Effect of Political Affiliation on Covid Death rate

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Data Sources, Joined

Centers for Diesease Control and Prevention (CDC)

There is data on cases and deaths from 2020 – 2022, and the state of each observation.

Federal Election Comission (FEC)

Data on the 2020 presidential election, but we're interested in the state, and who received how many votes in that state.

Pros/ Cons

POSITIVE

STRENGTH

› By looking at the death rate in a state, and the way a state voted, we can get a rough look at how COVID affected that state given its political environment.

› Even if we can't get a correlation between popular vote and death rate in a state, we can see how COVID affected each state just by gathering summary statistics.

NEGATIVE

WEAKNESS

› We have no possible way of knowing how each dead person voted, if they voted, or if they were vaccinated.

› We have no way of knowing who COVID killed in each state. We are assuming that COVID killed more of the predominant political party in each state.

› It could easily be that COVID killed more conservatives in a democrat state, or vice versa.

My Calculated Fields

Death Rate

Percent Dem.

Percent Difference

Fields

Survived

Survival Rate

Percent Rep.
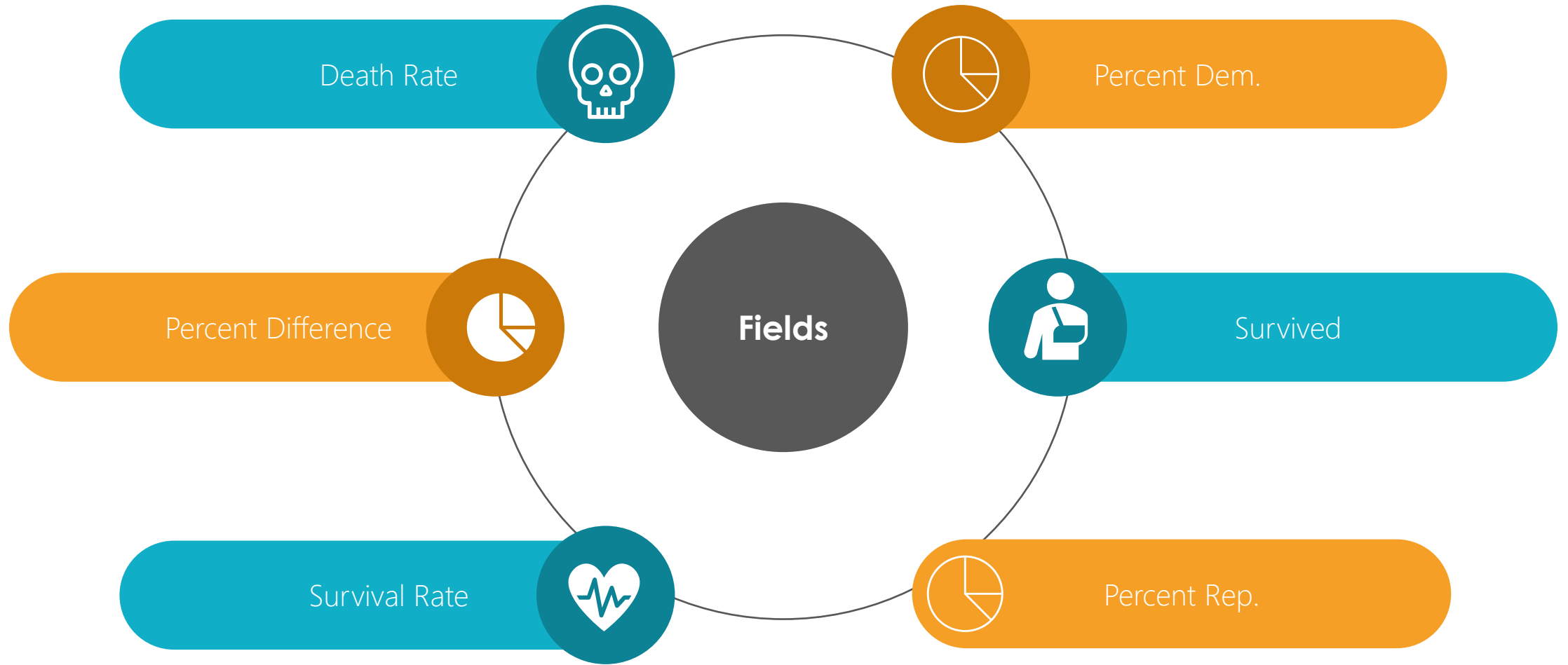
Purpose

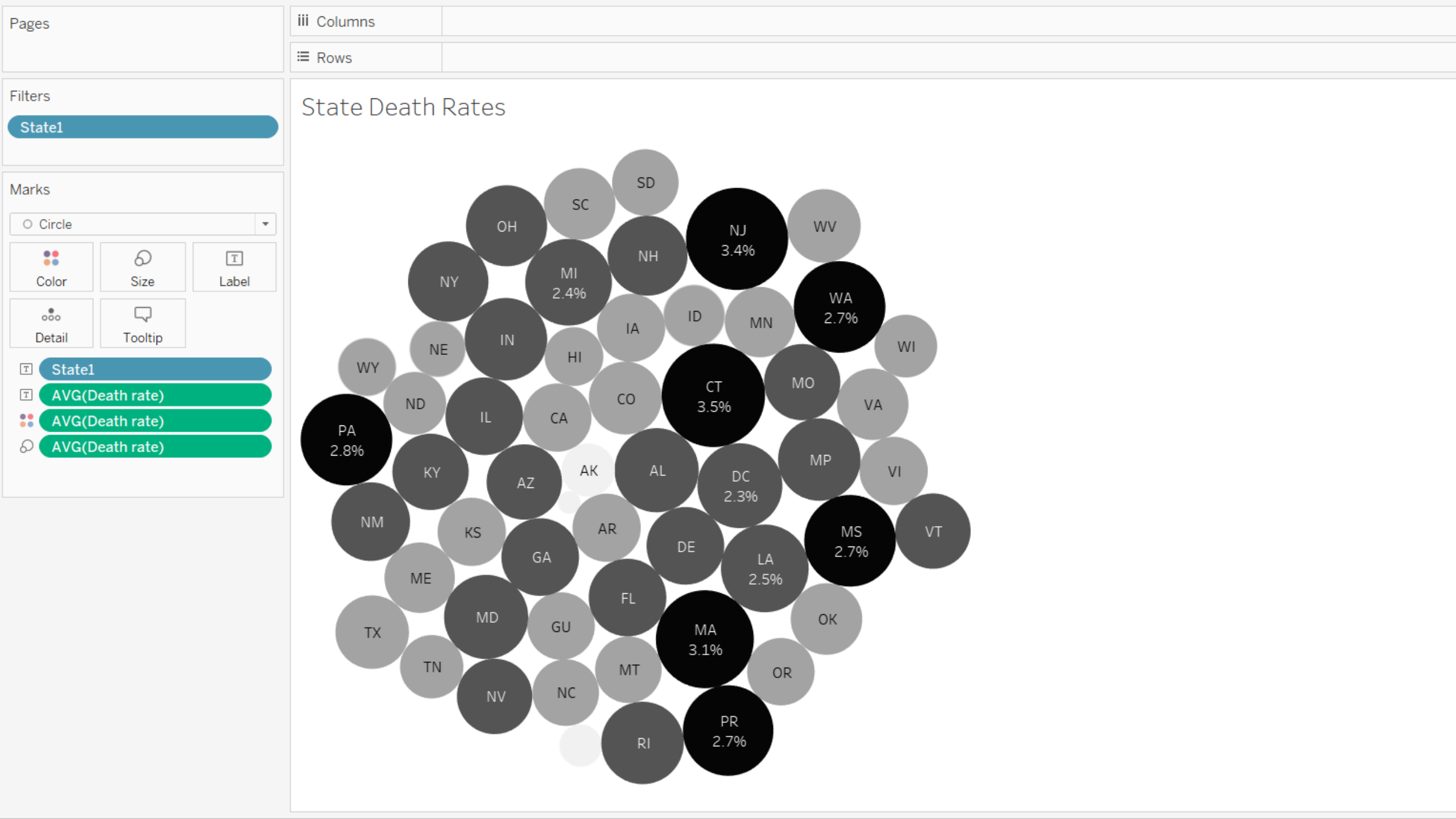## Reasons

Test Common conceptions of the effect of covid

› "It probably killed more conservatives because they tend to oppose vaccines"

> › Let's explore that

Check for trends among the states

› "I bet the Southern states lost the most people. Democrats probably have an easy win next election!"
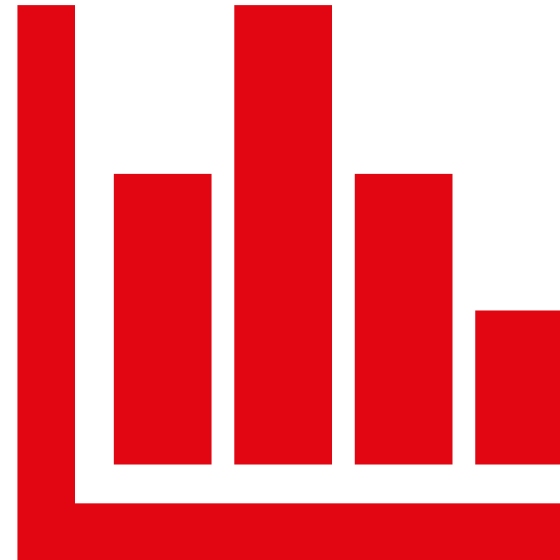
› Let's explore that too.

