Crime Rate in Australia

Display crime rate across different states and territories

crime rates

crime rate

Year

Trends in crime rates over years

Demographic

Show the distribution of crime victims by age group and gender

Male   Female

Visualise the marital status and country of birth

Crime Incident Details

Illustrate the flow of crime incidents from occurance to reporting to the police

relationship between crime rates and wealth distribution

Labour Force

☑ not in the labour force
▢ employed
■ unemployed

Crime Rate

Region

Income

Illustrate the distribution of crime rate across different income level

Analyse the correlation between income levels and crime rates

Education

Show the distribution of crime victims by their highest level of educational level

Relationship between education levels and types of crimes experienced

Types of crimes

Rates of different crime

Show the proportion of various crime within the total crime dataset

Categorise

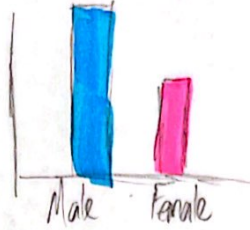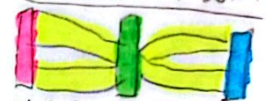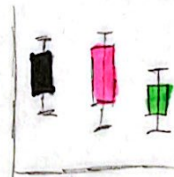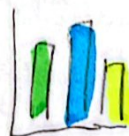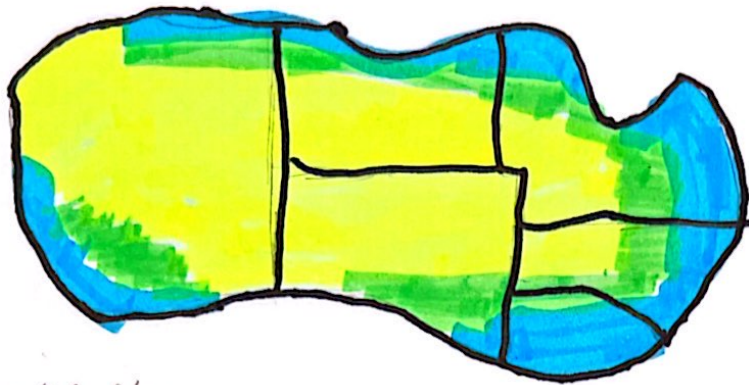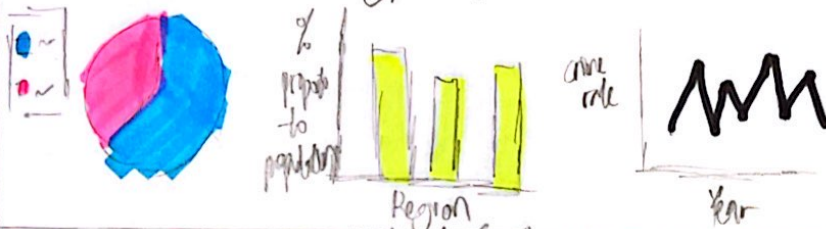| Geographic Vis	Trend Analysis	Comparative Analysis	Relationship Analysis	Flow & Process
Heat Map	Line Graph			Sankey Diagram
Choropleth Map		Bar Chart	Scatter Plot	
Bubble Map		Pie Chart	Bubble Chart	
		Box Plot		

Combine & Refine

Combine a Choropleth Map with a Bubble Chart to show crime rates and related social economic factors

Layout

Crime Rate in Australia

Crime Rate Value

100   10000

Types of Crime

% people to population

Region

crime rate

Year

Related to Income

Operations

Select any region

Highlighted the selected region

Discussion

- Able to let user do use the map as a filter

- This feature allows viewers to focus the region they want

- Easily filter to get the stats

Focus

the rest of the region will become dim

selected region

The focus here is to allow the map use as filter when selected a certain state or territory, the rest of the items also filtered as well

