Exploration of Global Climate Change

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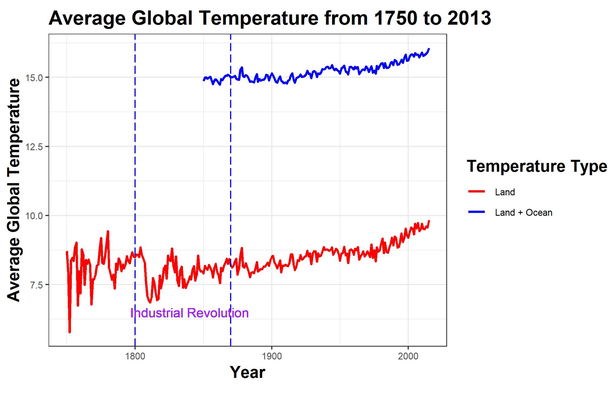
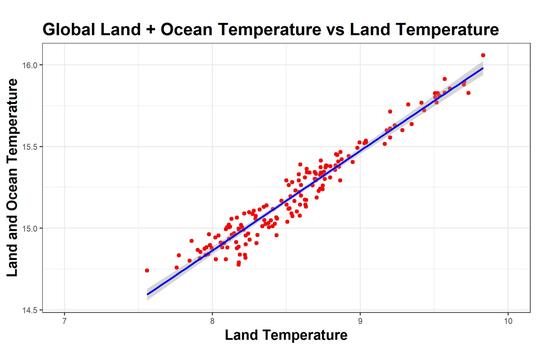
Background

The dataset contains the temperature history from 1750 to 2013. The dataset also looks at temperature in major countries, states, and cities.
We were hoping to find trends in the average temperature over time and in different regions of the globe.

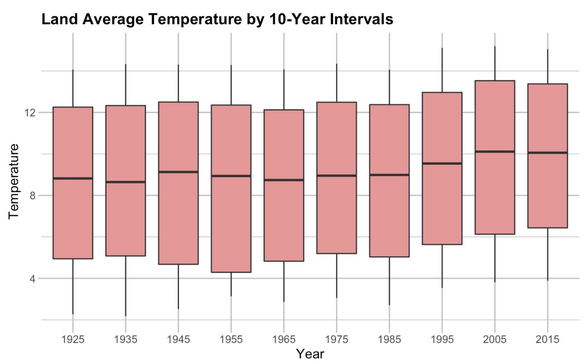
Global Temperature Trends



The global temperature is increasing. The graph specifically highlights the period of industrial revolution, where we can see drastic increases in temperature in some years.

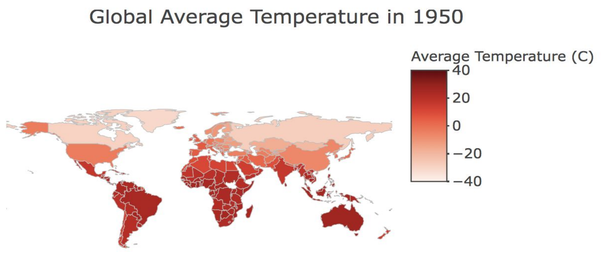


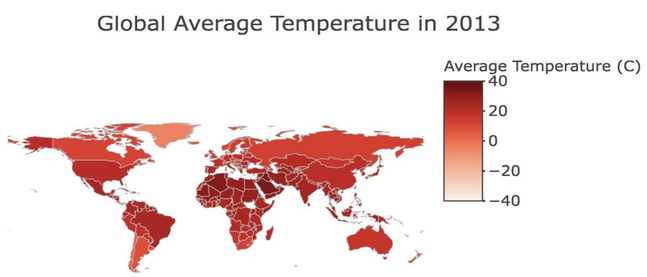
The global land temperature and ocean temperature are increasing in a linear fashion over time.



