**Project 3: Weather and Air Quality Index Apps**

*By Kevin Jeong, Sushma Mylavarapu, Faraz Tabatabaei*

**Abstract**

Outdoor air pollution is defined as the presence of one or more substances in the atmospheric air at concentrations and duration above the natural limit. Air pollution with particle matters (PM), especially those with less than 2.5 m, has been the focus of most outdoor air pollution studies due to its ability to penetrate the long tissue and induce local and systemic effects. Recently, wildfires are a growing international concern due to climate change increasing the length of the fire season and the frequency of fires. Wildfire smokes contain many air pollutants, including particulate matter (PM) and carbon monoxide. Unlike other air pollution, smoke can move in and out of a community rapidly and make the air unsafe very quickly. Our goal is to create a live map that informs users specific conditions such as: PM10, PM2.5, CO and AQI levels. This will be accompanied by a dashboard of detailed graphs showing the patterns and progression of air pollutants.

2 APIs were used to complete this project. The Open Weather API was used to collect data on weather data. Open-Meteo API was used to collect data on Air quality and pollutants.

Open Weather: <https://openweathermap.org/current>

Open-Meteo: <https://open-meteo.com/en/docs/air-quality-api>

**Tasks**

* Weather App:
  + Create HTML file
  + Create style.css file
  + Create script.js file
* Live Map
  + Create HTML file
  + Create style.css file
  + Create script.js file
* Dashboard
  + Create live graph that shows PM10 and PM2.5 levels
  + Create live graph that shows CO levels
  + Create live graph that shows AQI levels
* Presentation Slides