Layout

Crime rate in Australia

This is a choropleth map with bubble chart combination

Size
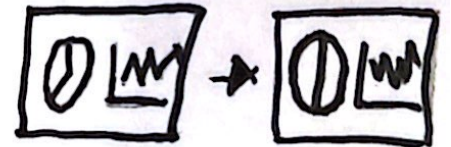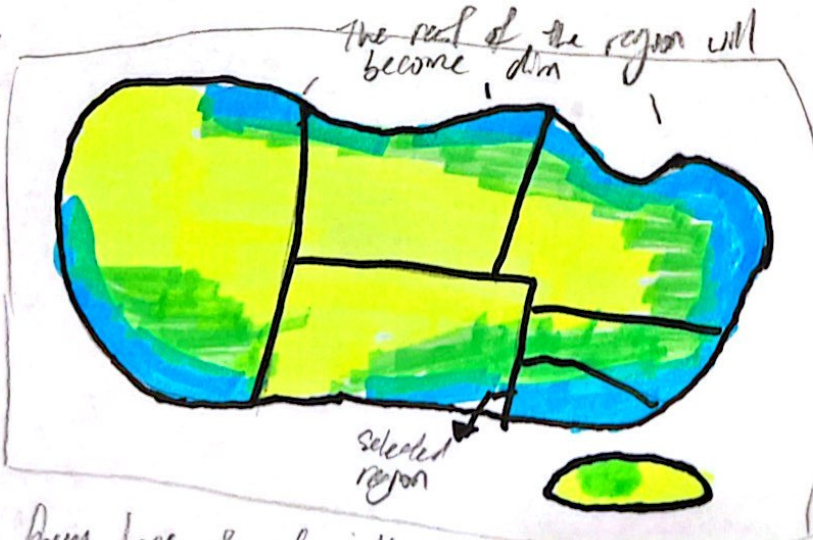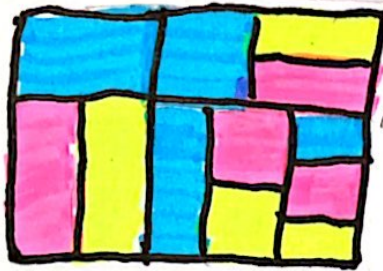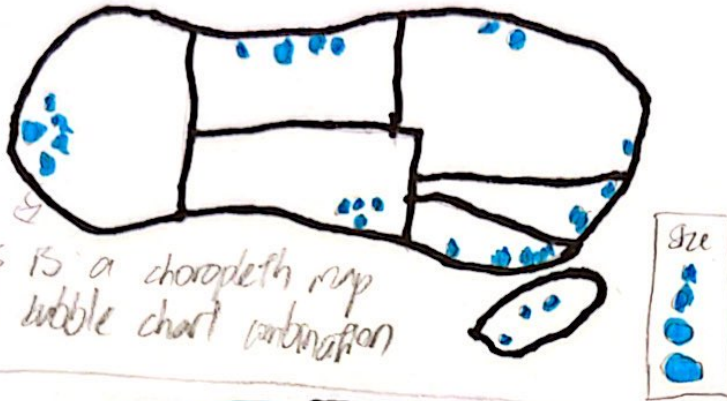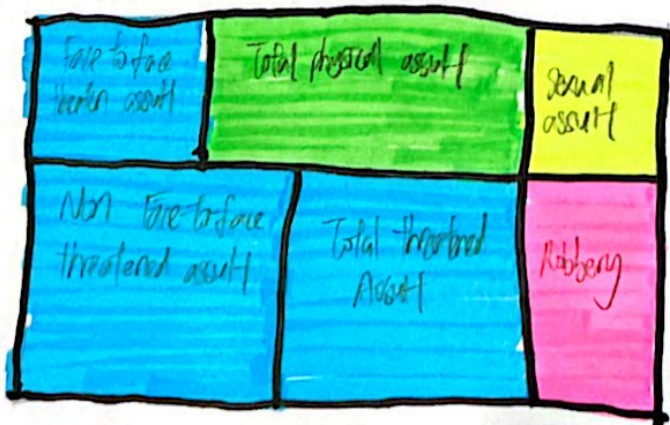
Show the proportion of various crime within the total crime dataset

Region

Components

- A choropleth map and bubble chart combination

- A treemap

- Line chart

- Bar chart

- Possibly box chart to make a economical factor

Focus

Face to face healtn assault · Total physical assault · sexual assault · Non face to face threatened assault · Total threatened Assault · Robbery

