How Badly is Global Warming Affecting Greensboro, NC?

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Motive

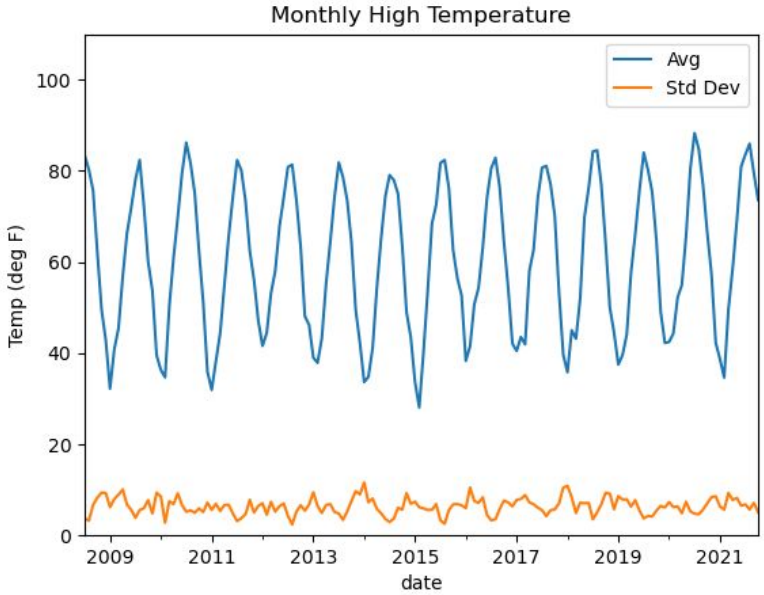
- Media always talks about how global warming is causing current weather to break new records such as temperature and precipitation

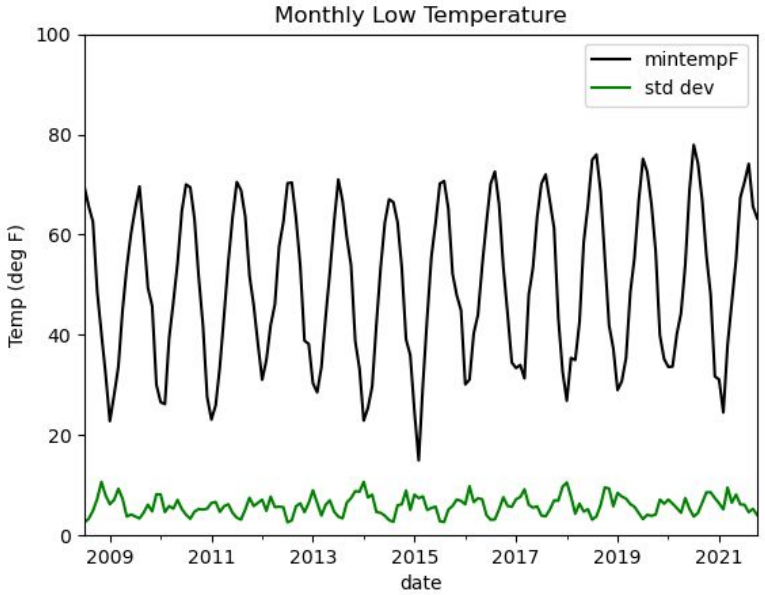
- I wanted to see how much global warming has affected the weather in the past 10+ years in Greensboro.

Why is this important?

