Course Assignments
for

Information Visualization
4DV800 – Spring 2019

Assignment 3

Deadline for this assignment is Feb 21, 2019 at 23:55.

Task 1 *Answer the questions*

Answer the following questions. Some of them are related to the next several lectures, so you might want to listen to the lectures first. But you can already start with task 2.

1. Explain in **detail** the InfoVis Reference Model. What are the strengths of this model?

2. What kind of interactions are supported by Range Sliders? Is there a way to improve them in order to show more information? Make a short list of pros and cons.

3. In most of the visualization systems selecting or highlighting a data object in a specific view leads to a highlight in another view. What is this interaction technique called? What are its advantages?

Task 2 *Implementing a scatter plot*

Your task is to implement a scatter plot visualization. You can use whatever programming language you want, however a **runnable (executable)** application should be provided together with a source code and a short *readme.txt* file with the instructions on how to run the program. You are also not allowed to use any visualization libraries for this assignment (i.e., you may use Swing for your Java implementation, but not Prefuse or JFreeChart). Your application should be able to load and visualize data sets such as the ones found in Moodle and here:

`http://cs.lnu.se/isovis/courses/spring19/4dv800/assignments/data1.csv`
`http://cs.lnu.se/isovis/courses/spring19/4dv800/assignments/data2.csv`

Make sure it is possible to select the file via GUI. The scatter plot axes range should be normalized automatically based on the data values present in the file. There is one attribute of categorical nature. You might want to use color or shape to distinguish such attributes. Do you notice anything interesting regarding these datasets?

Please prepare a ZIP archive with your implementation and report (PDF) and upload it to Moodle by the given deadline! If you have questions, you can contact Angelos Chatzimparmpas via email (angelos.chatzimparmpas@lnu.se). You will have to present your work on Feb 22, 12:00-13:45, room B3037V.
Please note: any kind of plagiarism is not acceptable!