Design choices - assignment 7
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For the last assignment of Dataprocessing I chose to make an interactive choropleth map of the United States, showcasing the total earnings for each county in 2001. The map was linked to a bar chart, that showed the amount of farms in each county. In this document, I will explain my design choices for this assignment.

Story elements

What I wanted to show with my data visualisation is the spatial division of total earnings over the U.S. and link it to data that can explain the spatial distribution. In my story I think the distribution can be explained by, on the one hand population data and on the other hand the level of urbanization (rural vs urban centers).

Map

The map was created by using a topojson file and data set from U.S. census bureau.
I wanted to include more variables later on in my design but it was hard to adapt my data set because my data set was very large, and the files from U.S. census had to be adapted each time. For instance state information had to be removed. Also, many counties in the U.S. share names, which also resulted in mixed up data. Therefore, adapting my data set wasn't a simple copy paste. I spend a lot of time trying to include more variables, but every time the map id's would be mixed up. In the end I chose to stick with my initial (more simple) data set, even though I would have wanted to include more for my story. I think the choropleth map is a really nice visualization, but if I could start again I would have chosen a simpler data set.

Colour

For the legend colours, I used colorbrewer2.org to come up with the right set of colours. Because there were 11 categories, the colour range was relatively large. I chose a set of colours that ranged from dark brown to dark green. Dark brown was related to the lowest possible values and dark green to the highest. I chose this design because I think it's easy to distinguish between brown and green. I think brown and green colours go together well and result in a pleasantly looking map. Also, I think brown corresponds more to 'rural' and green more to flourishing and rich areas. It was therefore also fitting to my story.

Zoom

For my map, I wanted to include a zoom function because the map includes a lot of counties. Some of them are very small. In the initial state of the map, it's hard to distinguish between certain counties, so I thought the zoom function was a must-have.

Website

For the website I used a free to use bootstrap design (source: https://blackrockdigital.github.io/startbootstrap-stylish-portfolio/). I really liked the look of the webpage because it included interactivity in a menu and had some very nice pictures. All in all, I thought it would make for an aesthetically pleasing website. The frontpage picture is related to my design because it shows a picture of the biggest city in the United States: New York, and as an urban planning student, I love cities. When all counties' earnings within New

York are summed up it is also the highest ranking city in my data set. Therefore I thought it would be a fitting image.

Bar chart

I first wanted to include a scatterplot, but the resulting image was way too cluttered and didn't really give any information. That's why I switched in the second week to a bar chart.
I tried adding more categories to my bar chart to show more variables, in order to tell the story better. I was unfortunately unable to update my data set with this information because when I did, the id's that linked the information with the right location on the map got mixed up somehow even though in Excel everything was lined up correctly . I wasn't able to fix this issue so therefore I chose to retain my more basic bar chart, that provided less information, but did give the right information.

Things that need improvement

I tried very hard to make everything functional but some elements I couldn't get to work unfortunately. Here are the things I would have wanted to add:

- Update function

I wanted to update the bar chart in the same svg element and also show different years in a dropdown menu.

- Extra variables in bar chart

As explained earlier, I would change my data set to reflect more variables.

- Zoom function

I would include a limit to my zoom function, as it can bug sometimes right now.