

FIT3179 DATA VISUALISATION

2nd Semester, 2022

Homework Assessment Week 4 - Visual Design

Chartjunk, Colour, Layout and Typography

1. Description

- The week 4 homework requires you to **improve two Tableau dashboards** by **identifying chartjunk** as well as **using layout, colour and typography design principles**.
- The goal is to create visualisations that
 - require less cognitive load,
 - are easy to read,
 - show information with a clear hierarchy,
 - and use a compact and clearly structured layout.
- The whole assessment is worth 2% of your final grade. 1% for each dashboard task.
- The submission is **due Sunday, 21 August 2021, at 11:55 pm**.
- The late penalty is 25% of the total mark (2%) per day for late submissions.
- This is an individual assessment. Discussing this assessable exercise or posting (intermediate) results on any forum is not allowed. We will follow up on and penalise any kind of academic misconduct.

2. Task 1 - Chartjunk (1%)

a. Instruction

Open the Tableau file **Homework Week 4 Task 1.twbx** from Moodle and improve **Dashboard 1**. The improvement should at least cover the following aspects.

- **Identify** elements of **Chartjunk** in this graph.

- Improve this Dashboard to **reduce the cognitive load** required to read this visualisation:
- **remove chartjunk**
- **remove unnecessary elements** (For example, can you remove some of the **legends**? Or can you **replace some** of the **legends with annotations** on the chart?)
- **increase the data-ink ratio**,
- use **consistent colours**, prefer **grey for less important** marks, and use colour to **highlight important elements**.
- Use typography consistently: Text elements with the **same relevance** should use the **same font size and type weight** (for example, labels on axes). More important text elements can be larger; less important elements can be grey.

3. Task 2 - Colour, Layout and Typography (1%)

a. Instruction

Open the Tableau file ***Homework Week 4 Task 2.twbx*** and improve ***Dashboard 1***. The improvement should at least cover the following aspects.

- **Layout**: **arrange** the **text**, **map**, **diagram**, and **legend** to create a good layout. Choose a **compact size** for your visualisation and **adjust the size of all elements**. Use sight lines, white space, and the proximity gestalt principle to align elements and structure the layout.
- **Typography**: apply typographic principles to create a **clear hierarchy of text elements**. Improve the typeface, weights, font sizes, etc. of the title, subtitle, text, diagram, as well as the tooltips for the map and the diagram.
- **Diagram**: **add two annotations** to highlight **interesting facts in the line chart**. Annotate or graphically change the chart to indicate that **data for 2010 is estimated**. Adjust colours and replace the diagram legend with colour-coded titles.

- **Colour:** Choose **pleasing colours** for the **map** and all other elements, including the background of the visualisation. Use colour coding in legends and titles, where appropriate.
- **Tooltip:** create and design an aesthetically pleasing tooltip that shows information with a hierarchical structure and useful alignment. Replace the abbreviations, which stand for *County Name*, *Average Population Per SQM*, *Median Age*, and *Total Population*. You should edit the *map* sheet for this task.

b. Resources

Apply the principles discussed in Week 4, particularly for:

- choosing colour,
- gestalt principles for annotated charts and visual hierarchy and order,
- visual hierarchy with figure-ground,
- layout with sight lines/visual balance/symmetry, and
- typography.

4. Report

- The report must be submitted in **PDF format** through the submission link on the Week 4 page. Do not submit your Tableau file.
- The page limit of the report is 3 pages.
- Write a report that contains the following information:
 1. Your identity (name, Monash student ID, lab, tutor name).
 2. Task 1 - Chartjunk
 - a. A brief description of the identified chartjunk.
 - b. A screenshot of the final chart.
 3. Task 2 - Colour, Layout and Typography
 - a. A brief description of improved aspects of the visualisation.
 - b. A screenshot of the final dashboard, including both tooltips