CSE 599 B1 Project

Visualization of Climate change & its correlation with pollution

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- **What is your data?**
  - US Pollution Data: https://www.kaggle.com/sogun3/uspollution/downloads/uspollution.zip
  - Climate Change data (global land temperature) https://www.kaggle.com/berkeleyearth/climate-change-earth-surface-temperature-data/downloads/GlobalLandTemperatures.zip

- **Who are your users?**
  - Environmental Activists and Climate change advocates.
  - This project can serve as an eye opener to people denying climate change (like the president-elect :/).
  - Activists working against the utility companies denying adverse impact of pollutants on climate.

- **What questions are users asking?**
  - How does average land temperature map across the globe?
  - Which are the hottest countries in the world?
  - What is the trend of temperature change over the years? Is global warming real?
  - What are the state wise mean for the various pollutants (NOx, O3, CO) in US?
  - What is the trend in amount of pollutants over the year?
  - Does the pollutant trend adhere to the temperature rise trend?

- **What are the use cases (user-system interactions) to answer their questions?**
  - Mapping the average temperature on a globe.
  - Bar plot of countries according to the average temperature.
  - Plot showing the average global land temperature over the years.
  - Plot showing the average land temperature of each continent over the years.
  - Scatter plots of mean pollutant value over the years and across US states.
  - Plots showing state wise change in pollutant gases.
  - Plot relating temperature & mean pollutant value.

- **What issues are there ("known unknowns") with building your system?**
  - Visualization tool to create state wise plots for the pollutants.
  - Visualization tool for creating a dynamic globe showing temperature of the countries.