Yes, there is a correlation between the length, width, and the magnitude of tornadoes. As the magnitude increases, the length and the width increase.
- Magnitude 5 has had the highest average of fatalities with 82.3%.