**Air Quality Index Analysis Write-Up**

Group 10: Ewansiha Simmons, Phil Faulkner, Kendall Young

1. What was the change in the average AQI (Pre-Covid/Post-Covid) for the countries in dataset?

* Major Findings
  + AQI went down 14% from 2018-2021
  + Air quality was record low when pandemic began in 2020
  + Trend start to go back up in 2021 (lockdown restrictions lifted)
* Implications
  + Greater restrictions during lockdown periods
  + Reduced vehicle emissions greatly improved air quality
  + Future emphasis placed on vehicles that do not emit air pollutants
    - More electric vehicle production

1. Is there a correlation between the Air Quality Index and temperature change?
   * Major Findings
     + Average temperature went up 45% from 2019-2020
     + AQI was lowest when pandemic began in 2020
       - Higher on average temperature lead to better air quality?
   * Implications
     + Average temperature has continued to rise since 2020
       - COVID-19 effects?
2. Is there a relationship between the Air Quality Index and population by country?
   * Major Findings
     + There was no defined relationship between the AQI and population size
       - Largest countries (China) had average AQI while mid-size countries had higher AQI
       - Larger sample size of countries may provide different perspective
   * Implications
     + Reviewing AQI by city population may provide more insight on air quality impact
       - Population by Country may be skewed depending on how many cities make up country
3. How does AQI effect the average life expectancy?

* Major Findings
  + There was a direct correlation between average life expectancy/AQI
    - Higher AQI generally meant decrease in life expectancy
* Implications
  + Are there other additional factors that would influence the average life expectancy?
    - How else can we evaluate AQI?

**Resources**

**Most Polluted Cities and Countries (IQAir Index)**

* [**https://www.kaggle.com/datasets/ramjasmaurya/most-polluted-cities-and-countries-iqair-index?datasetId=2029905**](https://www.kaggle.com/datasets/ramjasmaurya/most-polluted-cities-and-countries-iqair-index?datasetId=2029905)

**Covid-19 Air Pollution Data**

* [**https://www.kaggle.com/datasets/ramjasmaurya/most-polluted-cities-and-countries-iqair-index?datasetId=2029905**](https://www.kaggle.com/datasets/ramjasmaurya/most-polluted-cities-and-countries-iqair-index?datasetId=2029905)

**Life Expectancy at Birth (2019/2020)**

* [**https://ourworldindata.org/grapher/life-expectancy-at-birth-total-years?tab=table**](https://ourworldindata.org/grapher/life-expectancy-at-birth-total-years?tab=table)