**Project Title**: Emission of Atmospheric Pollutants and Asthma related hospital visits in California Counties 2011-2016

**Team Members**: Anthony Phelps, Jasmin Johal, Rama Pranadinata, Robina Shaheen

**Project Description/Outline**:

**Research Questions to Answer**:

What are the impacts of atmospheric pollutants (Ozone, CO2, & PM2.5) on human health specifically asthma related hospital visits.

And how has global warming impacted the rate & size of wild-fires in California over the last decade.

We will use CO2 as a marker for human induced (anthropogenic) activities

**Parameter to be tested:**

In order to address this challenging question, our team will analyze various indicators of changes in the atmospheric composition and how this change is impacting hospital admissions for asthma related illnesses.

1. Atmospheric composition such as ozone, carbon dioxide, PM2.5 (fine particulates) and asthma related hospital visits.
2. Health consequences such as asthma and relationship with ozone and PM2.5.
3. Incidence of global wildfires and temperature relationship (if we have time)
4. Make a twitter bot that queries the EPA API and if a facility is emitting pollutants above a certain PPM threshold, find facility name and tag that company in a twitter post with the graph. (if we have time)

In order **Data Sets to be Used**:

* CHHS Asthma ED Visit Rates: <https://data.chhs.ca.gov/dataset/asthma-ed-visit-rates-lghc-indicator-07/resource/781708cb-7b25-4967-b760-54b2a4b8cfed>
* Air Quality data archive from EPA websites and world climate data.   
  https://aqs.epa.gov/api  
  <https://aqs.epa.gov/aqsweb/documents/ramltohtml.html#serviceAvailable>

**Rough Breakdown of Tasks**:

|  |  |
| --- | --- |
| **Team Member** | **Tasks** |
| Anthony Phelps | 1,2,4 |
| Jasmin Johal | 3,4 |
| Rama Pranadinata | 3,4 |
| Robina Shaheen | 1, 2,4 |

Tasks for each question: querying data (e.g. via API), merging datasets, cleaning up data, analyze data, create 2-3 visualizations, summarize findings, discuss implications