Weather Patterns X COVID-19

Final Project Documentation

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Contents


```
# Load Required Packages
library(tidyverse)
library(kableExtra)
library(readr)
library(gridExtra)
```

Data Acquisition

1. New York City COVID-19 Data Archive

- Source: NYC OpenData
- Acquisation Method
  - Download .csv file
- Purpose:
  - We will use this time series data to track changes in the incidence of COVID-19.

2. New York City Weather Data

- Source: Weather Underground - Weather Archive
- Acquisition Method
  - Webscraping/ API Tool
- Purpose:
  - Merge time series weather data with timeseries Covid-19 data and investigate potential associations

3. Daily UV Index Scores - New York City

- Source: Central New York's Live Weather Source
- Acquisition Method
  - UV index values are presented as tables (see figure)
  - Copy tables and paste into Microsoft Excel
  - Save as .csv file
- Purpose
  - Sunlight and Vitamin-D absorbtion
    - It is generally accepted that there is a positive association between exposure to sunlight and absorbtion of vitamin-D.
    - It is also generally accepted that there is a positive association between vitamin-D absorbtion and immune system capacity.
  - We will us UV-Index as a proxy for exposure to sunlight at the population level and test for associations between UV Index and the incidence of Covid-19.

Relational Schema

```
knitr::include_graphics(path = "Relational_Schema.png")
```

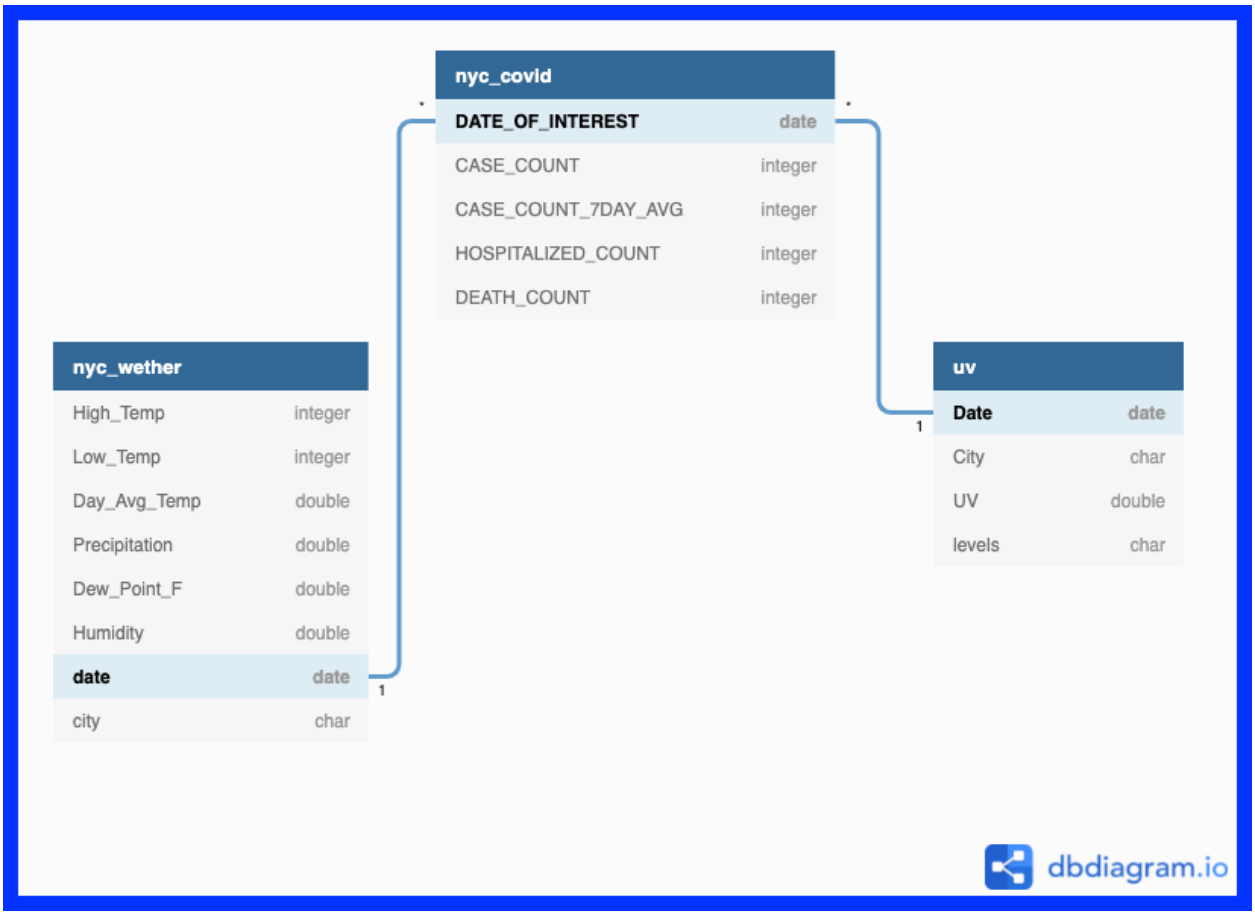

Figure 1: Highlighting the Keys to our Relational Database