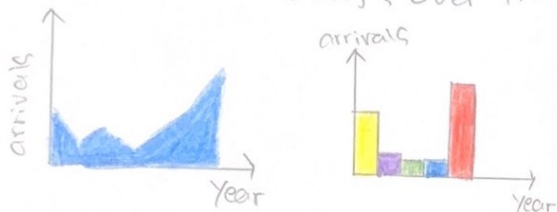# IDEAS

→ Geographic Map: Every point of entry into Malaysia
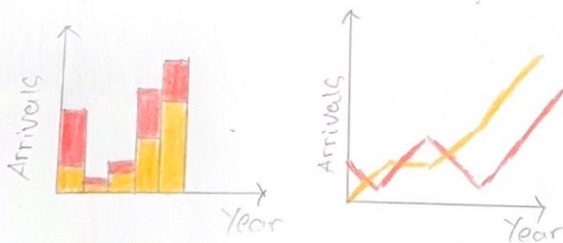

→ Arrival trends: Changes over time

→ Entry point comparison by states
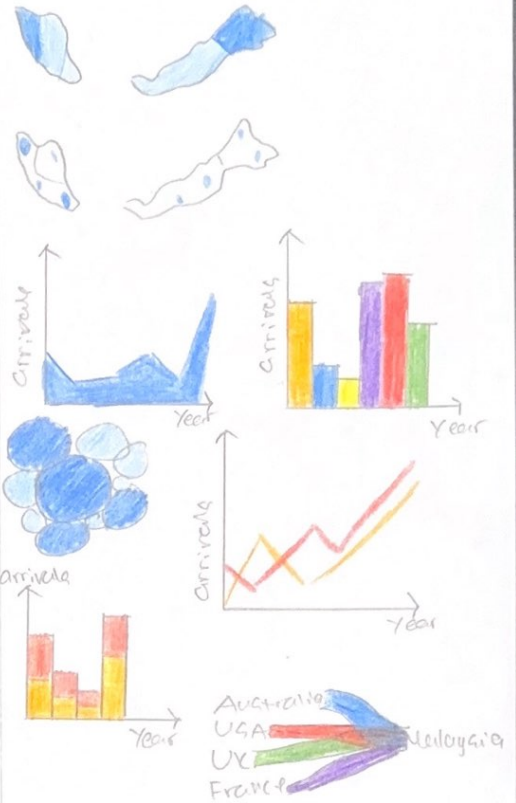

→ Gender Analysis

→ Top country with most arrivals

Filter

Categorise

1) Entry points in Malaysia
2) Arrival changes over time
3) State-wise arrivals
4) Gender Proportion
5) Top Countries by arrivals

Questions

1) Do I want to use two map idioms in this visualisation?
2) How can I ensure viewers identify the trends in arrivals clearly?
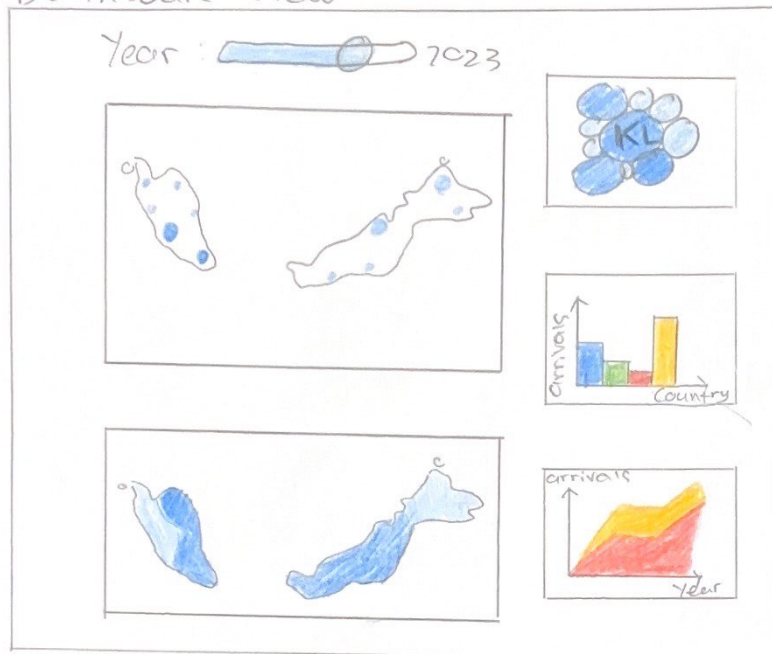3) Can we reduce the number of categories by combining idioms?

