Exercise 12: Make a Plot in *Plotly*

ECON 256   Data Analysis and Visualization

Objective

Try out plotly as an alternative to ggplot.

1   Set up Your R Workspace

Set up your R script with a preface. In this exercise we will use TidyVerse but also use the package *Plotly*. You will need to install *plotly* and initialize both `plotly` and `tidyverse` with library functions.

2   Download/Load the Data

Download the "vaccinations.csv" data from Laulima.

Use the `read_csv()` command to load the .csv file into R.

The data set contains daily information on vaccinations for Hawaii and the US. The variable `fullyvac` is equal to the number of people who were fully vaccinated at that time. The variable `sharefullyvac` is the percentage of the overall population who were fully vaccinated at that time.

3   Generate a Plot with ggplot

Produce a line graph to show the share of the population who are fully vaccinated over time in Hawaii and in the US using ggplot. ie use `geom_line()`. There should be two lines, one for Hawaii and one for the US. You should use three aesthetic arguments (`aes()`): the x variable should be date, the y variable should be the variable `sharefullyvac` and the `color` aesthetic should equal the variable `geog`.

4   Generate a Plot with Plotly

Now create the same graph using Plotly. Give the plot a title and label the x and y axes. You can use the following code as a template and fill in the blanks:

```
plot_ly(data=_____, x = ~_____, y = ~_____, split=~_____, type = "scatter", mode = "lines") %>%
  layout(title="_____", xaxis = list(title = "_____"), yaxis = list(title = "_____"))
```

A few things to note when coding in plotly: (1) the function to make a plot has an underscore (`plot_ly()` not `plotly()`) (2) the variable names need to have a tilde ($\sim$) in front of them (3) the `split` argument in Plotly indicates a variable with which to group the data (4) Plotly uses "piping" (%>%) whereas ggplot separates lines with a + symbol.

5   Send me Your Code

Name the R code with your last name, followed by the exercise number. Submit it on Laulima.