Graph 1

Pages

Columns

Rows

Filters

State1

Marks

Circle

Color | Size | Label

Detail | Tooltip

State1
AVG(Death rate)
AVG(Death rate)
AVG(Death rate)

State Death Rates

SD

SC

OH

NJ
3.4%

WV

NH

MI
2.4%

NY

WA
2.7%

ID

MN

WI

NE

IN

HI

WY

CT
3.5%

MO

VA

ND

IL

CA

CO

PA
2.8%

KY

AZ

AK

AL

DC
2.3%

MP

VI

NM

AR

MS
2.7%

VT

KS

DE

LA
2.5%

GA

ME

FL

OK

TX

MD

GU

MA
3.1%

TN

NV

NC

MT

OR

PR
2.7%

RI

Break Down

- Each State is a bubble, the size and color is representative of the the death rate. Blacker, bigger = higher.

- Max(CT)=3.5%

- Min(AK)=0.9%

- AVG~2%

- Death Rate is a calculated field. ([tot_cases]/[tot_deaths]), expressed as a percentage. (1/4)

Insight

- This graph is mostly useful for summary statistics, like finding the max, min, and avg death rates.

- Mostly useful for reference and keeping specific values in mind when comparing other states.

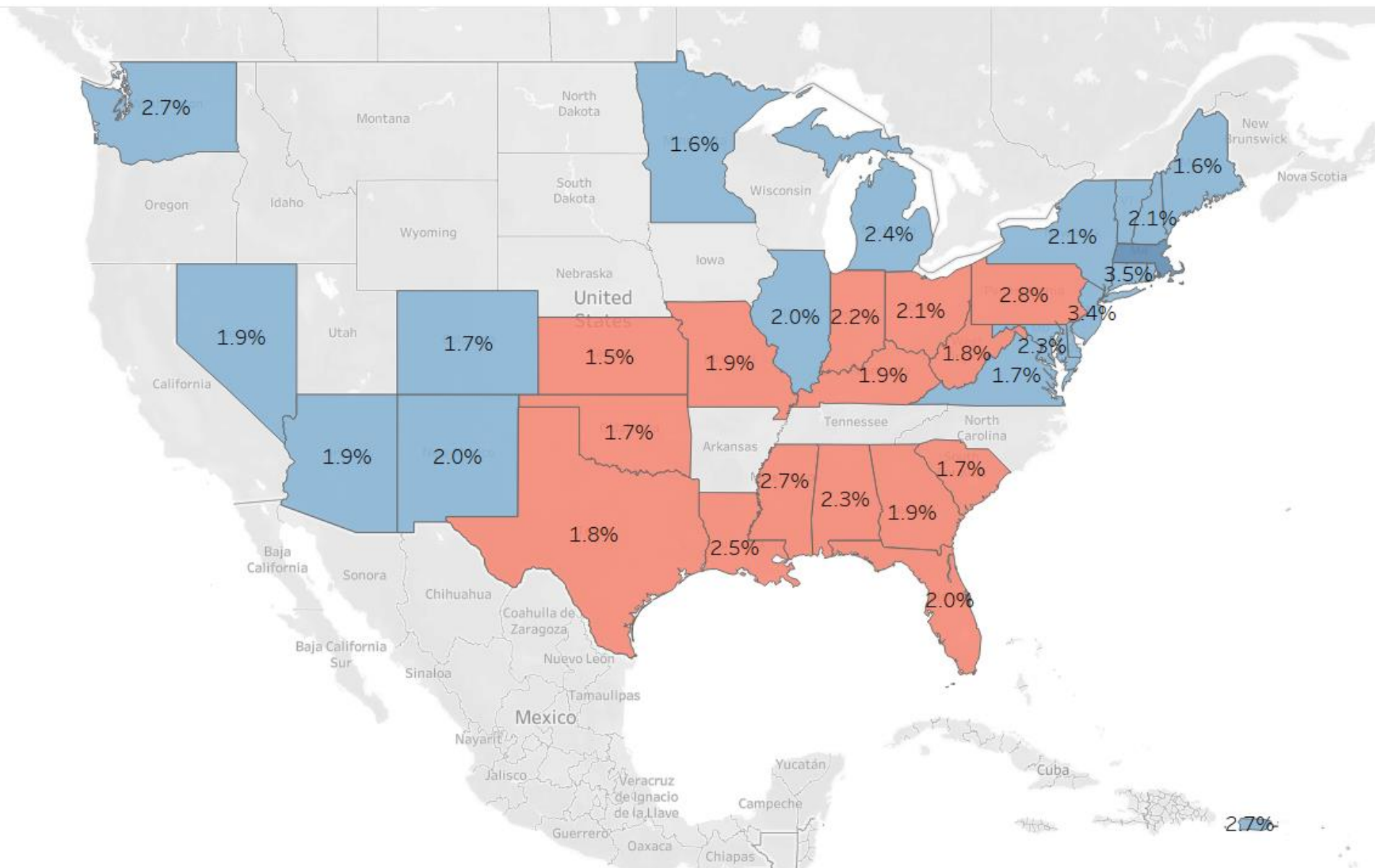- Deviation between states is quite low 0.9%-3.5%

Graph 2

Highest Death Rates

e)

rated)

nerate..

T
Label

diff)

h rat..