- By using Treemaps, it can display hierarchical data

- This example shows the class hierarchy of the types of crime
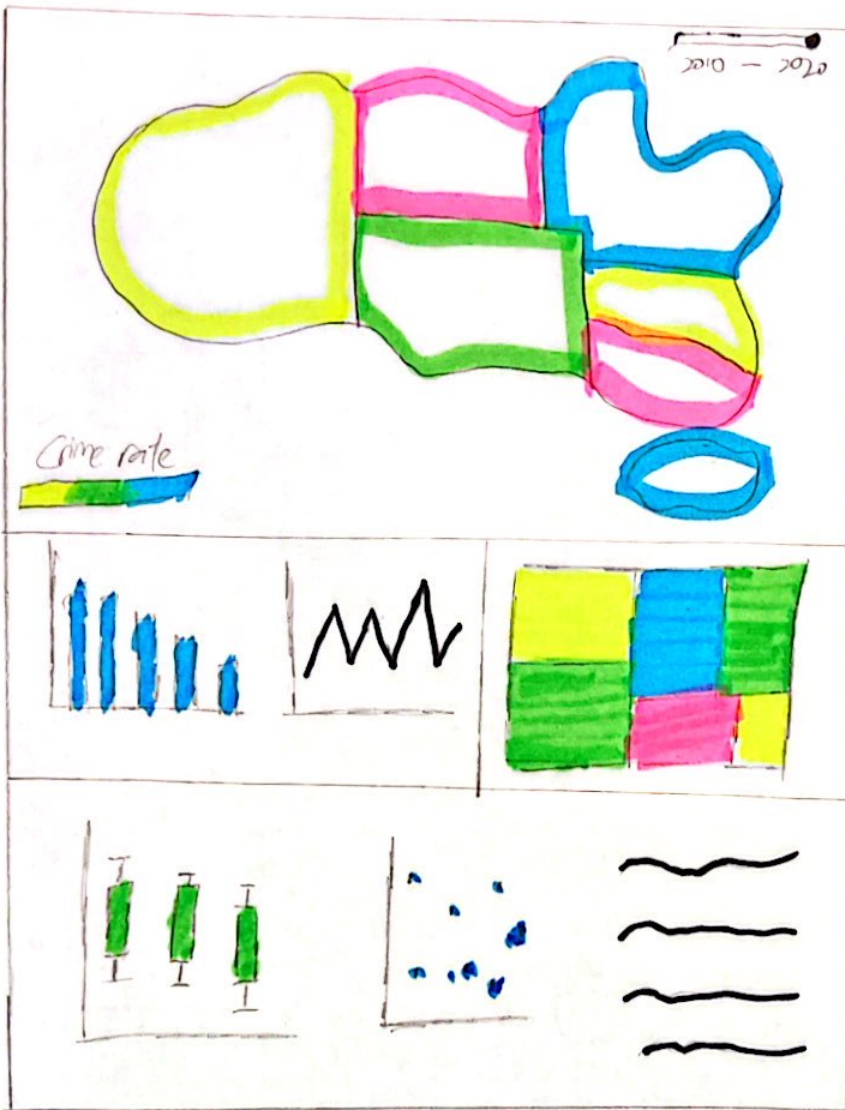
Discussion

Pros:

- Can effectively display hierarchical relationship between the data

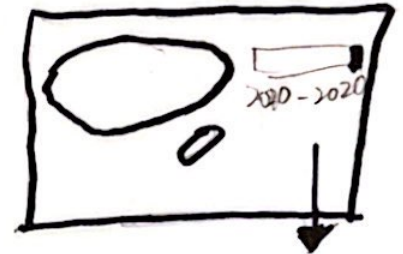- Use color code to encode a second dimension, making it easier to compare different categories

Cons:

