

Context

This assessment will examine the student's understanding of the data types and the fundamentals of Data Visualization. In particular, students are asked to write a short report (up to 8 pages using the "modified-ieee-conference-template-a4.docx") on "How would you visualize your data?"

Topic: How would you visualize your data?

Preparation:

To start your assignment, you first need to select the data you wish to visualize. These data might be from your previous studies, data from your work, any research project or some data you've obtained from elsewhere as long as your data contain at least 5 attributes (columns).

Tasks:

In your report, you are asked to describe and argue:

1. The nature of the data: what do those data represent/describe? How were they collected?
2. Who are the typical consumers of such data?
3. How are those data typically depicted or conveyed to those audiences? Present your explanation/argument with respect to data types.
4. What sort of questions are asked and answered through such typical visualization you've mentioned in #3?
5. What might be typical mistakes people make in depicting those data?
6. How would YOU visualise those data differently? Using the symbolic representations from Semiology of Graphics, describe and explain how you would define the imposition of your visualisation, and how you would assign each data type to various visual variables.
7. Provide a sample of your visualization based on the symbolic representation from #6. (You can use any visualization tool to create your visualization or you can provide hand sketches).
8. Explain how you derived your visualisation in #7 from the symbolic representation in #6.
9. Derive an equivalent but different symbolic representations of your answer from #6, and explain the equivalency.
10. Provide an example of your alternative visualization derived from the symbolic representation from #9, and describe/explain how you assigned each data type to be used for the axes and various visual variables. (You can use any visualization tool to create your visualization or you can provide hand sketches).

Academic Integrity:

This is an individually assessed assignment and you are not allowed to collaborate with your colleagues. If you use any external sources (journals, books, articles on the internet, etc) other than the material provided in the course, you must provide adequate/appropriate references/citations. For more details on Academic Integrity, please refer to the week 1 lecture. Your submission will be checked for plagiarism against external materials, and other students' assignments (including past assignments) using TurnItIn).

Submission:

Write your report (up to 8 pages) using "modified-ieee-conference-template-a4.docx". We use this format and set the maximum page number in order to make the amount of work presented and processed by the markers consistent across all students.

Use this Canvas site to submit your report in the form of a PDF file, so that it can be checked using Turnitin.

Due:

The due is xxxxxx.

Academic honesty

While the University is aware that the vast majority of students and staff act ethically and honestly, it is opposed to and will not tolerate academic dishonesty or plagiarism and will treat all allegations of dishonesty seriously.

Further information on academic honesty, academic dishonesty, and the resources available to all students can be found on the academic integrity pages on the current students website: <https://sydney.edu.au/students/academic-integrity.html>.

Further information for on research integrity and ethics for postgraduate research students and students undertaking research focussed coursework such as Honours and capstone research projects can be also be found on the current students website: <https://sydney.edu.au/students/research-integrity-ethics.html>.

Compliance statement

In submitting this work, I acknowledge I have understood the following:

- I have read and understood the University of Sydney's [Academic Honesty in Coursework Policy 2015](#).

- The work is substantially my own and where any parts of this work are not my own I have indicated this by acknowledging the source of those parts of the work and enclosed any quoted text in quotation marks.
- The work has not previously been submitted in part or in full for assessment in another unit unless I have been given permission by my unit of study coordinator to do so.
- The work will be submitted to similarity detection software (Turnitin) and a copy of the work will be retained in Turnitin's paper repository for future similarity checking. Note: work submitted by postgraduate research students for research purposes is not added to Turnitin's paper repository.
- Engaging in plagiarism or academic dishonesty in coursework will, if detected, lead to the University commencing proceedings under the [Academic Honesty in Coursework Policy 2015](#) and the [Academic Honesty Procedures 2016](#).
- Engaging in plagiarism or academic dishonesty in research-focussed work will lead to the University commencing proceedings under the [Research Code of Conduct 2013](#) and the [Academic Honesty Procedures 2016](#).
- Engaging another person to complete part or all of the submitted work will, if detected, lead to the University commencing proceedings against me for potential student misconduct under the [University of Sydney \(Student Discipline\) Rule 2016](#).