

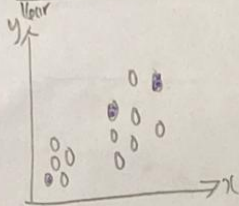
FIT 3179 Data Visualization

Tan Man Zhao 33206244

5 Design Sheet

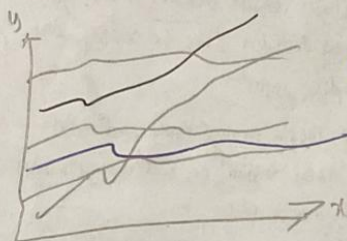
Ideas

① Bubble Plot Chart



○ - divorce
○ - Marriages

② line chart



States
— Sydney
— Melbourne
— Victoria
— Western Australia

③ Butterfly Chart



Rate of marriage
Number of marriages

④ Map Chart



⑤ Radial chart



Marriage and Divorce Rate

Filter

Bubble Plot: Display relationship between divorce rate & number divorces

Line Chart: Tracks number of marriages across year

Butterfly Chart: Shows a comparison across states

Map: Display geographical distribution of marriages

Categorize

Trend Analysis: Line chart (shows how marriages changes over time)

: Butterfly chart: comparing trends in both rates and numbers.

Geographical: Map (Spatial distributions of marriages across states)

Comparative Analysis:

Radial Bubble: comparing number of divorces vs rates

Combine and Refine

③ + ②
- Butterfly charts & Line charts: could these 2 show marriage trends side by side, with marriage number and rates combined into one view? This would highlight not only how marriages rates & raw numbers change but also how they related to each other.

- Map and Radial Chart: could be linked so that selecting a state on map updates the radial chart with detailed statistics about the specific state

Question

- How have marriage number evolved in different state from 2019 to 2022?

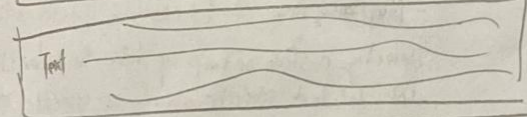
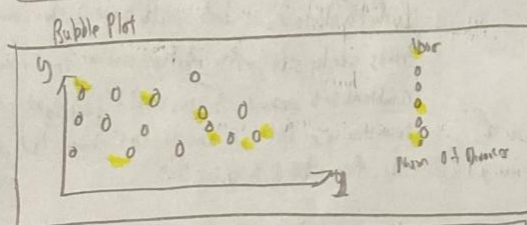
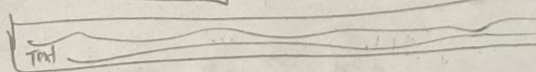
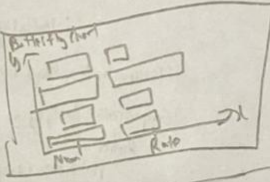
- Is there a trend between increasing divorce rate and total number of divorces over time?

- Do the crude marriage rates reflect the raw number of marriages?

Layout 1

Title

Marriage and Divorce in Australia



Operations

- Time-based filtering on the map allows user to explore monthly marriage trends.
- The line chart provides state-specific insights through hover and selection.
- The bubble plot highlights divorce trends, with bubble size representing the number of divorces.

Title:

Author: *Min Zhou*

Sheet: 2

Task: Brain storming Ideas on Layout

Focus

- Map: Highlights regional differences in marriage rates across Australian states for 2023 providing a geographic perspective.
- Line chart: Display marriage trends overtime from 2019 to 2022, focusing on how marriage number fluctuate across states.
- Bubble chart: explore the relationship between divorces rates and number of divorces.