2.7%

1.6%

1.6%

2.4%

2.1%

2.1%

3.5%

1.9%

1.7%

2.0% 2.2% 2.1%

2.8%

3.4%

1.5%

1.9%

1.8%

2.3%

1.7%

1.7%

1.9%

2.7%

2.3%

1.7%

1.8%

1.9%

2.5%

2.0%

2.7%

Montana

North Dakota

Oregon   Idaho

South Dakota

Wisconsin

New Brunswick

Nova Scotia

Wyoming

Nebraska

Iowa

United States

Utah

California

Tennessee

North Carolina

Arkansas

Baja California

Sonora

Chihuahua

Coahuila de Zaragoza

Baja California Sur

Nuevo León

Sinaloa

Tamaulipas

Mexico

Nayarit

Veracruz de Ignacio de la Llave

Guerrero

Oaxaca

Campeche

Yucatán

Cuba

Chiapas

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Break Down

- For this visualization, we are only interested in the highest death rates to spot trends. I set a filter for at least 1.5% death rate.

- Percent diff was used to color the states.

- Percent diff is a composite calculated field: ([per.demo]-[per.rep]) (2/4)
- Per Dem (3/4) & Per. Rep (4/4) = [(Dem OR Rep)votes]/Total Votes]

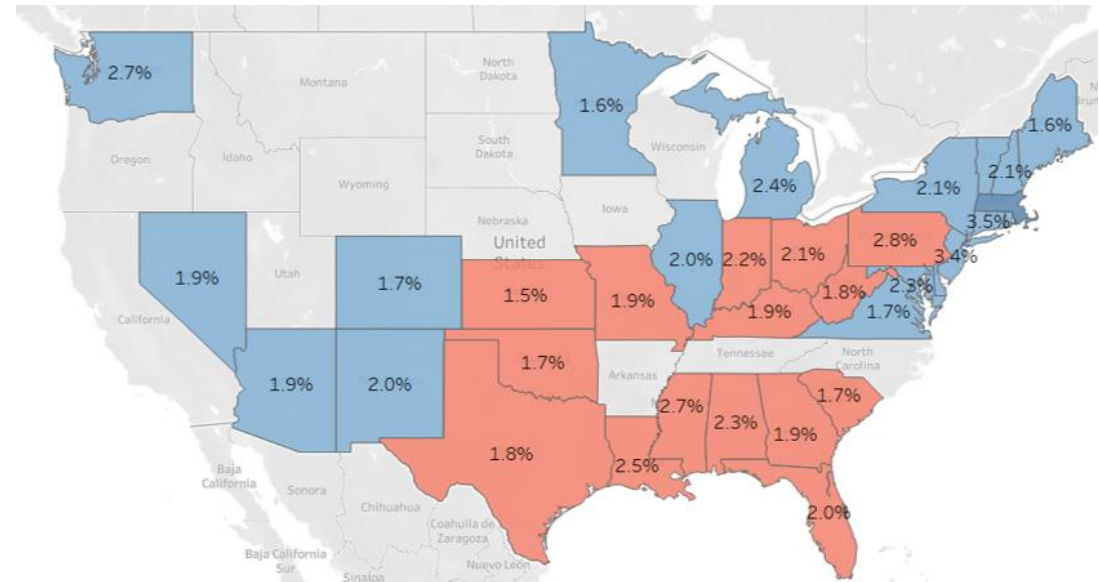- Higher positive values indicate a mostly democrat state, and lower negative values mean mostly republican states.

Insights I

- Lower populated states are rarely ever present in this filtered set.

- Every Northeastern state IS in this filtered set. They are traditionally densely populated.

- Population density is an element that should be explored.

- AK, TN, and NC were the only Southern states NOT in this filtered set.

