**UCI Data Analytics**

**Global Energy Story: Project #2 (Andrew, Aaron & Cristalle)**

**Topic**

Our project will focus on global energy statistics and may include usage among different types of energy, production, import and export. The CIA world factbook reports global information for education and analysis. Energy production and usage is an important aspect of economy and daily life for citizens. We will find a story as we explore this energy data.

**Data**

Our group will be web scraping data from the publicly facing CIA World Factbook website (<https://www.cia.gov/library/publications/the-world-factbook/>). There is no downloadable dataset or API available for this information. This website contains data on every country in the world, including ranking each country in various global metrics.

The website is structured in a well-organized way but we will have to loop through several levels for each country to obtain the necessary data. The information on the website is arranged in a home page drop down menu which lists each country in the world. The data for each country page is organized into categories, fields and subfields. The main categories include geography, people and society, economy, energy, communications, transportation, military and security.

We will create a script with Python (using the Beautiful Soup library) to scrap the specific data points we want for each country and then create and house the data using MongoDB. This will allow us to capture both numeric and image data as needed.

**Visualization**

To make global comparisons we will use Leaflet.js to create a world globe heat map. The heatmap shows a color gradation based on the data value linked to each country. This provides an easy and impactful way to visualize data. Each colored in country will also have a hover over pop up box including the overall rank for the data point on display.

**Screenshots of Global Mapping Inspiration**





