DATA VISUALISATION 2

Semester 2, 2019

Submission

- 5 design sheet outcome due **Sunday of week 9, 29 September, 5pm**.
    - Submit a **PDF** document with scans of the 5 design sheet outcome.
- Critique due in the lab of **week 11 or 12**.
    - Post a public URL to your visualisation on a Moodle forum and critique a visualisation by another student.
- Report and Tableau file due **Friday of week 12, 25 October, 5pm**.
    - Submit the **report as a PDF** document through Turnitin.
    - Submit the **Tableau Desktop file compressed with ZIP**.
    - Publish your visualisation on Tableau Public and include the URL on the coversheet of your report.

All submission need to be made through the Moodle unit website.

Aims

The aims of this second visualisation assignment are to apply the data visualisation techniques examined during the entire semester and demonstrate their use in an innovative context.

Requirements

This Data Visualisation 2 assignment must satisfy the requirements and meet the expectation of the Data Visualisation 1 assignment. Refer to the documentation for Data Visualisation 1.

In addition, the following requirements apply:

- **Who:** Design your visualisation for the average Australian or Malaysian.
- **Maps**: Include at least one substantial map that requires the use of external software. If approved by the tutor, another non-standard visualisation can be created.
- **Interactivity**: Include substantial interactive functionality, such as data filtering.
- **Domain**: The second visualisation can be in the same domain as the first visualisation, or you may explore another domain.
- **Difference to Data Visualisation 1**: You must create an entirely new visualisation, and you cannot reuse any element created for the first visualisation assignment.
- **Story**: The narrative must be entirely different from the one used for Data Visualisation 1.
- **Data**: You can re-use the same data set for the second visualisation if it is very rich and complex. If this is not the case, you need to use an alternative data set that is substantially different from the one used for Data Visualisation 1.

Tasks Description

1. Present your domain, design ideas, and datasets to your tutor to obtain **approval** in the week 9 lab.
2. Design a narrative visualisation using the **5 Design Sheet Methodology** and submit it by end of week 9.
3. Implement your design with **Tableau.**[1]
4. In week 11 or 12 you **critique** a visualisation created by one of your colleagues in the same lab. In a constructive discussion, you present ideas for improving your colleague's visualisation in terms of visualisation idioms, interactivity, layout, colour, figure-ground, typography, storytelling, annotations, etc. No slides can be presented. Each student posts a URL to his/her visualisation on a Moodle forum before the lab. The next student who answers to this posting with an own URL will be paired with the first student. Before posting your URL, ensure your Tableau file cannot be downloaded: https://kb.tableau.com/articles/howto/preventing-workbook-downloads
5. Write a **report with a maximum length of 750 words** covering the following:
   a. A cover sheet with the number of words and a **URL** of your visualisation.
   b. A brief description of the **domain.** Also mention the domain of your Data Visualisation 1 submission.
   c. A brief description of the **narrative** (story telling approach and story told). If the domain is identical to the one of Data Visualisation 1, explain how the narrative for this assignment differs.
   d. **What**: A brief description of the **data** (sources, authors, relevance, creation process, etc.).
   e. **How**: Give a rationale for choosing the specific idioms, and explain how they help the users to achieve their tasks. Include at least one screen capture of your entire visualisation, and a description of features that are special to your visualisation.
   f. **Bibliography**.

Marking

This assignment is worth 20% of the final unit mark. A detailed marking rubric is included on the next page. Note that some marking criteria and some weights are different from Data Visualisation 1.

5 design sheet	5%
Critique	2%
Visualisation	10%
Report	3%

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[1] You can develop an interactive visualisation system using web technology (e.g., HTML, D3, Vega), but (a) you must obtain permission from your tutor first, and (b) the entire visualisation must be downloadable as a single ZIP file and runnable on any web browser without the installation of additional tools. The visualisation needs to be made accessible on a public web server and a ZIP archive with all files must be submitted on Moodle.

Marking Rubric for Data Visualisation 2

	HD (80–100)	D (70–79)	C (60–69)	P (50–59)	N (0–49)
5 Design Sheet 5%	All 5 stages completed, large variety of sketches, creative outcome.	All major stages completed, large variety of sketches, useful outcome.	All major stages completed, some variety of sketches, useful outcome.	Not all stages completed, limited variety of sketches, useful outcome.	Most stages not completed, small variety of sketches, outcome not applicable.

