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CPSC 408
Final Project Proposal

COVID-19 Relational Database Proposal

- The application will update daily with new data of new cases and temperatures
- Given the current worldwide epidemic on our hands, it is the responsibility of those who can help to help in whatever way they can. Given our computer science experience, and our newfound data analytics experience, we decided the best way to help was by increasing accuracy information. There is the notion that Covid-19 spreads easier in colder climates and slows in warmer climates. With our correlation of data, we want to decide whether this thesis is true in order to help better combat the spread of the virus.
- We will be comparing the growth of the virus to the climate of the area, in order to accurately predict if temperature affects the growth of the virus. We will be utilizing John Hopkins GitHub repository for a live database of cases of the virus in a specific area. We will also be utilizing Google's BigQuery database to access historical weather data mapped from the Global Historical Climate Network. By utilizing these public datasources, we will compare how temperature affects the rate of growth of the virus.
- We are proposing to make a relational database that updates with daily data, from corona-virus cases, and corresponding with temperature data world wide
    - Utilizes John Hopkins online live database
        - https://coronavirus.jhu.edu/map.html
    - Github repository is publically available
        - https://github.com/CSSEGISandData/COVID-19
        - Data sources are based on WHO, CDC, ECDC, NHC, DXY, 1point3acres, Worldometers.info, BNO, state and national government health departments, and local media reports. (relatively reliable sources during a period of lots of mass hysteria)
        - Contains a CSV file
            - Contains current number of cases
            - Contains latitude and longitude
                - Extremely useful when trying to figure out the average temperature of a location

Weather dataset options

- https://cloud.google.com/blog/products/gcp/global-historical-daily-weather-data-now-available-in-bigquery
- https://console.cloud.google.com/marketplace/details/weathersource-com/weather-past-climatology?project=cpsc408final&supportedpurview=project

COVID-19 Dataset Options

- https://console.cloud.google.com/bigquery?project=ancient-blade-273400&folder=&organizationId=&p=bigquery-public-data&d=covid19_jhu_csse&t=confirmed_cases&page=table
- https://console.cloud.google.com/bigquery?project=ancient-blade-273400&folder=&organizationId=&j=bq:US:bquxjob_bb10ebc_1714ce1a836&page=queryresults
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