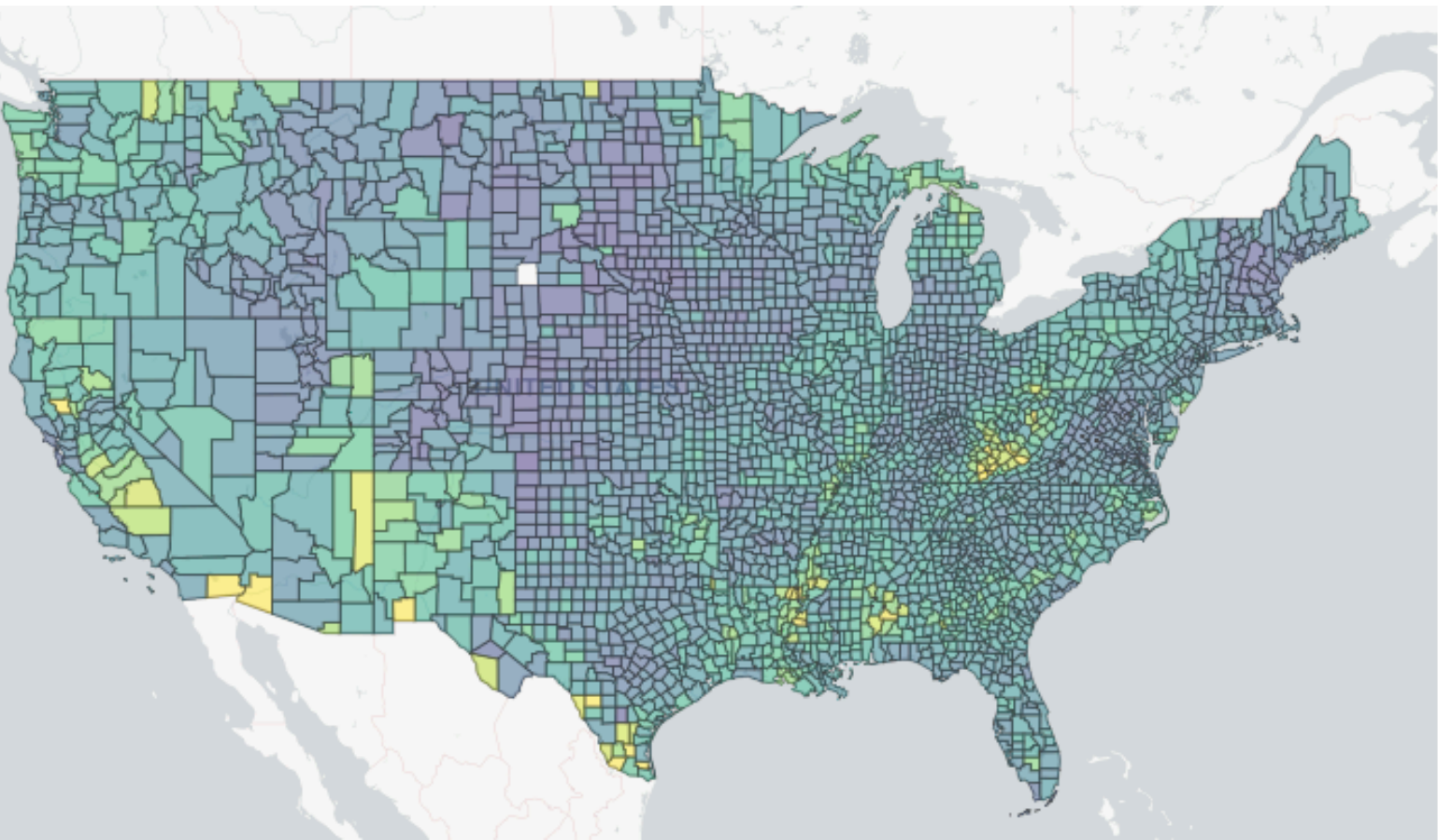Version 2, Revised 3/22/2022

Due April 8 23:59

In this assignment, you will create a dashboard for Covid-19 data using Streamlit. The dashboard should contain the following:

1. Produce a line plot of the weekly new cases of Covid-19 in the USA from the start of the pandemic. Weeks start on Sunday and end on Saturday. Only include full weeks.

2. Produce a line plot of the weekly deaths due to Covid-19 in the USA from the start of the pandemic. Weeks start on Sunday and end on Saturday. Only include full weeks.

3. Using Plotly Choropleth map produce a map of the USA displaying for each county the new cases of covid per 100,000 people in a week. Display the data as a color in each county. An example is below. You need to pick a color scale that is appropriate for the data.

4. Using Plotly Choropleth map produce a map of the USA displaying for each county the covid deaths per 100,000 people in a week. Display the data as a color in each county.

5. For #3 & #4 have a sider that allows the user to select the week displayed in the two maps. Moving the one slider should change both maps.

6. For #3 & #4 provide a button that when pressed will animate the maps by briefly displaying the data for each week in order. You need to pick a reasonable speed to run the animation.

<div align="center">**Data**</div>

The data used is from USAFacts (https://usafacts.org). The data sets can be downloaded on the assignment page of the course website.

<div align="center">**covid_confirmed_usafacts**</div>

This data set from USA Facts contains the new covid cases in each county in the country each day from the beginning of the pandemic.

url: https://static.usafacts.org/public/data/covid-19/covid_confirmed_usafacts.csv

Column Labels

State

> 2 letter abbreviate for the State

County Name

> Name of the County

stateFIPS

> Federal ID number for the state

countyFIPS

> Federal ID number for the county

2020-01-22, 2020-01-23, etc

> Column contains the number of new cases on the specified day.

<div align="center">**covid_deaths_usafacts**</div>

This data set from USA Facts contains the covid deaths in each county in the country each day from the beginning of the pandemic.

url: https://static.usafacts.org/public/data/covid-19/covid_deaths_usafacts.csv

Column Labels

State

> 2 letter abbreviate for the State

County Name

> Name of the County

stateFIPS

>Federal ID number for the state

countyFIPS

>Federal ID number for the county

2020-01-22

>Column contains the number of deaths.

covid_county_population_usafacts

url: https://static.usafacts.org/public/data/covid-19/covid_county_population_usafacts.csv

Column Labels

countyFIPS

>Federal ID number for the county

County Name

State

population

>Population of the indicated county.

Instructions

If you need more than one python file for you code name the file one to run via streamlit as **main.py**

At the beginning of your python file you should create variable that hold the path (plus name) of any input files that you use.I will need to change that when grading. I should be able to run your script using my input files by just changing the path to files at the top of your file.

As the pandemic is ongoing the datasets are growing. In the future we want to be able to download the data again and run the the script without having to edit the new files. So do not modify the data files.

Grading

	Points
Problem 1	10
Problem 2	10
Problem 3	15
Problem 4	15
Problem 5	5
Problem 6	5
Clean, orderly & Informative display	10
Only need to edit paths to test data in one location	5
Runs on test data with only modifying path to data sets	20

What to turn in

You need to turn in a zipped version of your python files.

Late Penalty

An assignment turned in 1-7 days late, will lose 5% of the total value of the assignment per day late. The eight-day late penalty will be 40% of the assignment, the ninth-day late penalty will be 60%, after the ninth day late the penalty will be 90%. Once a solution to an assignment has been posted or discussed in class, the assignment will no longer be accepted. Late penalties are always rounded up to the next integer value.

Revision History

Version 2. March 22. Changed Due date. Added last 24 points to the grading scale.