Combine & Refine

✷ Answers Q3

By using a stacked area chart, it can combine number of arrivals over time, and proportion of male vs female arrivals into one visual allowing easy pattern recognition.
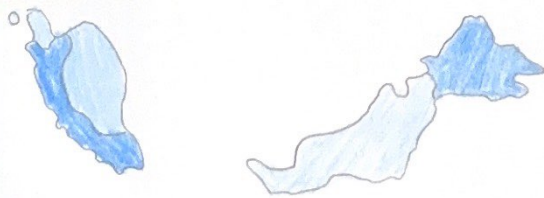
Layout

Dashboard View

=> The year slider will change the data for all the idioms based on the year selected by the user. For example, Sarawak may have a less darker shade in 2023 compared to 2020.

Focus :

- A Chloropleth map shows geographic patterns and provides a clear overview of how arrivals into Malaysia are distributed across the country.

Operation

Year :

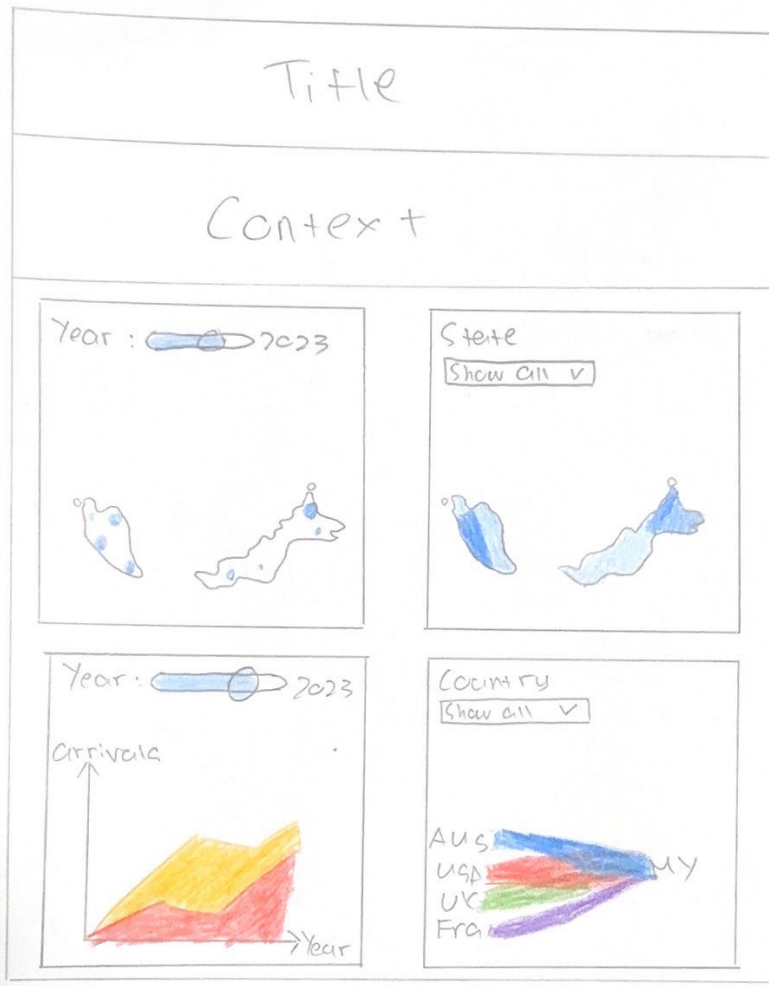- Slide to change visualization based on the year

Discussions

Positives

1) Comprehensive overview of all the idioms
2) Easy-to-understand idioms

Negatives

1) Lack of context to explain data
2) Might cause a cognitive overload due to overwhelming charts
3) Lack of storytelling flow

Layout

Title
Context

Year: ◯──●──▷ 2023

State
Show all ⌄

Year: ●──────▷ 2023

Arrivals

↗ Year

Country
Show all ⌄

AUS
USA   MY
UK
Fra

Focus

Australia
USA
UK
France
Thailand

Malaysia

=) A Sanvey diagram allows viewers to trace and compare the number of arrivals across different countries. This way, it is easy to see the main source of foreign arrivals into Malaysia.