- CA's mix of sparse and dense population may have kept it off this set, but also had the strictest COVID policy
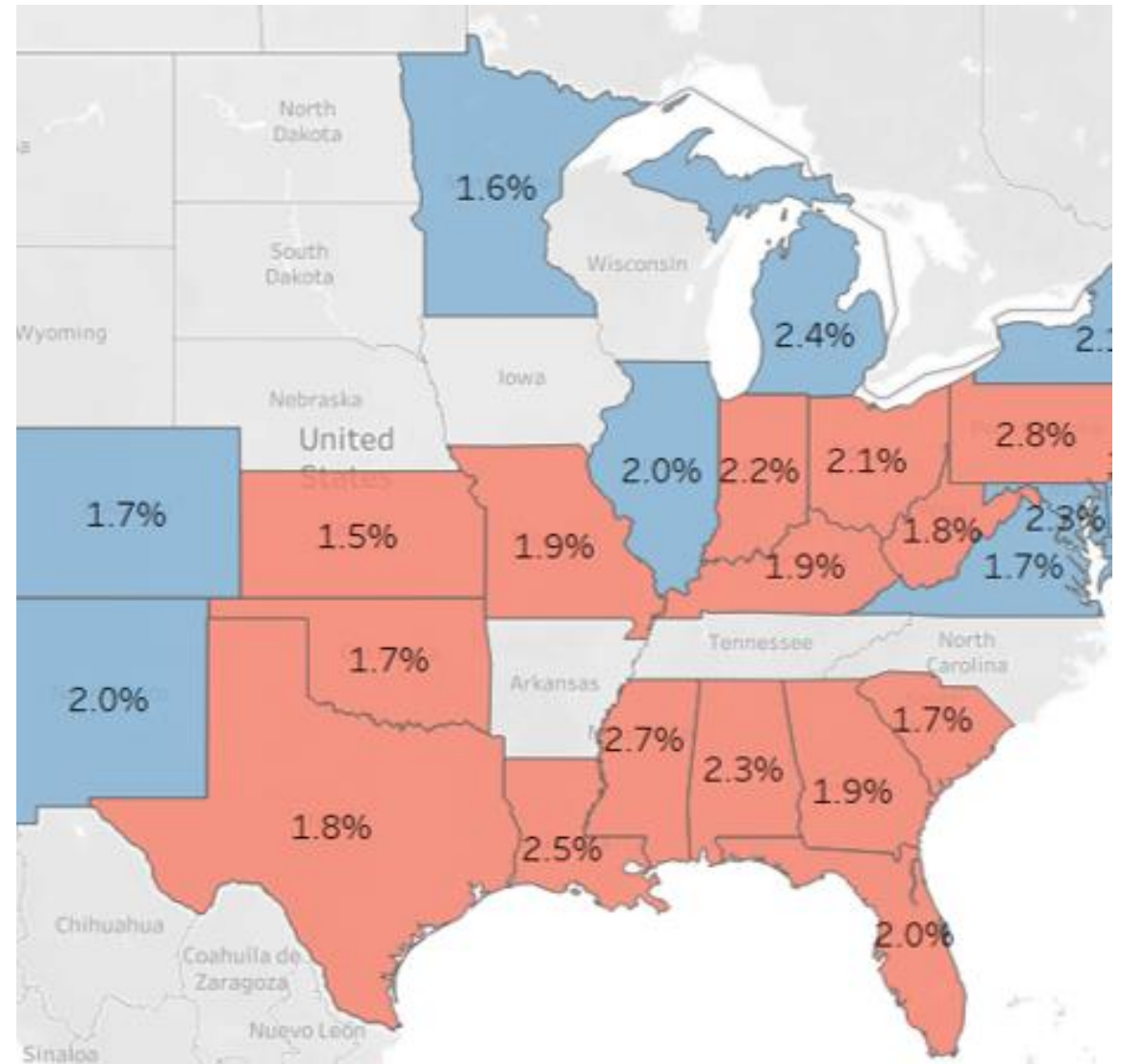
Insights II

- Political affiliation's relationship with death rate is only insofar as the state is densely populated.

- More populated states generally are more democrat.

- A state's COVID policy likely had effect (like CA).
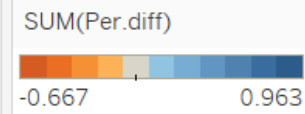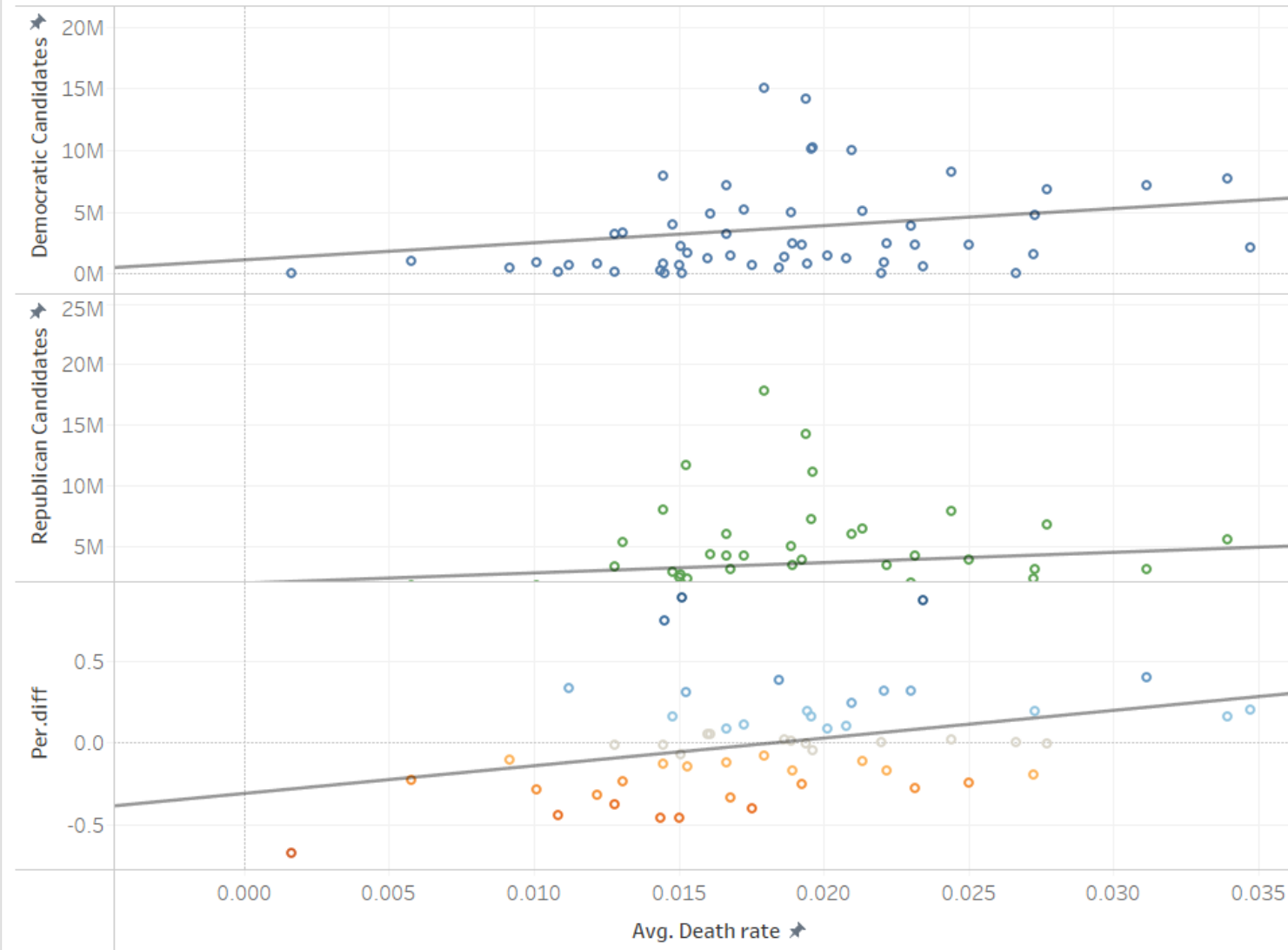
- AK, TN, and NC are still anomalous.

