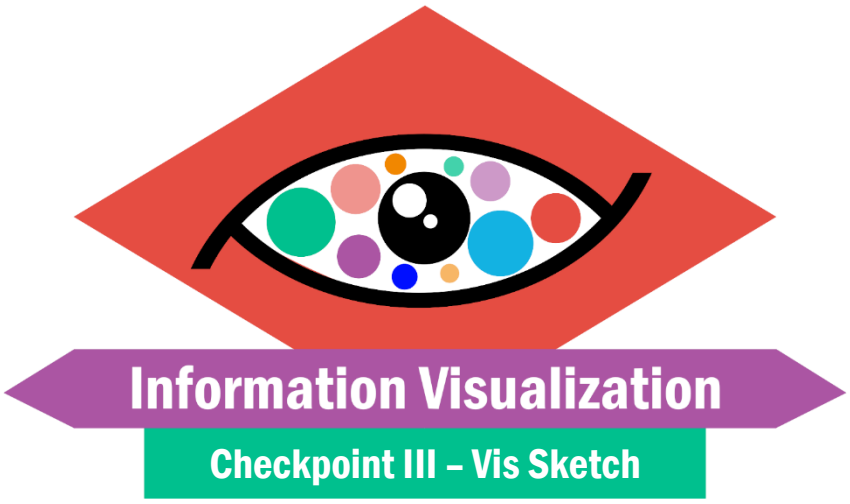

Objective

Show the first version of your visualization sketch. This version must make clear:

- The visual encoding of each data type.
- The different views you intend to represent.
- How those views are interconnected (interaction on one affects the others).
- How they relate to your questions as defined in Checkpoint I.

ULTIMATE GOAL: at the end of this Checkpoint, you have a sketch depicting the main aspects of your visualization, which you can then implement.

Requirements

Create a paper-and-pencil sketch of your visualization considering:

- The Questions your visualization must provide the answers to (Checkpoint I).
- The Data Abstraction you have selected (Checkpoint II).

You must consider ***at least* three interconnected different visual idioms**, in your prototypes.

These sketches may be done using prototyping tools BUT do not worry about the aesthetics at this point. You should focus on choosing the visual encodings for your data types and the idioms for supporting your questions instead. Hand drawings are preferred ***if we can understand the depicted visualization techniques***. Think carefully about **whether the idioms you choose are the most effective for what you want to show** (datatypes, tasks, scalability, etc.).

One of the sketches **must** show the entire dashboard where the several idioms to be used and the overall layout can be seen. You can show detailed sketches for different parts of the interface if you feel this will help you explain, but **the overall view is mandatory**. Be careful with your layout, proportions, etc. as this will be evaluated. Just "drawing a few vis side-by-side" with no care to relative position, size, etc. is in the fast track to a bad grade.

It may be particularly interesting to show more than one sketch if you want to show relevant differences in visual representations/states arising due to ***interactivity***.

You should show us how the several idioms you chose, working *in tandem*, will address your needs. To that end, **also mandatory**, are **storyboards showing how to answer at least one of the questions from Checkpoint I**. You can choose the questions you think are better, but answering it **must require the combined use of more than one of visualization idioms** (ex: finding something in one view, selecting it causing that item to be highlighted in another view, where you then compare it with others, etc.)

Finally, remember also that you do not need (should not) limit yourself to the tasks/questions in Checkpoint I if there are obvious opportunities to better explore the data given your choice of encodings/idioms. Beware ***missed opportunities***.

Deliverables

Create a **3-page document using the provided template** and submit it online, until two days before your class (ex: classes on Monday must submit until Friday end of day) which states:

- (At least) The Overall View sketch.
- The visual encoding for your data types, including a description of the visual encoding you have selected for each item and attribute.
- How your visualization will enable the user to provide the answers to each of the Questions on Checkpoint I. The Storyboard sketch should be included here, for the selected question(s).

Penalties

- Documents over 3 pages long: **1 grade point penalty per extra page**.
- Document uploaded after the deadline: **0.5 grade points penalty per hour of delay.**
- Document template altered (wider margins, smaller font, etc.): **1 grade point penalty.**

Constraints

Think about the visualization idioms you are going to use. Your project needs to contain *at least* three different linked visualization techniques. You do not get extra points for effort if you create more than three idioms. However, sometimes it is better to implement a fourth idiom that helps answering or complementing a data scope/question. Keep that in mind and make sensible decisions that you can justify based on theoretical and practical knowledge. There are two main constraints in the choice of idioms. **One** of those visualizations should be customized, i.e., you pick a basic chart type and extend it. For instance, you can add a layer of small multiples in a flow chart to increase its complexity (small multiple flow). Or you can change a stacked bar chart to have bars stacking on the background rather than on top or side-by-side. In addition, **one** of them must not be in the following set:

- Line chart.
- Area chart (including stacked area).
- Bar chart (including stacked bars).
- Pie chart.
- Scatterplot.
- Choropleth Map.
- Simple map with pins on it.
- Treemap.
- Bubble chart.
- Heatmap.
- Radar chart.

Tasks to perform during the lab

The professor will provide feedback. The grade will be made known one week later (see below).

Grading

Your work will be graded according to the following parameters:

- **Integration – Overall organization** (the way things are laid out, proportions, etc., is sophisticated and makes sense).

- **Integration – Interactivity** (the way the idioms are integrated, as demonstrated by the storyboard, is sophisticated and makes sense; the different idioms work well together: there are meaningful ways to answer questions by using more than one).
- **Visual Encodings** (Complete? Adequate?).
- **Articulation with Questions** (provides means to answer all Questions from Checkpoint I).
- **Missed Opportunities** (haven't missed anything obvious).
- **Creativity and match to problem/questions** (you do not need to invent the next Nobel Prize in InfoVis, but at least think about which idioms, out of the myriad of available ones are the best for your domain and questions, even if this requires customizations, etc.).
- **Custom chart** (does it *really* extend an existing chart? Is it well executed?).

Additional Notes

After you deliver your document, your work will be graded. HOWEVER, this grade **can be improved by up to two grade points** if you correct any faults pointed out by the professor and submit a revised version of the document HIGHLIGHTING THOSE CHANGES up the beginning of the class taking place 7 days after you receive feedback in class.