**DATA 607 FINAL PROJECT PROPOSAL**

**Climate Change – Where are We?**

**Climate Change** is by far the hottest concept around the world today. We can no longer afford to describe this phenomenon as a topic for discussion. While scientists continue to explore climate change and its effects, their research shows that we are experiencing the beginning effects of it and we could be close to if not too late to be reversing these effects on us, our way of life and the future of earth. Globally, 2020 was the hottest year on record, effectively tying 2016, the previous record. Overall, Earth's average temperature has risen more than 2 degrees Fahrenheit since the 1880s.

Our project will examine climate change from the following perspective. We will provide data analysis on trending climate change topics from social media such as twitter and google trends. We will use API (application Programming Interface) calls to the Library of congress to research the US Congress’s work on climate change. We will seek out quantitative data in csv, json, and/or MySQL formats to support or not support the qualitative arguments being made on the global front. We will use linear modeling and regression techniques on available data to predict possible changes in real world consequences of climate change such as sea level rise, beach erosion and increased instance of severe weather pattern.

Team members

Ramnivas Singh

Deepak Sharma

Tage Singh

**Project Brief**

* Why did we choose this project?
  + Climate change will have the most consequential long-term effects on our race and the planet.
* What issue are we attempting to address?
  + We want to examine the qualitative work and global discussions from a trending perspective, google trends, twitter etc.
  + From a quantitative perspective we will examine
    - Rising temperatures
    - Declining air quality
    - Extreme weather
* How is this work different form existing work?
  + Much of the work in public media today deal with either the qualitative aspect or the quantitative aspect, we will attempt to provide material on both aspects and conclude with a discussion about them.
* What are the data sources?
  + Library of congress
  + Google trends
  + Twitter
  + Kaggle
  + NOAA
* What are the challenges/gaps?
  + Producing a project that can deliver both a qualitative and quantitative view of climate change and its’ collateral effects. Most projects deal with either discussions, we will attempt an under the hood brief of both sides of the equation.

Project layout

Data gathering, transformation. - Tage Singh/Ram

EDA (Sentiment Analysis, qualitative, quantitative) ----All

Modeling, trends ------ Deepak/Ram

Conclusion/Discussion -All

Possibility – API of R modeling using Plumber / Ram

S3 object storage,

AWS RDS MySQL

XML, JSON, CSV transformation

Data Security and Management

Google Trends

Twitter API

Congress API