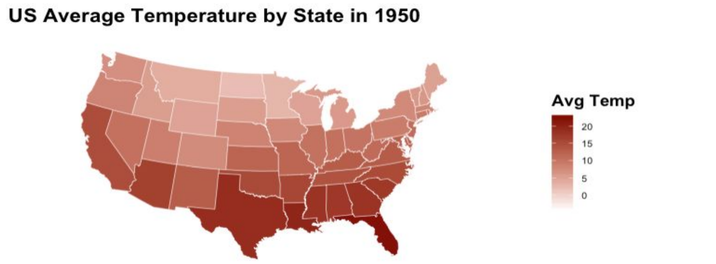
We can see that the average land temperature over the past 100 years has steadily increased, but not enough to show any statistically significant increasing trend.

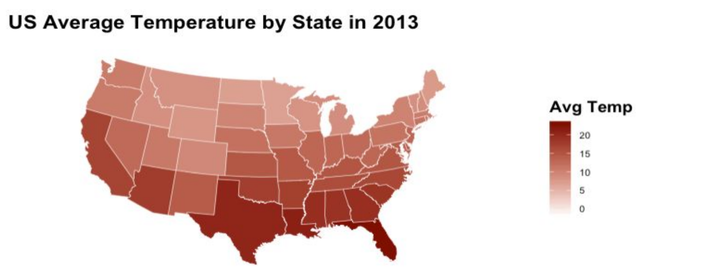
Temperature Trend By Region



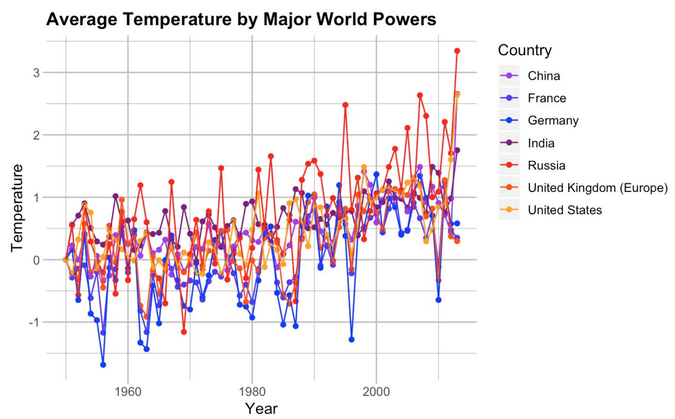


These graphs compare the average temperatures in each country in 1950 and 2013. When comparing the world from 1950 to 2013, we can see that the world, especially the northern hemisphere, is getting much hotter.

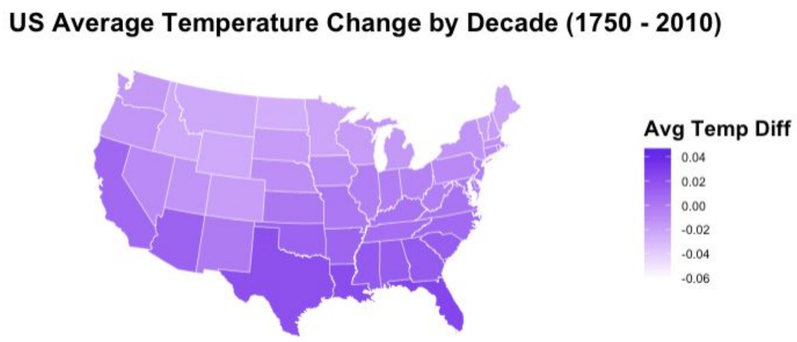




The United States shows similar trends as the rest of the globe. Overall we see an increase in temperature but we can also see that those states in the North have had a bigger change in average temperature compared to those in the South.



Every major world power shows an upward trend in average temperature between the years of 1950 and 2013.



By looking at the average difference between decades of each state in the US from 1750 all the way to 2010, we can see that those states in the South are getting hotter faster compared to those in the North.

Conclusion

Through our exploration of this dataset of global temperatures, we have found that over time, there is a clear upward trend in global average temperature. The change in temperature by region is also interesting. We see that countries in the Northern hemisphere and Northern states in the US are getting hotter in the 1950 to 2013 period than their Southern counterparts..