CSCI E-79
Spring 2019

Week 2 Topic: Visualizing with Tools

Who eats the food we grow?

Context

After sketching the visualization by hand, next step is using visualization tools, adding "mathematical" constraints to your visual forms. In the Topic 2, the task is to use *RawGraphs* to implement visualizations sketched previous week (Topic 1).

Data

Download the complete CSV from here
Check here for a reduced dataset version
(years range from 2004 to 2013 food data, area, and item)

Feel free to explore related datasets and aggregate/combine them in order to tell your story better.

The Task

1. Adjust your drawings taking into account the feedback you received. Define the **sketch** that will serve you as a "map" to develop your project.

   NOTE! A trick is to start from the legend**.** The legend is not only there to help communicating your messages clearly, but it also serves as the foundation of your work. In fact, the legend combines a quick representation of all data variables and visual variables present on a single visualization or a dashboard. The legend can be seen as the compass or a map.

2. Decompose your dashboard in separate visualizations. At this point you should have explored *RawGraphs* as explained in the Lab 2. Once you have defined the single elements, identify the visual models you want to use and organize your **data** in separate spreadsheets.

3. Copy-paste your data in ***RawGraphs*** and create the visualizations. Create at least 2 visualizations for each visual model. For instance, if you want to represent a time series try to visualize two models that show the same data in two different ways, for example use a bump chart and a streamgraph. Experiment with visual models, it's really important to find the most effective solution!

   NOTE! If you are not happy with the visualizations and you realize there is no story to tell than, you have a problem with the selected portion of your data. Try to go back and restart the process. Try to think of a different data filtering or aggregation, sketch it, and then produce with *RawGraphs*. Remember, there is no guarantee that any idea would work. Design most of the time is about going back and forth, starting from a scratch.

   Try not to attach yourself to your ideas. Rather, be flexible with change!

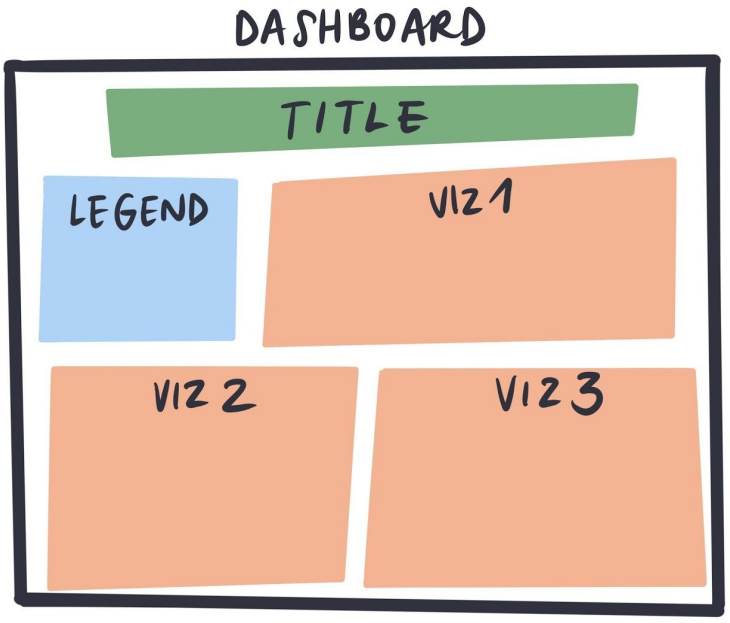

Figure 1: Visualization dashboard

4. Once you have selected the set of final visualizations, create a **dashboard** and download it as PNG file. You can use a google doc or whatever drawing app/text editor you want to paste a PNG. Elements to include in the dashboard:

   a. selected visualizations (at least 3), copy-paste, drag and drop, or import your PNGs in the file.

   b. legend[1]. draw the legend by hand, then take a picture or scan it to add it to the file.

   c. title. write a title that helps understanding how you are approaching the topic and telling the story.

[1] Check the Lab 2 figures for more inspiration

Make sure to maintain consistency between the variables (colors, shapes... etc). Export final solution as a PDF. The details regarding your Studio shared folder uploads as well as the Final work submission will be posted on Piazza.

NOTE! Since we are not using any other drawing tool (such as *Illustrator*) we won't focus on the quality of combined visualizations. For instance, if you have sketched two bubble charts overlapped one on top of the other, you might need to create two separate charts in *RawGraphs* or to plot them using two different clusters (pick different colors, sort bubbles by size, use the same scale). But don't worry if you have a hard time combining them as you would like to. Practice makes perfect (as well as additional tools that will be introduced along the way).

Good luck!