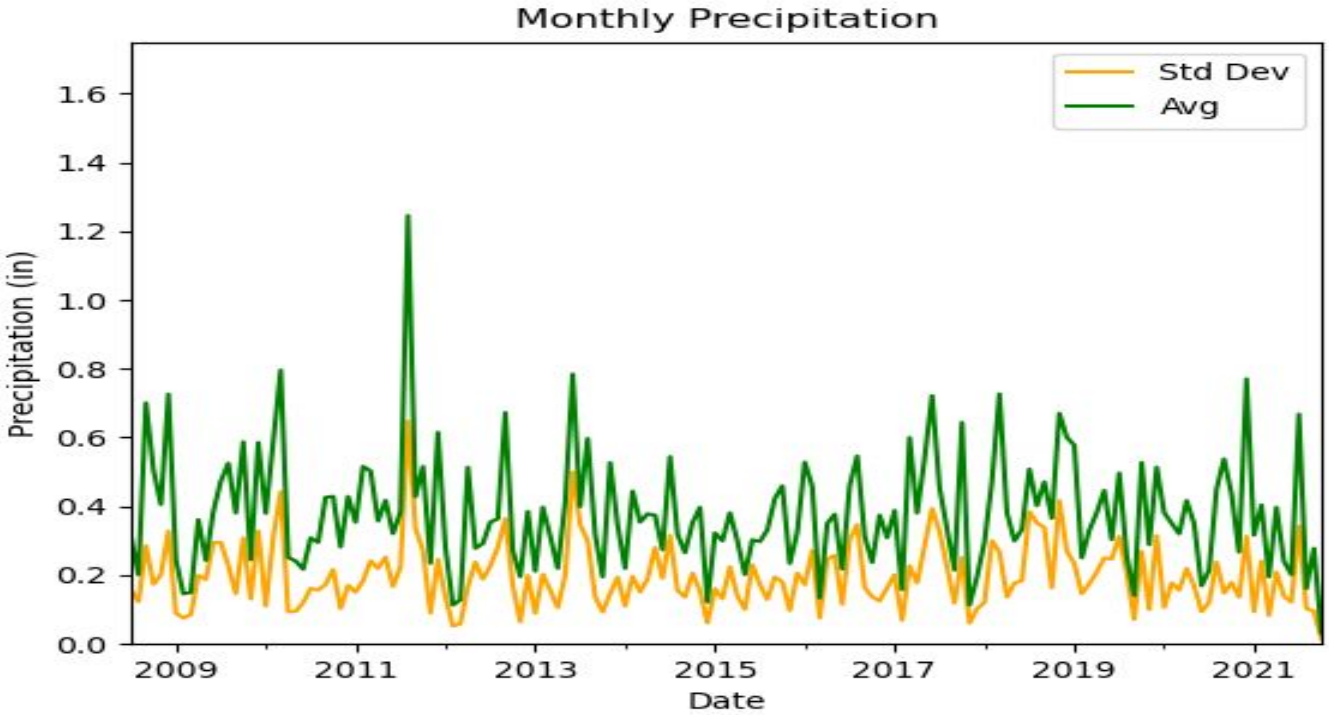
- This concerns with everyone's daily lives. Weather affects how we all go about our day.
- Current and historical weather analysis is necessary for forecasting weather.
- This can potentially change how we place our trust in mainstream media:
    - From distrusting the media to having a little more faith
    - From trusting the media to being a little more skeptical