Note: 5 Design Sheet outcome is due end of week 9. Mark is 0 if the 5 design sheet outcome is submitted after this due date, the domain is changed after this due date, or the outcome is not clearly different from the Data Visualisation 1 assignment.

	HD (80–100)	D (70–79)	C (60–69)	P (50–59)	N (0–49)
Critique 2%	Identifies all relevant areas that require improvement, explains creative suggestions for improvement in a constructive manner, uses correct terminology.	Identifies most relevant areas that require improvement, makes valid suggestions for improvement, uses correct terminology.	Identifies some relevant areas that require improvement, makes some suggestions for improvement, uses correct terminology.	Identifies some minor areas that require improvement, makes minor suggestions for improvement, uses imprecise terminology.	Does not identify major issues that require improvement, makes wrong suggestions for improvement, uses wrong terminology.

Note: Critique is in lab of week 11 or 12. Mark is 0 if students do not form pairs before the lab, do not present a critique, or are not present when their visualisation is critiqued.

	HD (80–100)	D (70–79)	C (60–69)	P (50–59)	N (0–49)
Visualisation (a) Idioms and complexity 6%	A substantial number of appropriate standard or custom-built idioms.	A substantial number of appropriate idioms.	A number of standard idioms (e.g. bar chart, line graph).	Small number of standard idioms (e.g. bar chart, line graph), or inappropriate use of idioms.	Inappropriate selection or use of idioms, very small number of standard idioms, incomplete.
Visualisation (b) Layout, colour, figure-ground 2%	Balanced and symmetric layout clearly structured in columns/rows with good use of white space. All elements aligned with sight lines. Very clear visual hierarchy by using colour and figure-ground.	Balanced and symmetric layout mostly structured in columns/rows with use of white space. Most elements aligned with sight lines. Visual hierarchy by using colour and figure-ground.	Somewhat balanced and symmetric layout not consistently structured in columns/rows. No use of white space. Some elements aligned with sight lines. Some visual hierarchy.	Layout not balanced or not symmetric, no apparent layout structure. Some elements aligned with sight lines. Limited visual hierarchy.	Layout not balanced and not symmetric, no apparent layout structure. Most elements randomly placed. No visual hierarchy by using colour and figure-ground.
Visualisation (c) Typography, storytelling, annotations 2%	Use of non-standard and appropriate typeface. Clear guidance of reader through visualisation. Extensive use of high-quality annotations on diagrams and text outside of diagrams.	Use of appropriate typeface. Guidance of reader through visualisation. Use of high-quality annotations on diagrams and text outside of diagrams.	Use of appropriate typeface. Some guidance of reader through visualisation. Use of annotations on diagrams and text outside of diagrams.	Use of appropriate typeface. Limited guidance of reader through visualisation. Limited number of annotations on diagrams and text outside of diagrams with grammar or content issues.	Use of inappropriate typeface. No guidance of reader through visualisation. Small number of annotations on diagrams and text outside of diagrams with grammar or content issues.
Report (a) Structure and content 1%	Clear report structure. Narrative, What, How appropriately and succinctly described. Bibliography included.	Clear report structure. Narrative, What, How described. Bibliography included.	Mostly clear report structure, some content is misaligned. Narrative, What, How mostly described. No bibliography.	Report structure not clear, some content is misaligned. Narrative, What, How partially described. No bibliography.	Report structure confusing. Substantial aspects of Narrative, What, How missing. No bibliography.
Report (b) Writing and figures 1%	Correct grammar. Writing easy to follow and understand. Figures carefully designed, with numbered caption, and referenced in text.	Correct grammar. Writing mostly easy to follow and understand. Figures carefully designed, with numbered caption, and referenced in text.	Some grammar issues. Writing not always easy to follow and understand. Figures without numbered caption or not referenced in text.	Grammar issues throughout. Writing not easy to follow and understand. Figures without numbered caption or not referenced in text.	Major grammar issues throughout. Writing difficult to follow and understand. No figures.
Report (c) Word limit and URL 1%	URL and number of words indicated on cover sheet, less than 750 words total.	As HD	As HD	URL or number of words not indicated on cover sheet *or* **more than 750 words total.**	URL or number of words not indicated on cover sheet *and* **more than 750 words total**.