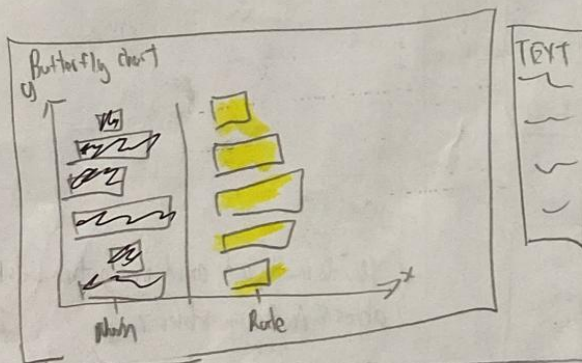
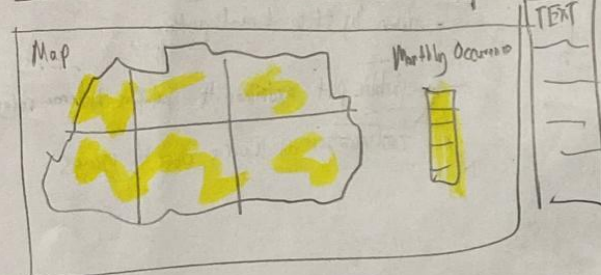
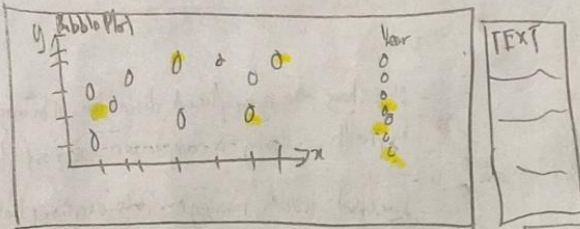
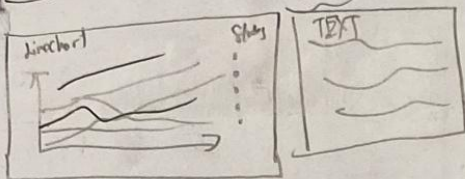
Australian
view:
s by
yes

number
is

Discussion

- 1) How do marriage trends vary across different regions in Australia?
- 2) What impact did major events, like the pandemic, have on marriage rates?
- 3) How do marriage and divorce trends relate, and what factors influence changes in divorce rates?

Layout 2



Operations

- Time based filtering and state specific hover interaction for the line chart
- Bubble size in the divorce plot represent the number of divorces, hover for details
- The map and butterfly chart provide regional insights into marriage occurrences on rates

Title:

Author: Minthaw

Sheet: 3

Task: Improving Presentation Ideas on Layout

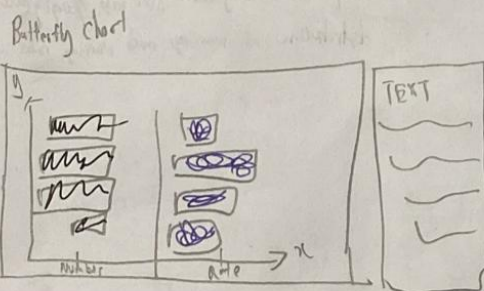
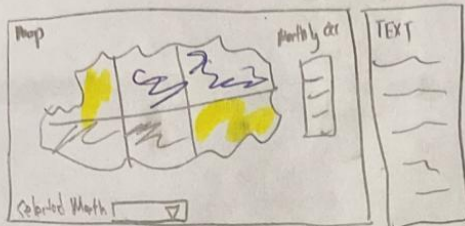
Focus

- Linechart: display marriage trends overtime, highlighting variations by state
- Bubble plot: explores the relationship between divorce rates and number of divorces
- Map and butterfly chart show case geographical distribution of marriage and marriage rates

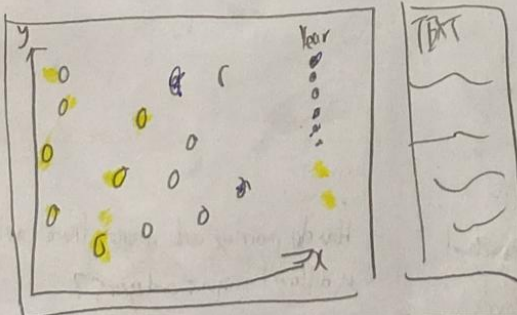
Discussion

- How do marriage and divorce trends evolve in different regions and years?
- What factors influence state specific changes in marriage and divorce trends
- How do marriage rates correlate with geographical and temporal factors?

