Public Opinions on Nuclear Energy from Social Media

The Capstone Experience

Team Anthropocene Institute

Akshit Bansal
Grant Carey
Shrey Jindal
Doyeon Kim
Aidan Lane
Katherine White

Department of Computer Science and Engineering
Michigan State University

Fall 2022
Project Overview

• Anthropocene Institute is a climate-driven think tank
• Public division and misinformation regarding nuclear energy present a challenge to Anthropocene Institute
• Developing a web application to display nuclear energy data by utilizing data from social media
System Architecture

Back End
- Twitter API
- Python
- Google Cloud Functions
- Google Cloud Firestore
- Natural Language API

Front End
- HTML5
- JavaScript
- React
- Google Maps APIs
Sentiment Map

National Sentiment Breakdown

Avg National Sentiment: -0.146
Time Window being shown: 11 2022
Average Sentiment and Topics
Case Study

Nuclear Sentiment Case Study

Energy sources support

- Female
- Male
- Democrat
- Independent
- Republican

Wind solar energy | Oil | Natural gas | Coal | Nuclear energy

Nuclear energy support | Nuclear energy concern
Mobile

The Nuclear Sentiment Analysis Tool (NSAT) is an application for researchers to discover how the public feels about nuclear energy through social media posts. By filtering through these posts, the application displays public sentiment by region and tracks these feelings over time. In addition to tracking general positive or negative feelings, NSAT looks for correlations between other factors and their results on sentiment.
What’s left to do?

• Features
• Stretch Goals
  ▪ Coal Sentiment Map
  ▪ Share Button
  ▪ User Topics Data
• Other Tasks
  ▪ Finalize Code and Fix Any Remaining Bugs
  ▪ Fix Chart Resizing Bug
Questions?