Operation

States

Show all ⌄

Press the "v" button to choose a specific state to highlight

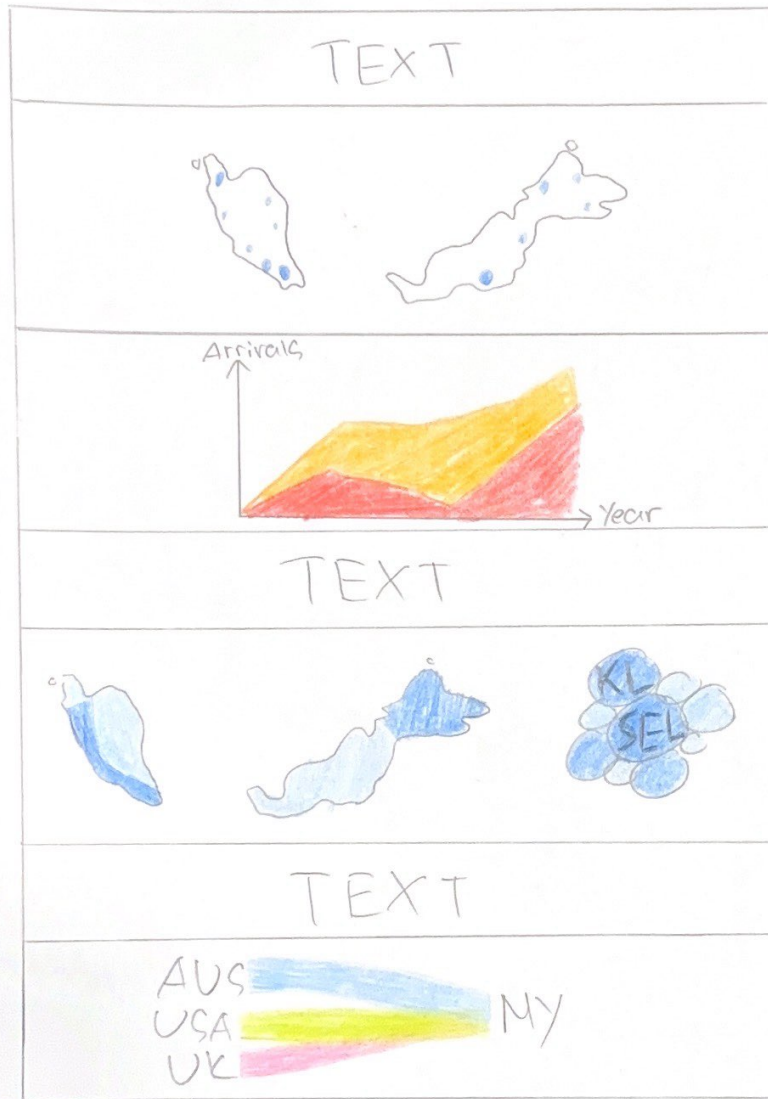| Show all ⌄ |
|------------|
| Kuala Lumpur |
| Selangor |
| Jahor |
| Sarawak |

Discussion

Positives

1) More flexibility with filters

2) Provides some context to viewers

3) Got flow for storytelling

Negatives

1) Too simple and plain which may cause the visualisation to be boring

2) Main map is not the centre of the visualisation

Layout

TEXT

Arrivals

Year

TEXT

KL
SEL

TEXT

AUS
USA
UK

MY

Focus

⇒ The proportional symbol map provides an intuitive comparison between entry points. It also shows clearly the geographic distribution whilst ensuring regions with the highest traffic is easily noticeable. It will also have a filter to allow users explore arrival numbers at each point change over time, adding a temporal dimension to the analysis.

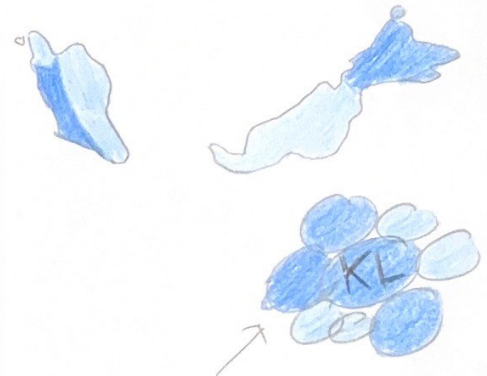Title : Detailed analysis of foreign arrivals into Malaysia

Author : Muhammad Imran

Date : 04/10/2024

Sheet : 4

Task : Create a detailed analysis for viewers to explore foreign arrivals into Malaysia

