FIT3179 Week 10 Homework

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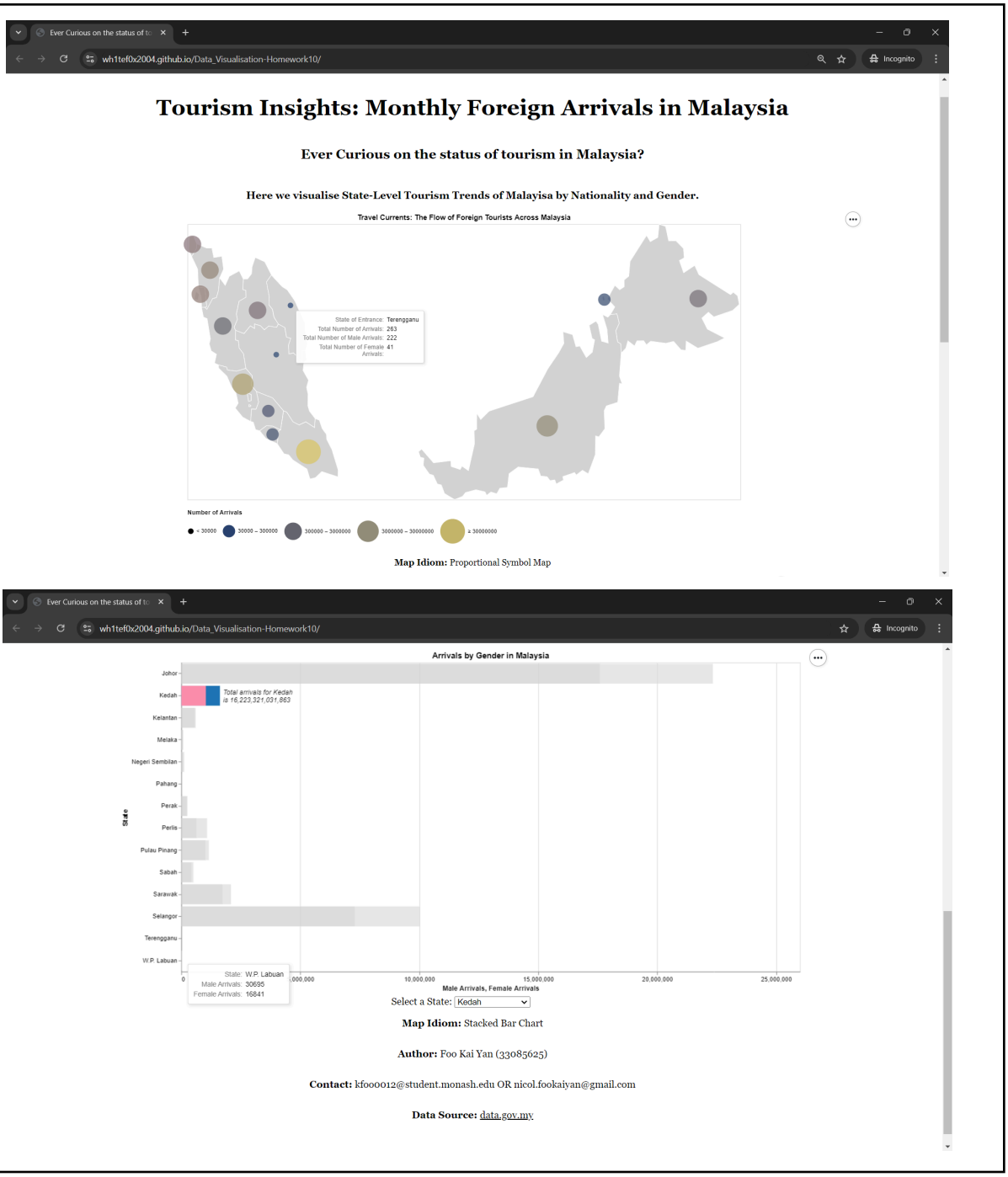
Studio: Tutorial 02 (Wednesday 12-2pm)
GitHub Graph URL: https://wh1tef0x2004.github.io/Data_Visualisation-Homework10/



Domain

Foreign arrivals in Malaysia by state of entry, nationality and sex.

Visualised Dataset

- Attributes Type:
    - Map Idiom 1: Proportional Symbol Map
        - Categorical: States in Malaysia
        - Quantitative: Total number of arrivals for each states in Malaysia
    - Map Idiom 2: Stacked Bar Chart
        - Categorical: States in Malaysia
        - Quantitative: Total number of arrivals for each states in Malaysia differentiated by gender
- Source: The dataset is obtained https://data.gov.my/data-catalogue/arrivals_soe
- Author:
    - Data Visualization Author: Foo Kai Yan
    - Dataset author/obtained from: data.gov.my

Data Transformation

No normalization is done as normalization is not required for Proportional Symbol Map. Nevertheless, the original dataset underwent data preprocessing before being utilized to create the map. More precisely, the dataset was changed from daily entries for each state to cumulative totals, including overall arrivals, total female arrivals, and total male arrivals for each state.

There was no special transformation done to create the Stacked Bar Chart. Nevertheless, additional features were added for this Stacked Bar Chart whereby a filter drop-down box was included to allow the user to select a state, causing only that state's bar to be colored while the bars of the other states will be grayed out. This specific feature helps the user focus on the selected state's bar without distractions, while still allowing the other bars to remain on the graph for comparison.

Justification

The type of map idiom used for the first graph for this homework is Proportional Symbol Map. In my personal opinion, a proportional symbol map is better for displaying the dataset I selected for my Data Visualisation 2 project because it is perfect for showing absolute quantities like the number of foreign arrivals, with symbol size directly reflecting the data values. Moreover, Proportional Symbol Maps are useful for portraying discrete data points such as state-level foreign arrivals, as the information is inherently linked to particular locations.

The type of map idiom used for the second graph for this homework is Stacked Bar Chart. There was a requirement to include annotations, filters, and tooltips for this homework so the map idiom that I immediately thought of that could easily incorporate these features is a bar chart. However, a regular bar chart would be too basic for my dataset and since I plan to include the graphs from this assignment in my final data visualization 2 submission, I decided to enhance the original bar chart into a stacked bar chart instead. Finally, opting for a stacked bar chart over a basic bar chart allows users like me to quickly view the total arrivals for each state and grasp the ratio of male to female arrivals. This visual method effectively emphasizes gender inequalities in tourism better than using individual bars.