- Climate may play a role.

Graph 3

Death Rate x Popular Vote in State

Break Down

- The bottom visualization is the most important. The top two show what is being compared against average death rate. IE: Number of demo or rep candidate votes in each state.

- States are differently sized, so percent diff is a better scatter plot relationship field because the sum shows us how a state votes, without the effect of the minority party in that state.

- Red and blue are exactly what you think they are.

Death Rate x Popular Vote in State

Filters
State1

Marks

Shape

Color Size Label

Detail Tooltip Shape

SUM(Per.diff)

State1

Per.diff

0.5

0.0

-0.5

-0.002 0.000 0.002 0.004 0.006 0.008 0.010 0.012 0.014 0.016 0.018 0.020 0.022 0.024 0.026 0.028 0.030 0.032 0
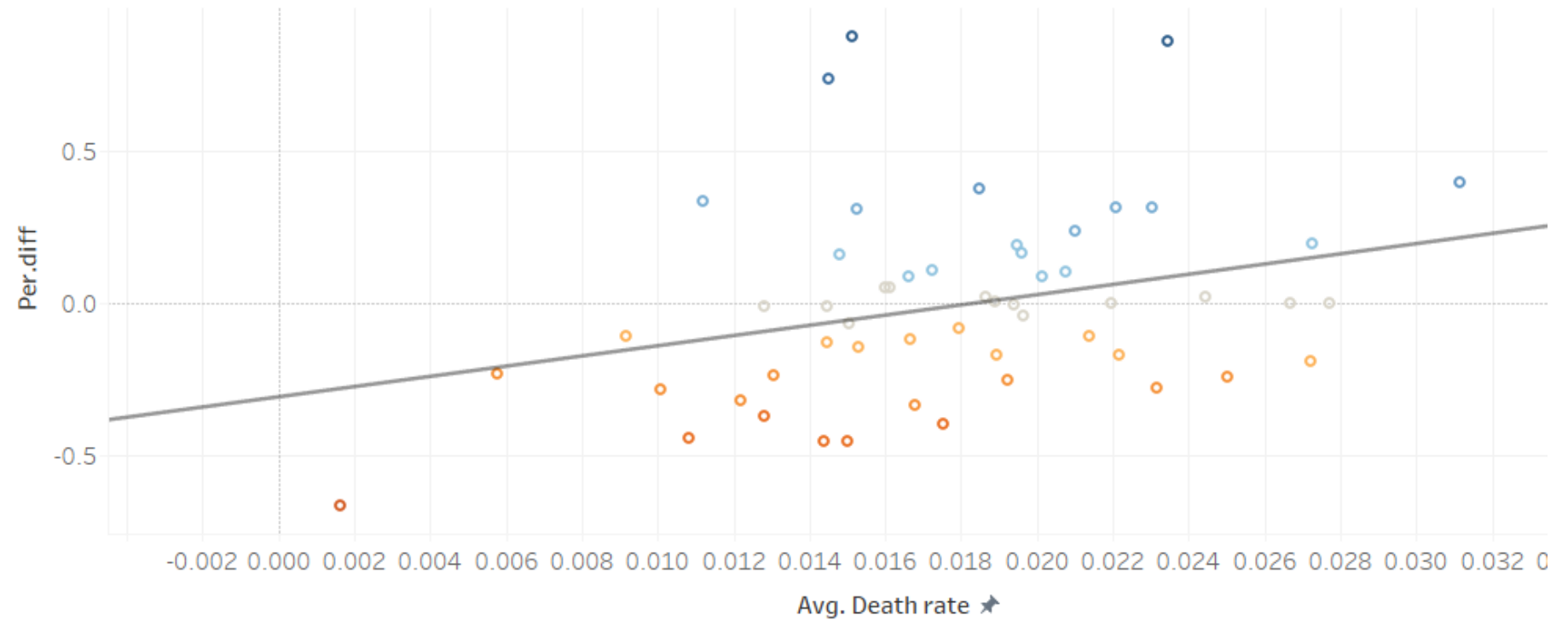
Avg. Death rate