Layout 3



Bubble Plot



Operators

- Drop down for selecting months on the map to view marriage distribution
- Hover interactions on the line chart and bubble plot for state specific data
- Butterfly chart uses both number of marriage and rates for a comparative view

Title:

Author: Nam Phuc

Sheet: 4

Topic: Still Improving on Layout

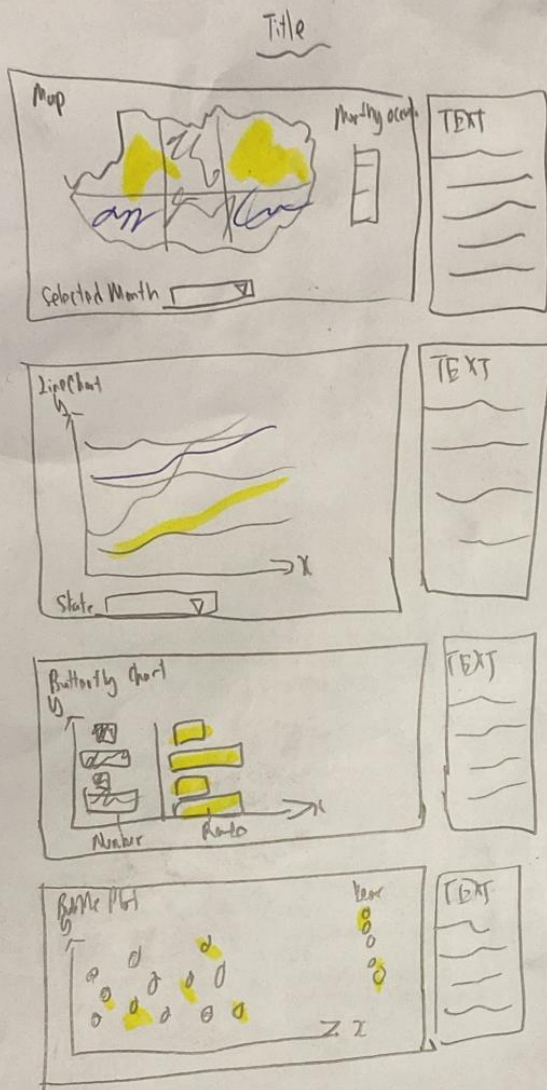
Focus

- Map shows the geographical distribution of marriages by month, allowing a comparison across states.
- Line chart tracks marriage trends overtime, broken down by state to reveal pattern
- Bubble plot examines the relation between rates and number of divorces over the years.

Discussion

- How do monthly and annual marriage trend different across Australian states?
- What factors influence the variation in divorces rates, as seen in the bubble plot?
- How do marriage rates relate to the number of marriages across different time periods and regions?

Final Layout



Operations

- Month selection on map to filter data and observe monthly changes in marriage pattern.
- Hover and click function on line and bubble plot to select specific states or year.
- Pop down on both line chart and bubble plot to select specific states or years.

Title

Author: Wan Zhou

Sheet: 5

Task: Finalised my layout

Focus

- Map visualize marriage occurrences across Australia by month, offering geographical overview.
- Line chart provides marriage trends by state over time, highlighting key changes year to year.
- Bubble plot explores the dynamic between divorce rates and divorces number, revealing critical shifts over years.

Discussion

Pros

- Each visualization is clear and easy to navigate between the different data perspective.
- It is very interactive where the use of hover and filter function is straightforward.

Cons

- The visualization can make the user feels cramped.
- With the same data it will keep the user boring.
- Focus is split due to some data is repeated over and over again.