Project Proposal

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Motivation:
We propose to conduct research on the topic "Climate Change" which is considered to be one of the greatest threats in the world as the risks associated with it are serious and uncertain.

The primary reason for us to research in this domain stems from our personal experiences. We both have been living in Northern India, since birth, and over the past 20 years have witnessed first and second-order impacts of climate change around us. Over the past decade, there has been an increase in both frequency and intensity of heatwaves in the majority of the Indian subcontinent during summers which makes it extremely difficult to live and work outside. Not just that, during the winter months, millions of people have to survive through extremely dangerous levels of pollution driven by GHG emissions. It is widely accepted that various regions in Asia will get disproportionately affected by the adverse consequences of climate change. All these experiences have made us genuinely concerned about our collective future and hence, wanted to explore this area from the learnings of this course.

Research Questions:
With this project, we would like to investigate two crucial questions:

1. Topic Popularity:
   Since climate change consists of a vast range of topics, we would like to gain insights into the most frequent topics that come along with climate change such as heatwaves, water shortage, GHG, and much more.
2. Sentiment Analysis:
   It might be surprising to know that certain people also consider climate change as a hoax and therefore, it is intriguing to study people's perception of it. We will classify people's opinion towards this topic as negative, positive or neutral.

Data:
For data collection, we are planning to use Twitter as it is a social platform with millions of users and we would be able to collect sufficient amounts of data to find relevant insights. Moreover, there is a Python library "Tweepy" available to scrape data from Twitter and thus, will be helpful for us to collect data.