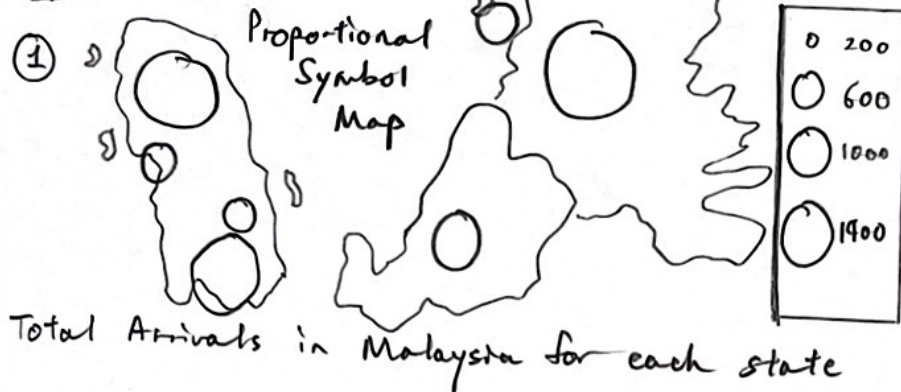
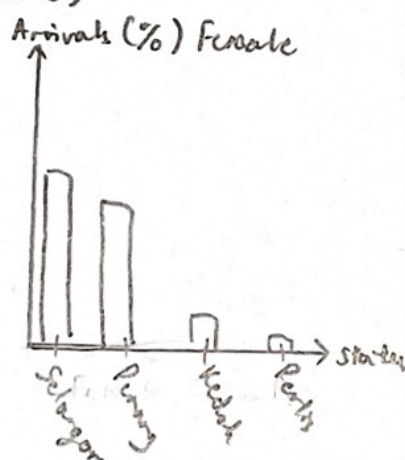
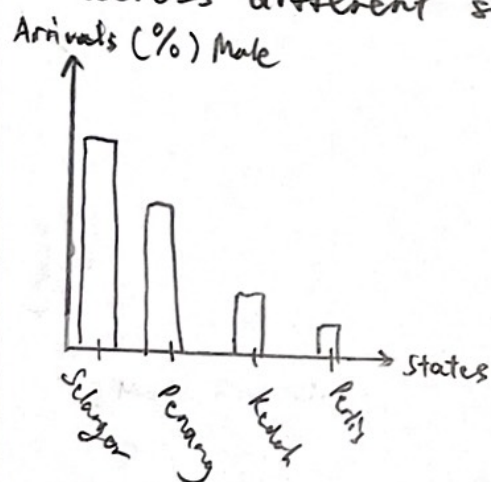


# I DEAS

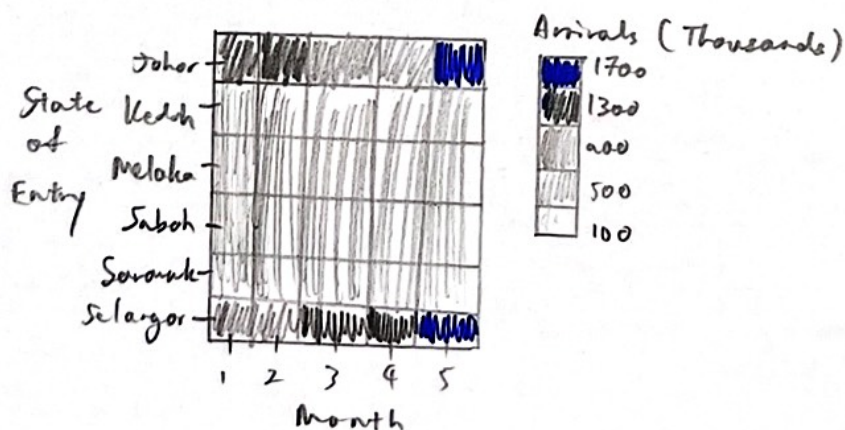


③ Bar Charts for total male & female arrivals across different states



- color hue for different states

④ Heatmaps: Show months / years arrivals density across different states



Name: Aaron Soh Wei Ern  
Date: 13th October 2024  
Sheet: 1/5

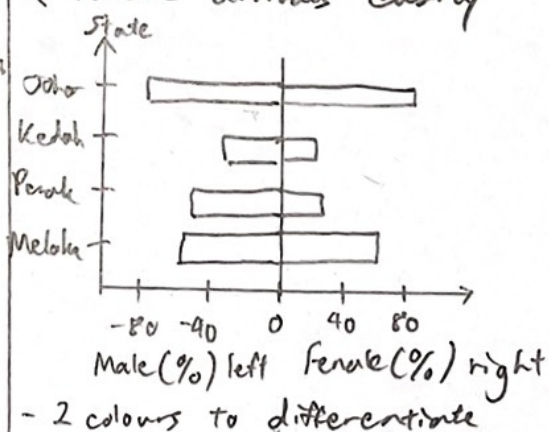
**FILTER:** ① & ② are about map, remove ① & use ② because ② is better in showing states' arrivals

**CATEGORY:**

- By States / Regions
  - ↳ To show arrivals geographically for each states
- By Gender
  - ↳ Able to compare male & female arrivals
- By Month / Year
  - ↳ Compare timing
- By Continents

**COMBINE & REFINE:**

③ should be combined into one chart only to compare male & female arrivals easily



**QUESTIONS?**

- Are users able to see the total arrivals for each state easily with a map?
- Will users understand the use of heatmaps since it's not commonly used?



