

Learning to use CODAP 1

We're going to look at data about COVID-19 vaccination rates in U.S. states,¹ compared to political lean in the 2020 election,² urbanization,³ and college education.⁴

Open up the [data \(and CODAP\) here](#). Choose the “open with CODAP” option at the top of your screen.

Take a minute to orient yourself to the data. What do you notice? What do you wonder?

1. What does the distribution of vaccination rates look like state-by-state? To answer this



question, click on the graph button **Graph**. A pop-up window will appear. Drag the attribute (variable) of “percent vaxxed” to x-axis of the graph. Copy and paste the distribution down below.

Describe the distribution. Estimate its mean and standard deviation.

2. CODAP will, of course, calculate mean and standard deviation for you. Click on this button,



, and then choose Mean. Also choose Measures of Spread, then Standard Deviation. Use the visual information presented and re-estimate the mean and standard deviation. Write them here:

3. Repeat the process of making a graph for the percentage of Democratic votes in each state.



Click on the **Graph** button, and then choose Measures of Spread, then Normal Curve. Copy and paste the distribution below.

Does the distribution look normal? What's the one INCREDIBLY outlierly outlier?

¹ Vaccine data source: <https://ourworldindata.org/us-states-vaccinations>, drawn from the C.D.C. at https://covid.cdc.gov/covid-data-tracker/#vaccinations_vacc-people-booster-percent-pop5.

² Source: https://en.wikipedia.org/wiki/2020_United_States_presidential_election from the Federal Election Commission.

³ Source: https://en.wikipedia.org/wiki/Urbanization_in_the_United_States from the Census Bureau.

⁴ Source: https://en.wikipedia.org/wiki/List_of_U.S._states_and_territories_by_educational_attainment from the Census Bureau.

4. Now we're going to analyze which of the possible predictors of vaccination—Democratic lean, urbanization, and college education—line up best with vaccination rates. You're going to want to open three graphs, side-by-side. Drag the attribute of vaccination rates onto the x-axis of each of the three graphs. Drag to the y-axis of a graph the attribute of Democratic lean; to the y-axis of the second graph, urbanization; to the y-axis of the third graph, college education. Copy and paste an image of all three graphs side-by-side below.

Which one seems like it most closely lines up with vaccination rates? Explain what you can learn from this.

5. What's something else you learned from this data you didn't address above?