Monthly Average Temperatures Over Time

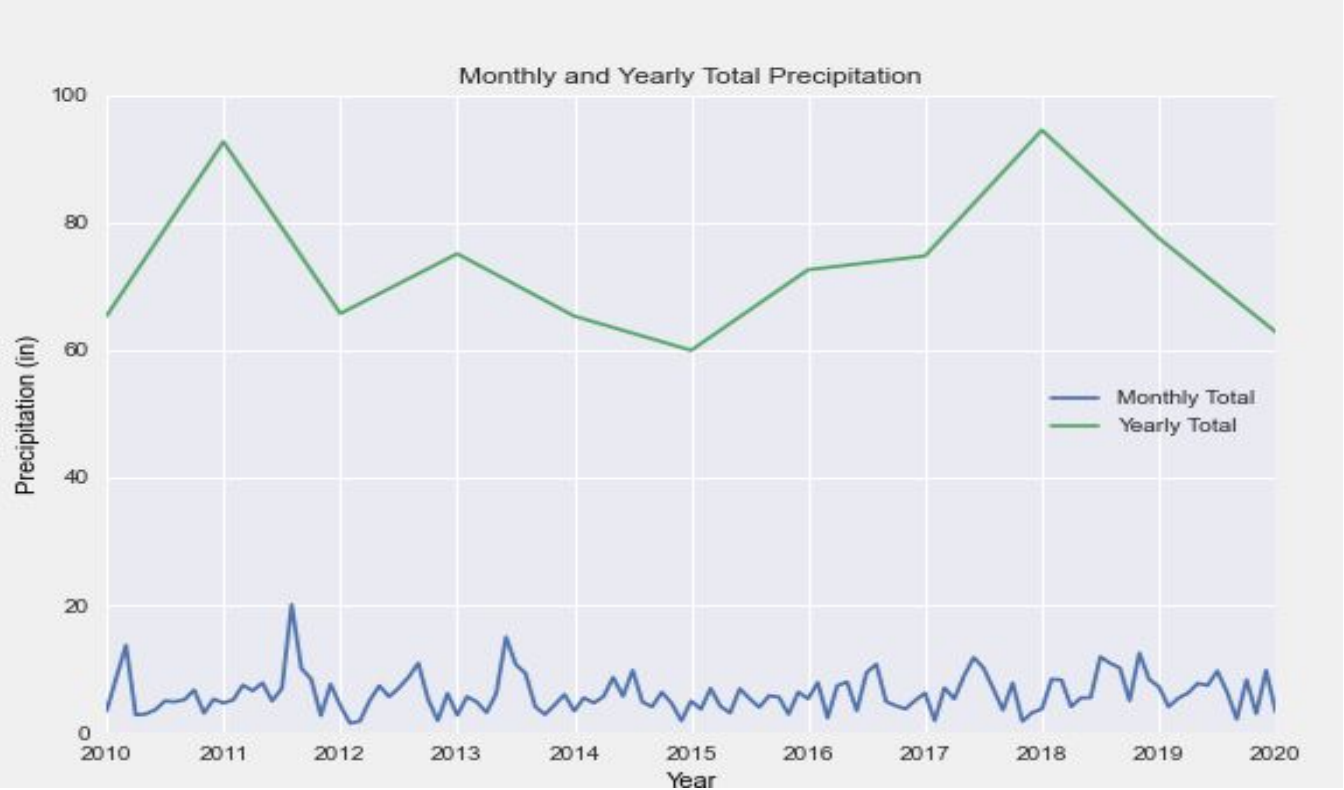




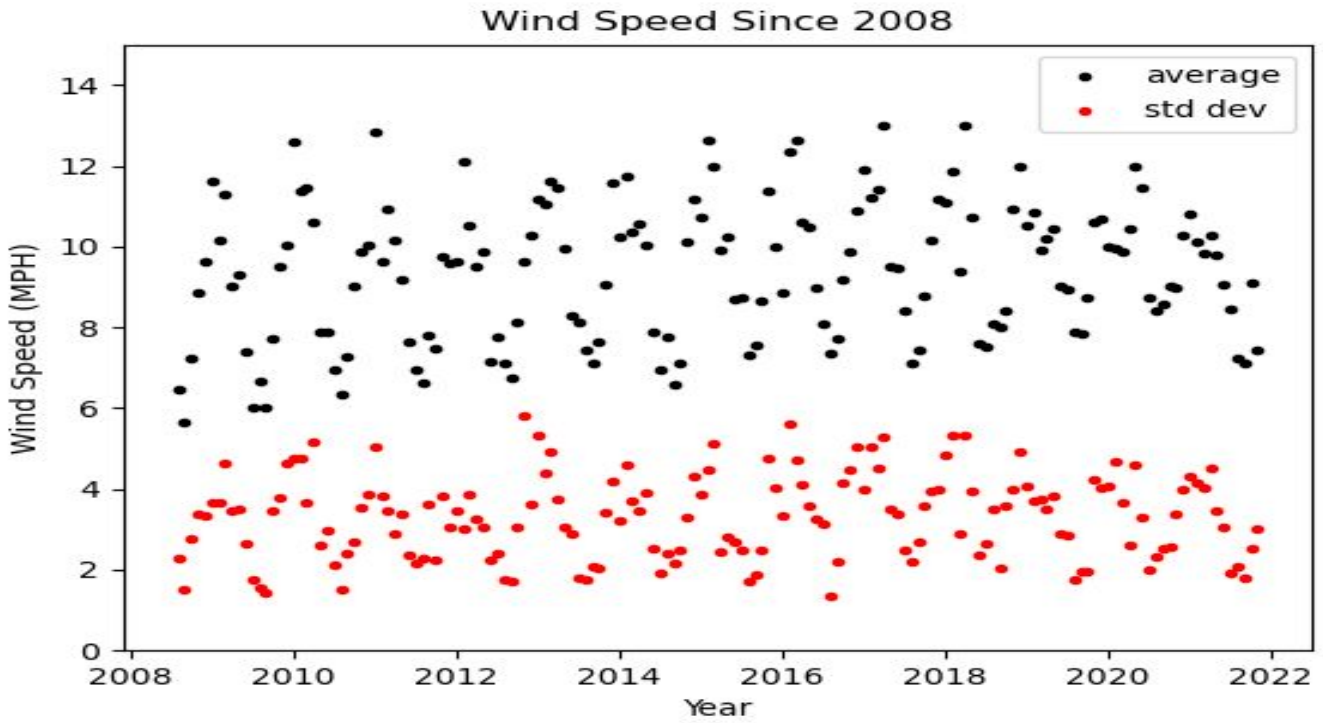
Monthly Avg Precipitation over Time



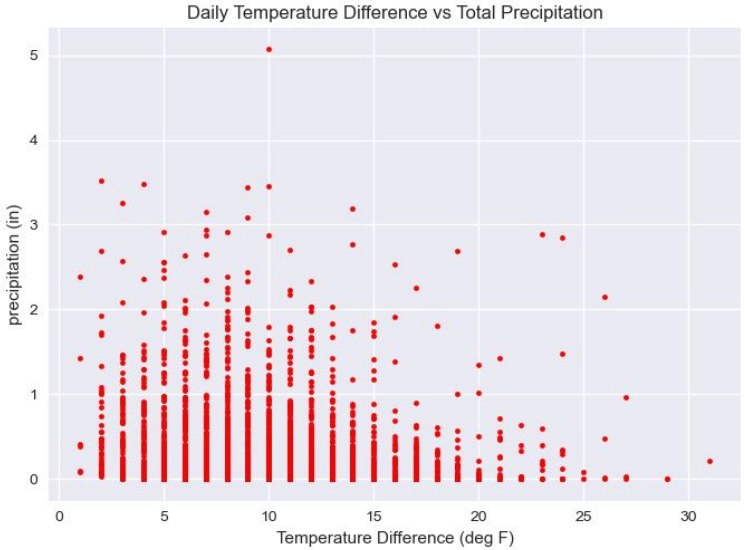
Monthly Total Precipitation Over Time

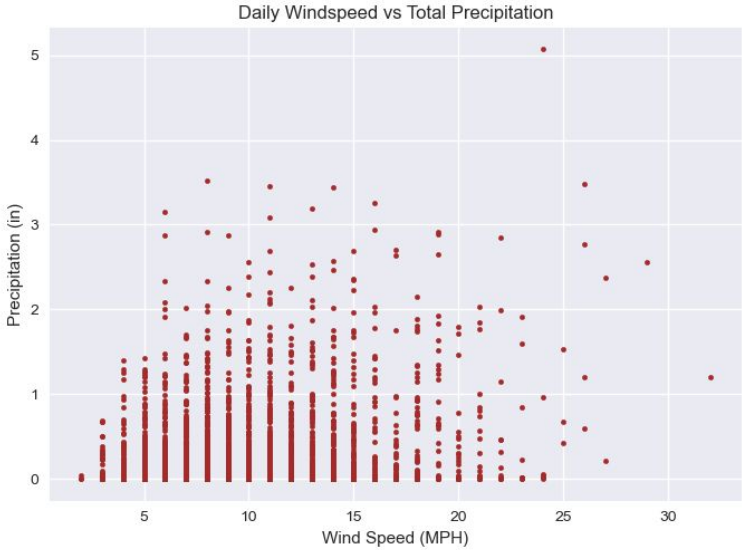


Wind Speed Over Time



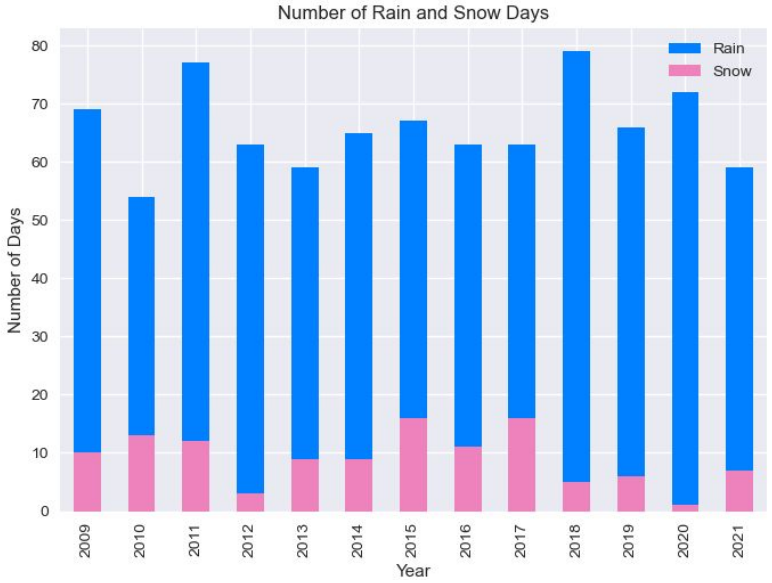
Comparing Different Features to Precipitation

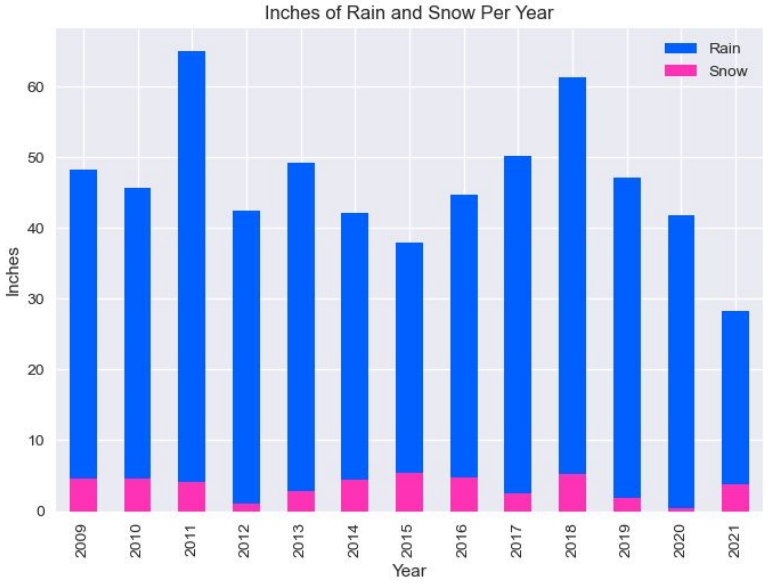




These graphs show little correlations. It only shows that whenever it rained the temperature range was mainly within 5 - 15 deg F and wind speed was mainly 5 - 15 mph.

Analyzing Rain and Snow





There is no clear downward or upward trend with the amount of rain and snow that falls in a year, and the same can be said about the number of occurrences.

Conclusion

- weather has not changed much over the last decade
- temperature and precipitation has been pretty much consistent including the amount of rain and snow
- no clear correlation between temperature difference and precipitation
- no correlation between difference of wind speed and gust and precipitation

Future Work

- Similar analysis can be done for different cities and states and see if global warming has affected those locations differently.
- Potentially use the dataset to create algorithms to predict future weather.
- Potentially combine the used data table with other data tables with other useful features to find positive correlations.