

## Course Assignments for

### Information Visualization in Practice 1DV801 – Fall 2021

#### Assignment 4

Deadline for this assignment is November 01, 2021 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. What is the difference between Overview + Details and Focus + Context? Try to describe pros and cons of each approach.
2. What is the difference between the Graphic Fisheye and Logic Fisheye views? Can they be combined? If yes, how (an example perhaps)?
3. What are Polyfocal Displays? What are they used for? Draw the transformation function for Polyfocal Displays.
4. Describe the idea behind Magic Lenses. Can you provide an example of a magic lens not discussed in the lectures together with a short description?

#### **Task 2** *Visualization of Multidimensional Data*

Your last assignment is to create a visualization dashboard for a multivariate data set using Tableau software (<https://www.tableau.com/academic/students>). We have used a slightly adapted data set from <https://archive.ics.uci.edu/ml/datasets/automobile>. You should check the website for the information about the attributes.

Before you begin to create your visualization, think about the data set and what would people like to do with it. What would one want to know and see, how can he/she find specific information, what other tasks would one like to perform with the data? Your visualization should help users in performing these tasks. Simple visualizations such as bar charts or scatter plots are not enough to pass the assignment — you may, however, think about combining multiple representations and complementing them with some interaction techniques. You should demonstrate that you have acquired some knowledge about the field and understand the techniques.

You should submit a report with an explanation about how to use your dashboard. You should explain how the user is able to perform various tasks (your visualization should support at least one task). Also, we would like to have your opinion about the advantages and disadvantages of your design. Please, do not forget to include **a few screenshots of your dashboard** in your report.

The data set can be found in Moodle and here:

<http://cs.lnu.se/isovis/courses/fall121/1dv801/assignments/cars.csv>

*Please note: you are not allowed to modify the format or the contents of the provided data set file!*

Please, prepare a report (PDF) with your results and upload it to Moodle by the given deadline! If you have questions, you can contact Angelos Chatzimparmpas via email ([angelos.chatzimparmpas@lnu.se](mailto:angelos.chatzimparmpas@lnu.se)). You will have to present your work on November 02, 15:15-17:00, room D1167V or online via Zoom. Please note: any kind of plagiarism is not acceptable!