Description:

The first map is about median age in Chicago Zip Code Areas. For this map I allow R to choose cut-off points itself, and you can see from the map that R choose an equal interval breaking (interval=4) which I think makes sense as it presents the difference between different zip code areas relatively clear. For the color, I choose viridis (inferno) and reverse the sequence of color because I hope to show “younger” areas with lighter colors and “older” areas with darker color. We can see from the map that, overall, western and loop areas are younger, while north side and south side are older.

The second map is about the average proportion of population under the age 17 across U.S. For each state, I calculate its value as the mean of all its counties—technically this is a wrong calculation because I didn’t take population of each county into consideration, but I didn’t find population variable in the datasets, so it might still serve as a proxy for what we want to measure. We can see from the map that, generally, northeast has few children while middle U.S. has more children. The cut-off points are chosen by R as well (equal intervals). Darker color is used to show less children.

The third map is a visualization of Chinese 5A tourist spots (:-)welcome to China!). Since tourist spots are often related to natural sceneries, I use the ‘terrain’ stamen map as the base map. On this map, I draw a heatmap of Chinese 5A tourist spots, which is the highest level of Chinese tourist spots. You can see that most such spots are distributed in the southern China, and there is also a weaker center around Beijing (Hebei province). Although there are also some in the north, its few relative to south. If someone wants to have fun in China, she should spend most of her time in the south.

The fourth map is about the distribution of U.S. university. I use it to generate a spatial scatter plot. On this map, you can see I use both dot shape and dot color to show the highest degree the university provides (bachelor/master/doctor), and the size of the dot is used to show the total enrollment of students in 2013. Although it seems a little redundant to use both color and shape to show the degree variable (and Tufte will hate me for that), I think it will make the picture more aesthetically pleasing and more intuitive for the reader. You can see from the picture that many universities in U.S. cluster in the northeastern areas, and many of them are also on the western coast. Midwest has relatively few.