Project Plan Presentation
Public Opinions on Nuclear Energy from Social Media
The Capstone Experience
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Project Sponsor Overview

• Anthropocene Institute is a climate-centered think tank
• Looks to find solutions to the modern climate crisis
• Works with entrepreneurs, investors, and institutions around the world
Project Functional Specifications

• Public division and misinformation regarding nuclear energy present challenge to Anthropocene Institute
• Gather data on nuclear energy public opinion
• Provide insight into the underlying causes for the public's view on nuclear energy
• Create a web application to display results
• Allow Anthropocene Institute to better educate the public on nuclear energy and champion its use
Project Design Specifications

• Interactive map with opinion overlay
• Live feed module with keyword search
• Key categories chart
• Survey data over time
Screen Mockup: Interactive Map
Screen Mockup: Live Feed
Screen Mockup: Trending Searches
Screen Mockup: Survey Data
Project Technical Specifications

• JavaScript, HTML, Python, and React for Front-end
• Python and Flask for Back-end
• Google Cloud Platform for Firebase, AutoML, and Cloud Natural Language API
• Twitter API for data collection
• Google Maps API for displaying maps
Project System Architecture
Project System Components

• Hardware Platforms
  ▪ None

• Software Platforms / Technologies
  ▪ Python, HTML, JavaScript
  ▪ Google Cloud Platform
  ▪ Google Firebase
  ▪ AutoML
  ▪ Flaks, React
  ▪ Twitter API, Google Maps API, Cloud Natural Language API
Project Risks

• Real-Time Data Collection and Modelling
  ▪ Public opinion is susceptible to change through external factors over time
  ▪ Performing computations for every region separately to minimize the processing and storage requirements

• Recognizing Trends in Real-Time
  ▪ Real-time analysis compromises on the ability to find deep insights and correlations to identify trends
  ▪ Identifying common topics and their frequency of appearance using NLP

• Identifying Bots
  ▪ Social media platforms have a large number of bots among their users
  ▪ Recognizing bots and cleaning data while reducing their weight

• Obtaining Location Data and Mapping
  ▪ The Twitter API does not provide location data for most users
  ▪ Get location information from user profiles. Map based on region rather than exact coordinates
Questions?