ISOVIS **Department of Computer Science and Media Technology**   **Linnæus University**

Spring 2018 – LP4

Course Assignments
for

Applied Information Visualization
4DV801 – Spring 2018
Assignment 1
Deadline for this assignment is Apr 8, 2018 at 23:55.

In this course offering, we are providing options for the students with and without computer science background or programming experience. Therefore, you can choose to work on **either** Task 1 **or** Task 2.

Task 1 *Visualize Data Sets*

This **implementation** task is to develop a program for visualizing two data sets. Note that you are not allowed to modify the format or the contents of the provided data set files! You can download them from Moodle or via the following URLs:

Dataset A:
  http://cs.lnu.se/isovis/courses/spring18/4dv801/assignments/DisastersScale.json

Dataset B:
  http://cs.lnu.se/isovis/courses/spring18/4dv801/assignments/BillionDollars.json

(1) You should start with the smaller *Dataset A*. Take a look at the data, find out what the data is about, and visualize it with the help of a treemap. (2) *Dataset B* has more attributes — think of a good way to visualize the complete data set and implement this. (3) In addition you should discuss what interaction possibilities would make sense and why, based on the available attributes in the data set.
You can use any programming language and library of your choice to visualize the data sets (JavaScript and D3.js for instance, http://d3js.org). Please note that this task requires programming rather than usage of existing visualization tools or environments such as Tableau.
Prepare a short report (1–3 pages, A4, 12pt) and a presentation (5–10 minutes). You will have to present your solution after the deadline.

Task 2 *Review a Visual Analytics Tool*

This **non-implementation** task is to read a research article about a visual analytics tool uVSAT developed by our group, try it out yourselves, and write a short review. You should start by reading our article at `http://journals.sagepub.com/doi/10.1177/1473871615575079`
uVSAT is available at `http://sheldon.lnu.se:8888/` , password: *seminar* .

You should try to load the data (please select the data in the time range not earlier than January 2015 and not later than February 2018) and investigate the available visual representations and interactions. Write a report with your review. Try to think about the pros and cons of this tool (please motivate your statements!). Also, try to think if a similar tool would be useful in your work/research and what you would change compared to uVSAT.
Prepare a report (4–8 pages, A4, 12pt) and a presentation (5–10 minutes). You will have to present your solution after the deadline.

Please prepare a ZIP archive with your report (PDF) and implementation (if applicable) and upload it to Moodle by the given deadline! If you have questions, you can contact Kostiantyn Kucher via email (kostiantyn.kucher@lnu.se). You will have to present your work on Apr 9, 15:15–17:00, room B3033V. Please note: any kind of plagiarism is not acceptable!