School of Computer, Data and Mathematical Sciences

WESTERN SYDNEY UNIVERSITY

Visual Analytics - 301109
Autumn 2020: Assignment 1
Relational Data Visualisation

(Assignment deadline: Friday 24/04/2020, 11:59pm on vUWS)

Assignment Details

For this assignment, you are required to identify and develop one (or more) visualisation(s) for relational data sets (**such as graphs, networks, trees as presented in lecture notes in week 3 and week 4**) using existing tools, software or your own development using available libraries. You might use the sample data sets at the tutorials as well as the provided visualisation techniques. Alternatively, you are encouraged to search and use other visualisation tools and/or datasets in literature. Based the visualisation(s), you can to explore to find insight, patterns, ir(regularity) and interesting property from the visualisation.

You are also required to write a report (approximate 1000 words but no limit to) on the following aspects:

- Brief technical details of the used visualisation method(s),
- Discussion on the advantage and disadvantage of the visualisation method(s) in comparison with other methods in literature. Can the visualisation method(s) be used effectively for large data relational data sets and why?
- Discussion on the analysis results and findings on the data sets,
- Discussion on other aspects, literature review of related work and your critical thinking on the visualisation(s).

Note: images (as figures) are essential and should be included in the report to illustrate the visualisations, results and findings.

Marking criteria for the assignment includes

- Development of visualisations for relational data (60%). You might use existing tools, existing software library (e.g. D3.js) or write your own program in the development. The marking will be based on how well the visualisation method presenting the relational data. Interaction should also be included in the visualisation.
- A report on the technical description of the visualisation, analysis results and other aspects (40%)

Deliverables

Students must individually complete the visualisation(s) and the report. The report should be typed and submitted online through vUWS as a Word or pdf file. A high standard of professional English and neat logical structure (including consistent and complete referencing style) is expected.

Declaration

You are required to submit a declaration with the following claim (in a text file or world file).

DECLARATION

I hold a copy of this assignment that I can produce if the original is lost or damaged.

I hereby certify that no part of this assignment/product has been copied from any other student's work or from any other source except where due acknowledgement is made in the assignment.

No part of this assignment/product has been written/produced for me by another person except where such collaboration has been authorised by the subject lecturer/tutor concerned.

Submission

The declaration, visualisation program(s) and data sets, and the report should be submitted via vUWS before the deadline for marking purpose. In Turnitin submission system, the report (preferable in PDF or MS Word) is submitted separately together with a compressed zip file containing all supporting program(s), data sets or other supporting works. Please ensure the file names include your student id. Submission that does not follow the format is not acceptable. No hard copy of the work and email submission is acceptable.

Important Note

Please note: it is not advisable to copy the materials from illustrating samples, your friend's works, works from previous years, or other sources. In addition to Turnitin checking, I may run a cross check the reports for detecting plagiarism. Failure to comply plagiarism's avoidance may lead to a misconduct with serious penalty.