Insights I

- P Value=0.009, the relationship between a state's political inclination, and death rate is statistically significant.

- R Squared=0.11, there is little, to no variance explained by our variables.

- Meaning, political affiliation is a poor predictor for death rate.

- Other variables to consider population density, COVID policy, the effect of climate, and the seasons.
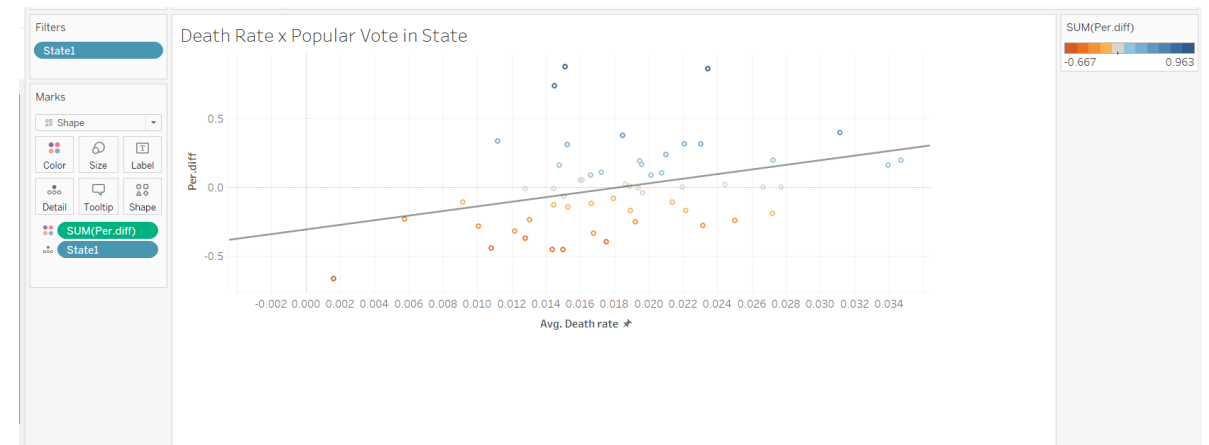
Graph 4
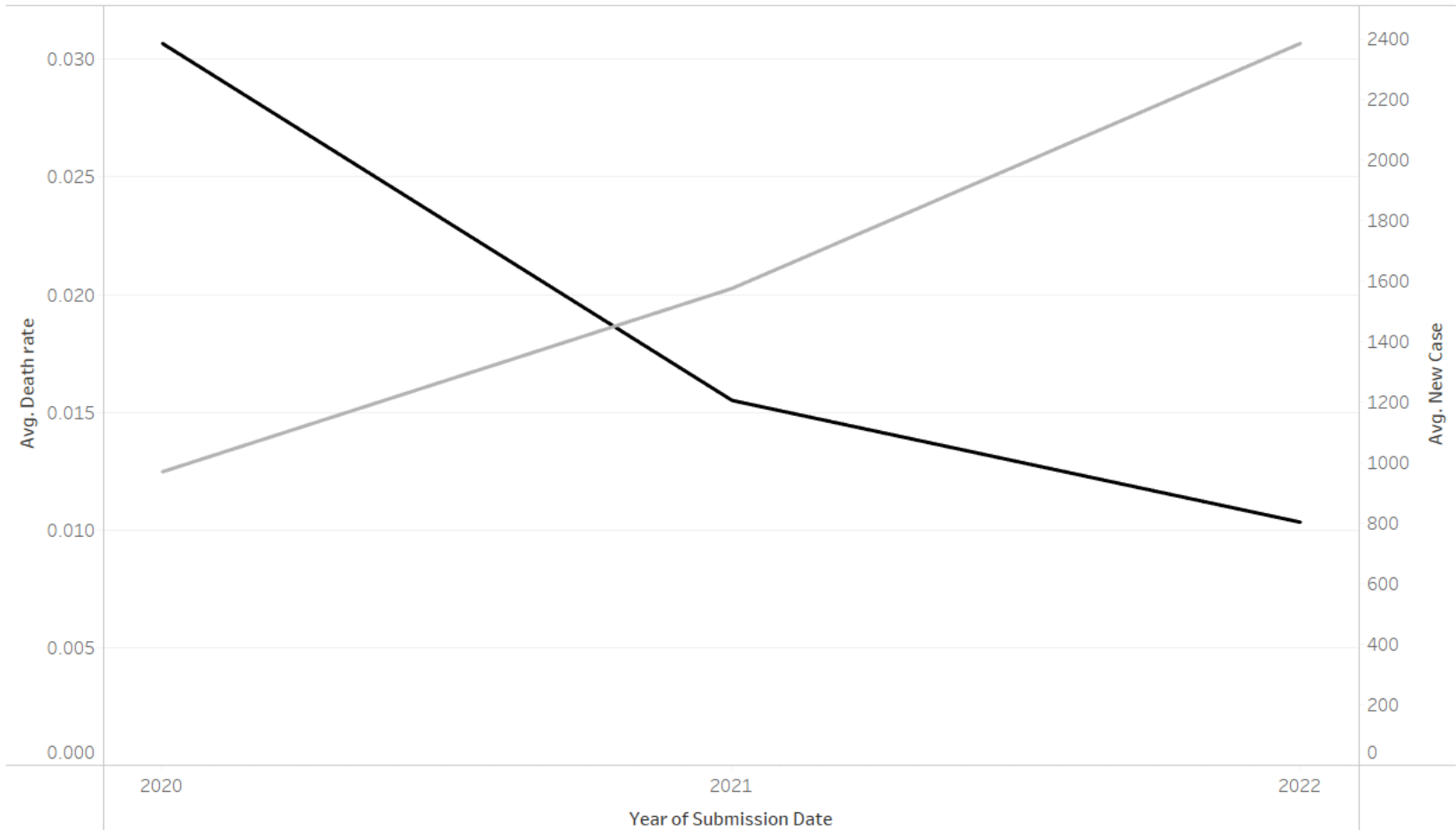
Break Down

