

Impact of Weather on Collisions

Does temperature correlate with the number of crashes?

Examines the number of vehicle collisions in New York City from 2019 - 2022 and the corresponding crash date temperatures.

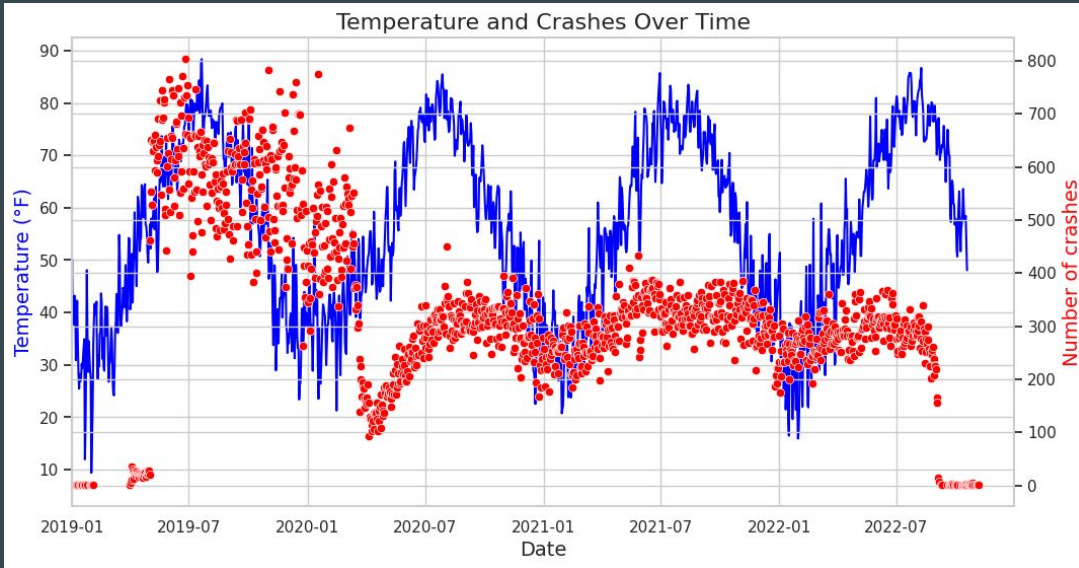


Figure 1. Temperature line plot (blue) and vehicle collision count scatter plot (red)

A weak positive correlation exists.

Possible factors include heat-induced **fatigue/road rage**, **poor visibility** from sun glare, and **increased traffic** from traveling, all of which are commonly associated with higher temperatures/summer months.

Though the correlation is weak, the Department of Transportation and Federal Highway Authority could implement seasonal **awareness campaigns** and increase **traffic monitoring** during extreme weather.

Outstanding questions involve **collision severity** and **vehicle type**. This could examine whether certain drivers are more vulnerable in extreme weather.

References

"API Reference — Pandas 1.5.2 Documentation." Pandas.pydata.org, pandas.pydata.org/docs/reference/.

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"Pandas.core.groupby.DataFrameGroupBy.agg — Pandas 0.22.0 Documentation." Pydata.org, 2024, pandas.pydata.org/pandas-docs/version/0.22/generated/pandas.core.groupby.DataFrameGroupBy.agg.html.