Operation

KL

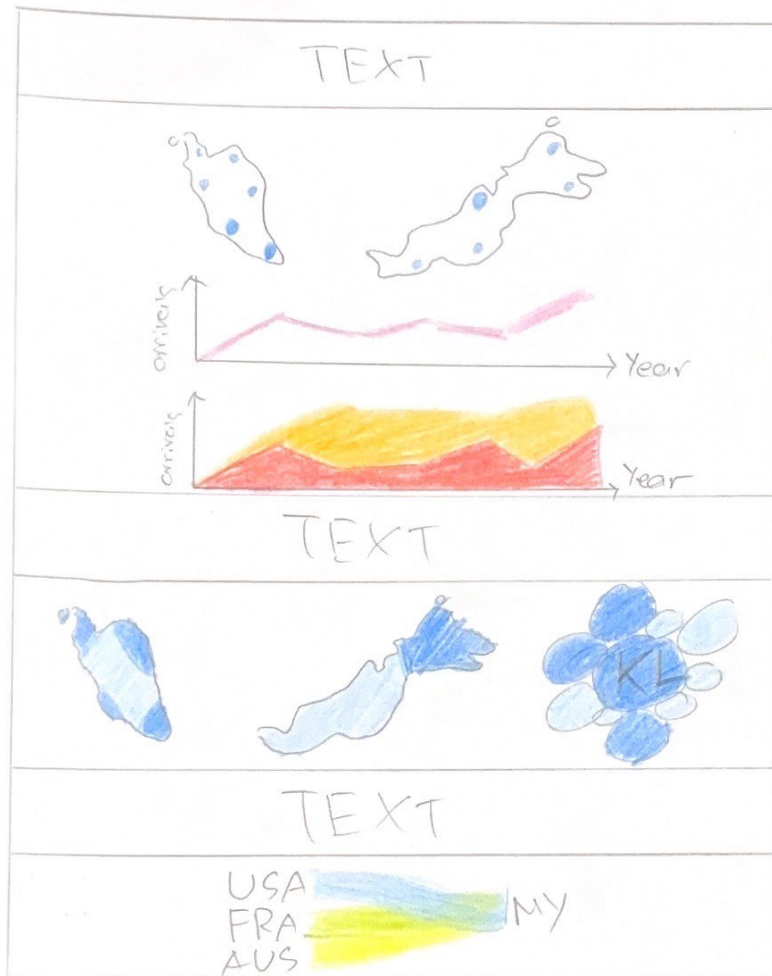Click on the bubble diagram to highlight a specific state

Discussions

Positives

1) Offers more personalisation & customisation

2) Clear flow of storytelling

3) Provides better and clearer context and visualisation for new viewers.

Negatives

1) May have too much clutter

Layout

TEXT

TEXT

TEXT

USA
FRA
AUS

MY

Operation

1) Hand-over tooltips that provide insights when viewer interact. This allows further analysis.

2) The dashboard will be easy to read in any screen sizes, ensuring good user experience.

3) Will have descriptions and context as well as legends to explain any visual cues.

4) The dashboard will be vertical to reduce clutter and any possible cognitive overload. This will also ensure a seemless experience for users to move between idioms and improve storytelling.

Focus

=> A brushing interaction which links the first two idioms. This interaction allows users to filter the time period displayed in both idioms simultaneously.

=> This ensures a smooth, cohesive exploration of the temporal data whilst ensuring the interface is intuitive.

=> This will allow users to analyse the data in a unified manner.
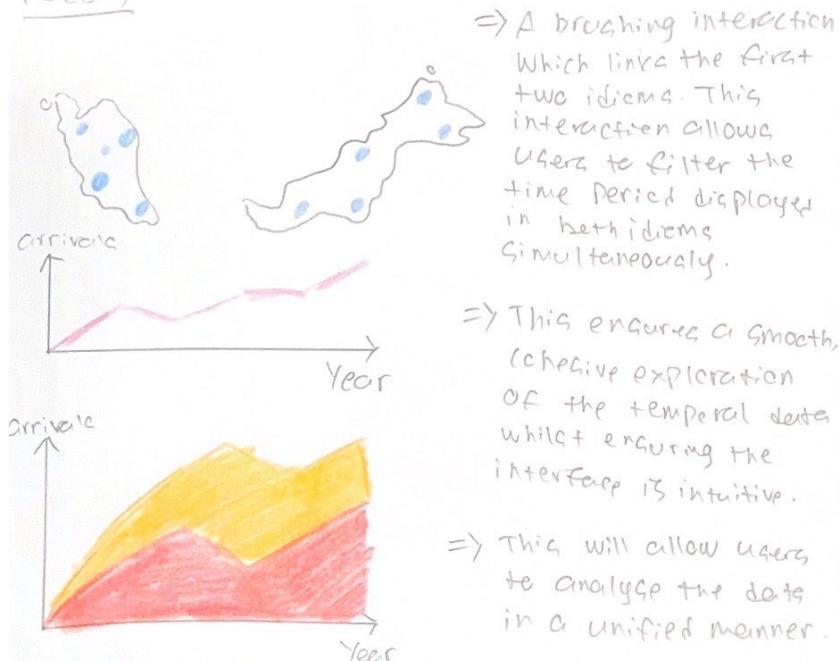
Discussion

1) Database implemented from 2 seperate files that have been combined into one. This is also used together with a topojson file of Malaysia.

2) Estimated time needed based on workload: 1.5 weeks

3) Software needed to build dashboard:
   i. Github
   ii. Vega-lite