- This dual lines graph compares the averages of new COVID cases, and the death rate from 2020-2022.

- Black stays associated with death to prevent confusion.

- Grey to keep with the current connotation that black, and black adjacent colors are bad.

Insights

- One confounding factor might be the tendency of death rate to fall, especially after the release of the vaccine.

- Oddly enough, the rate of new cases increased over time.

- One might credit the waves of COVID relaxation and then adoption of strict policy after a surge, then the elimination of COVID as a fatal threat.
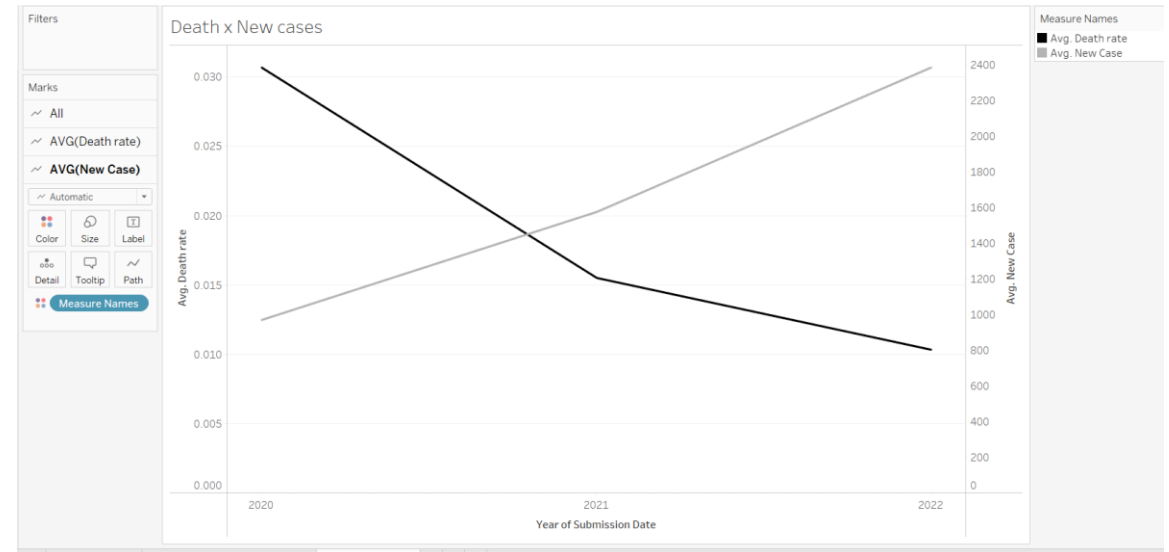
Conclusion

- This has been an exercise in exploratory data analysis via data visualization. Just by creating visualizations, we have dispelled the notion that one's political affiliation had anything to do with the probability of their death.

- There are much better predictors, IE: population density, COVID policy, climate, and countless more. Additional data will be needed to pursue that analysis.

Thank You