Analysis of Covid

Cases and Deaths by Population and Median Age

COMP 3006

Final Project

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Individually, our applications looked for correlations with cases and deaths, but we looked for different potential factors affecting rates.

Cases – Population (David Kuralt)

Deaths – Population, Median Age (Thad Hoskins)

There was only weak correlation between Cases and population, Deaths and Population, and Deaths and Median Age.

The data was formatted by County for each State. There were data columns for each day with cumulative cases and deaths. Each month, number of cases and deaths was calculated by taking the number for the last day of the month and subtracting the corresponding day of the previous month.

We chose to confine our range to March through July.

Our most compelling chart is the Pie or Donut chart in the combined program. It gives a nice visual for any state, while also show the proportion of deaths, cases, and population to the whole of the United States. In some cases, the percentage of deaths is disproportional to percentage of population, e.g., NY. Or the number of cases is disproportional to percentage of population while the percentage of deaths lags, e.g., TX.

For Colorado:

python3 combined.py -p pie -l CO

Below are the programs with some of the command line arguments to help get started.

# Cases

covid\_cases.py

Command: states or months

-s <State>

<3 – 7> for a month

-o output file name

-p creates a plot

# Deaths

covid\_deaths.py

Commands: print, deaths, state

-s, Sort order: population, median\_age, state

-o output file name

-l <State>

-p creates a plot

-a total, max, all

* Total returns all the months per state summed
* Max returns the worst month
* All returns each month as a column

# Combined

combined.py

-p pie, bar, scatter

-l <State>

-m, month from 3 - 7

-s, Sort order: population, median\_age, state