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COMP3800

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Question:

* How does the temperature affect the Mean Wind Speed (MXSPD) variable?
  + How does the time of year relate to it?
  + Why does the temperature affect the MXSPD variable?
  + What causes this trend?

Introduction

* The data source focuses on the global surface temperature over the course of 24 hrs. The graphs showed a steady increase in the temperature and steady decreases in MXSPD based on each month in the year.
  + <https://catalog.data.gov/dataset/global-surface-summary-of-the-day-gsod1>
* Overall, the increases appeared to be during the spring and summer seasons for the temperature, and the winter seasons in the first half of the year.

Paragraph 1

* The temperature steadily increased over an annual period.
* The MXSPD attribute steadily decreased based on the temperature.

Paragraph 2

* The temperature steadily increased over an annual period. In January, the temperature was at its lowest. However, the rest of the year including December were higher in temperature.
* The MXSPD attribute steadily decreased based on the temperature. The temperatures corresponding to the first winter are increasing with the remainder of the year slowly decreasing. The graphs illustrated that as the annual temperature increased, the MXSPD variable decreased.

Exploratory Analysis

* How does the time of year relate to it?
  + The year’s seasons determined the strength in wind gusts.
* Why does the temperature affect the MXSPD variable?
  + The temperature contributes to air pressure conditions, which can control wind gusts.
* What causes it to be warmer in November and December despite being winter months?
  + The air pressure would not be as great as it is for the first winter.

Summary

* Over the course of the year the seasons’ temperatures caused the wind gusts to subtly dissipate. There may likely be other factors adding to the decrease in wind gusts not explicitly shown.

Charts

