Group 19

Proposal: Forecasting Global Climate Change Patterns and Analyzing Impact

---

Potential Questions to Address:

- Is there a relationship between temperature change and location or not?
- Correlation between factors that affect global warming (i.e. earthquakes, volcanic eruptions, year..), and the impact of each feature on temperature to decide which ones contribute to climate change the most
- Can we forecast the rise in temperature due to global warming? If yes, then what is uncertainty in our predictions?
- And more such questions that come along while exploring the dataset

Real World Application:

- To provide compelling evidence to raise awareness about global warming and its impacts.
- To provide valuable insights for governments and environmental agencies, offering data-driven guidance on effective strategies to mitigate climate change and address its effects on vulnerable regions.

Dataset:

- Berkeley Earth data page (https://berkeleyearth.org/data/)
- Significant Volcanic Eruption Database (https://www.ncei.noaa.gov/products/natural-hazards/tsunamis-earthquakes-volcanoes/volcanoes)
- Carbon Dioxide Release Dataset (https://gml.noaa.gov/webdata/ccgg/trends/co2/co2_mm_mlo.txt)
- Population data (https://ourworldindata.org/population-growth#explore-data-on-population-growth)

**going forward we might include more datasets to improve the model performance*

Project Steps

Steps	Timeline	Person in Charge (in decreasing bandwidth order)
Data Collection, cleaning, and Preprocessing	28th Oct - 3rd Nov	Harry Liu, Rishabh Thapliyal, Yiqing Jin, Jianxiao Cai,
Feature Engineering, Modeling	4th Nov - 10th Nov	Rishabh Thapliyal, Yiqing Jin, Jianxiao Cai, Harry Liu
Visualizations, Analysis of results	12th Nov - 18th Nov	Yiqing Jin, Jianxiao Cai, Harry Liu, Rishabh Thapliyal
Final Presentation	19th Nov - 25th Nov	Jianxiao Cai, Harry Liu, Rishabh Thapliyal, Yiqing Jin