- Can become complex and harder to interpret

- not the best choice for [...]
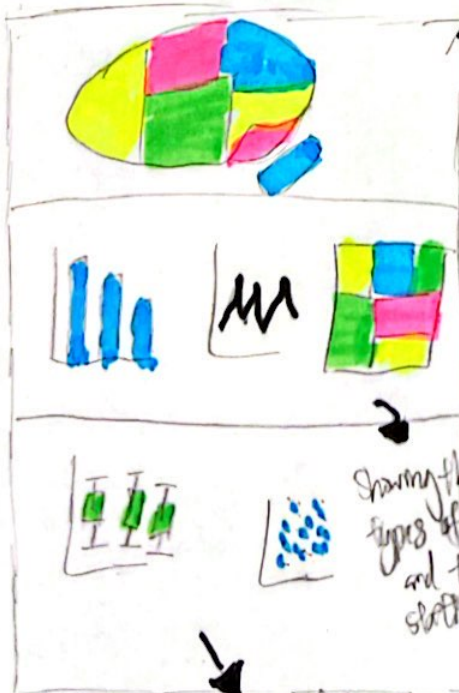
Layout

2010 — 2020

Crime rate

Operation

2010 – 2020

- Able to adjust the time period

- However, it might just included for the map, not for the whole dashboard

Focus

Showing the overview of crime rate across the states and territory

- Focus on providing as comprehensive information as possible

- Allow viewers have a understanding of the overall context by storytelling

Sharing the types of crime and the total statistics

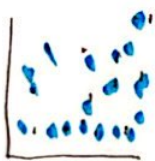Sharing the relationship between crime rate and income level
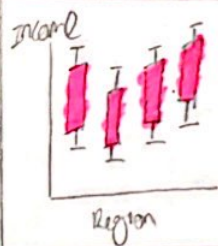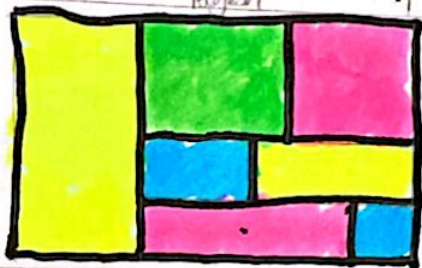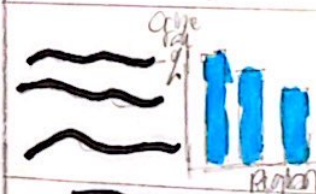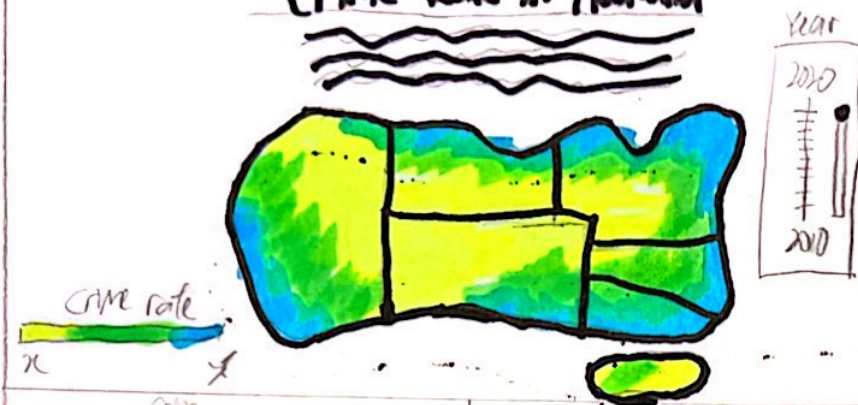
Discussion

Pros

- Viewers can get a lot of information from here

- Storytelling makes the visualisation more interesting

Cons

- Takes time to complete this, and might not able to do all of these due to the time limit
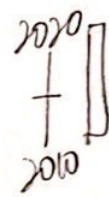
Layout

Crime Rate in Australia

Year
2020
2010

Crime rate
x   y

Crime rate / Region

Crime rate / Year

Income / Region

Operation

- Adjust time period (for the choropleth map)

2020
│
2010

2010 ─┼─ 2020

- Use the choropleth map as the filter to focus on certain region

Focus

2010 — 2020

Allow to change the time period

- The choropleth map would be the essence of the main idea which is the crime rates in Australia (by states and territories)

Detail

- This would be completed by using a few tools
  → Vega-lite
  → HTML, CSS, JS

- Time used
  → approximately 10 days for the visualisation
  → one day for cleaning and preparing for data
  → Few hours for the report