The American Geophysical Union is an interdisciplinary non-profit organization. This American-based organization consists of members residing in 133 countries with a breakdown of roughly 70% professional and 23% students. The AGU hosts yearly conferences, the content of which spans across multiple disciplines regarding earth and space sciences. The data from presentations spanning from the year 2000 to 2015 has been archived. This data is located in a database that is maintained by the organization. The AGU currently struggles to find ways to make this data useful for its members.

Ultimately, our group seeks to assist the AGU in creating intuitive ways to access this information, as well as encourage opportunities for research collaboration among its member base. We have created a series of software in order to analyze this data. These are written using the Python programming language. We chose Python because it is an open-source language, and it is familiar to our group from undergraduate coursework.

Thus far, we have analyzed the specific keywords used in each of the archives, and recognized trends throughout the years. In particular, we found that throughout the years, interest in disciplines relating to climate change have drastically increased. By visualizing this data, we are able to analyze the information and parallel the occurrence of significant world events to the influx of research interests of the AGU members. For instance, in 2005, Hurricane Katrina took effect, and the next year, research in the biogeochemical studies spiked. From the year 2014 to 2015, the number of submissions regarding the impact of global climate change more than tripled, and this may be attributed to the recent U.S. election, where more people than ever have attended to these issues.

Through our research, we can help the AGU identify the interests of its members, further, the interests of our country. This, in turn, can better support scientific endeavors and visibility about these issues.

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