Project Title: Air Pollution Effects on the Respiratory System

Group members: Paul Schnase, Deborah Dakoury, Loraine Gomez, Jessica Ermovick, and Ariana Gacia

Project Description/Outline:  ***The team is trying to determine whether the death rate for respiratory illnesses is higher in areas with high air pollution than in areas with low air pollution. We will be gathering data through open weather API for the air pollution levels and through the CDC data for cause of death from January 2020 to September 2022.***

Research question:  ***Is the death rate for respiratory illnesses higher in areas with higher average air pollution levels than those living in lower air pollution levels?***

***Null Hypothesis: There is no difference in death rates due to respiratory illnesses between high and low air pollution areas in the US***

Data Sets:

open weather api: <https://openweathermap.org/api/air-pollution>

cdc: <https://www.cdc.gov/nchs/fastats/copd.htm>

who: <https://www.who.int/health-topics/chronic-respiratory-diseases#tab=tab_1>

***Respiratory Illness/Death Dataset: to match dates with OpenWeather:*** [***https://data.cdc.gov/NCHS/Monthly-Provisional-Counts-of-Deaths-by-Select-Cau/9dzk-mvmi/data***](https://data.cdc.gov/NCHS/Monthly-Provisional-Counts-of-Deaths-by-Select-Cau/9dzk-mvmi/data)

Rough Breakdown/Tasks:

1. Proposal –due monday
2. Api call to open weather–to a database (sql)
3. cdc/who web scrape to the same database
4. Python Flask app API
5. Make html/css files
6. Use a new JS library
7. Leaflet or Plotly?
8. Final Page
9. Presentation