Air Pollution Across the Globe

Sneha Arya, Greer Moran, and Gabrielle Smeltzer 2025-04-24

Table of Contents:

Research Question 1

How does pollutant air quality index values (e.g. Carbon Dioxide, Ozone, Nitrogen Dioxide, and Particle Matter) impact the overall air quality index, which are most contributing to poor air quality index?

Plan

- 1. Load/get needed packages in an R Chunk
- 2. Read csv
- 3. Use {dplyr} package to use rename() to replace column names
- 4. Get linear regression model using () and summary()
- 5. Go to Dr.Hatfield and ask how to clean summary() and use kableExtra

Call:

```
lm(formula = AQI ~ CO + Ozone + NO2 + PM, data = cleanAQIdata)
```

Residuals:

```
Min 1Q Median 3Q Max -26.664 -3.527 -1.830 0.546 167.393
```

Coefficients:

```
Estimate Std. Error t value Pr(>|t|)
(Intercept) -0.603909
                      0.111439 -5.419 6.05e-08 ***
CO
            0.017075
                      0.039702
                                 0.430 0.66715
            0.157513
                      0.002338 67.371
                                       < 2e-16 ***
Ozone
NO2
           -0.036205
                      0.013496 -2.683 0.00731 **
PM
            0.980138
                      0.001264 775.385 < 2e-16 ***
Signif. codes: 0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
```