CWRU Data Analytics Boot Camp

Spring 2020

Project 2 Proposal

Group 3: Kafui Ahedor, Chris Bock, Ben Snyder, Ali Rizvi

COVID-19 Effects on Air Quality

Introduction

The worldwide COVID-19 pandemic has reshaped the culture, economics and socioeconomics across the globe. While the real story behind COVID-19 is incredible tragic where people are dying by the thousands daily and the unemployment rate is at a level not seen since the Great Depression, are there any silver linings to this pandemic? Scientists are coming together in an unprecedented, data sharing effort to uncover the exact mechanism of action for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) to find a cure for all of humanity. Alternative, e-learning education forums have seen an increase in activity and acceptance rates colleges are expected to increase. And because of unique large-scale shelter-in-place orders, pollution levels have seen an unparalleled decline; the peak of Mount Everest can be seen from the capital city of Katmandu for the first time in our generation and fish and even dolphins are seen swimming in the Canals of Venice. It is this last positive outcome, however brief it may be with countries starting to lift restrictions, that our group will explore.

Proposed Project

We plan to use and APT or scrape or download historical data from the web looking at the Air Quality Index (AQI) over a period of time before and during the COVID-19 pandemic. We intend to visualize the data in Leaflet and Plotly looking at trends and correlations to tell the story of how lockdown restrictions changed the world’s pollution problem, in hopes that it could guide future ideas of how to combat the world’s climate crisis,

Potential Data Sources:

|  |  |  |
| --- | --- | --- |
| **Source** | **Format** | **Description** |
| EPA.gov | API | US-based data in multiple formats, including historical data. 2020 data might be difficult to obtain as the site explicitly states that data can lag by 6 months – which is directly in the window we wish to observe |
| Aqs.epa.gov | CSV |  |
| Aqicn.org/data-platform/covid19 | CSV | Data can be obtained for multiple different air quality metrics as well as weather metrics such as temperature and wind speed. Data can also be |
| Breezometer.com |  |  |
|  |  |  |

Initial Assignments:

* Kafui Ahedor: GitHub pages and Heroku
* Chris Bock: Project proposal, Trello board
* Ben Snyder:
* Ali Rizivi:

Tasks will be updated on a Trello board as the project continues