# LAYOUT

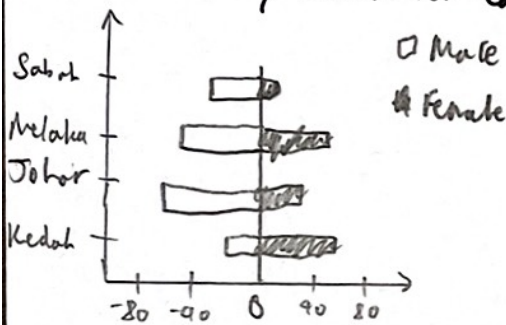
## Total Arrivals By state in Malaysia



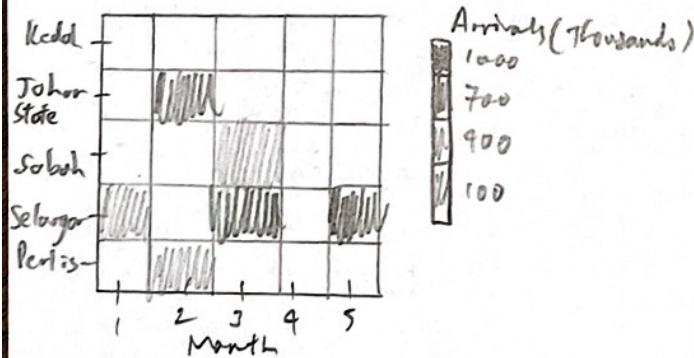
Year:

Gender:

## % of Arrivals by Gender for each state

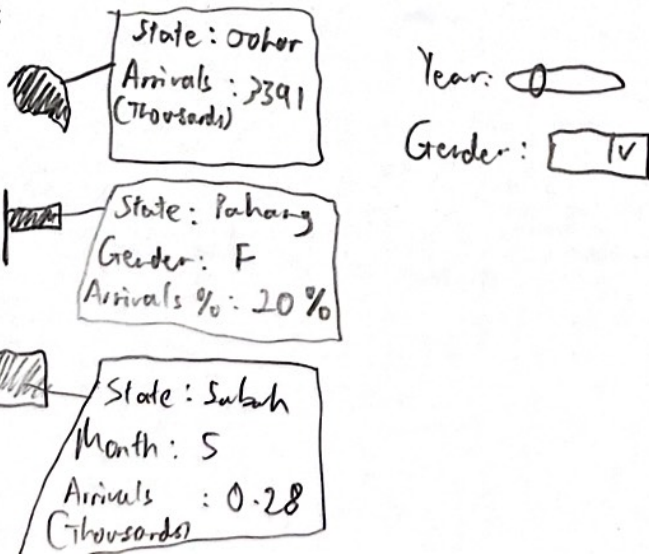


## Monthly Arrivals for each state (2020-2023)



Year:

## Focus



Title: A2 FIT3179

Author: Aaron Soh Wei Em

Date: 13/10/2024

Sheet: 2/5

## OPERATIONS:

- Choropleth map that shows arrivals of each state geographically
- ↳ Able to filter to see male & female arrivals
- ↳ Year selection time slider
- Population pyramid chart shows only male & female % arrivals across states
- Heatmap shows monthly arrivals for each state
- ↳ density
- Tooltip shows more detailed data & exact values when users hover over map / bars

## DISCUSSIONS:

### Pros:

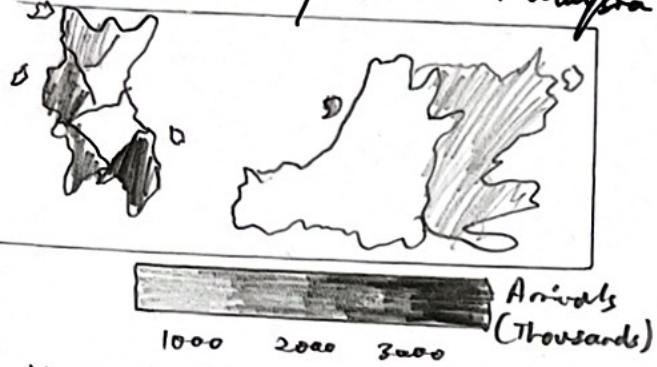
- Easy to compare
- Has filters & time sliders
- Easy to use

### CONS:

- Does not show from where  
Eg: Continent

# LAYOUT

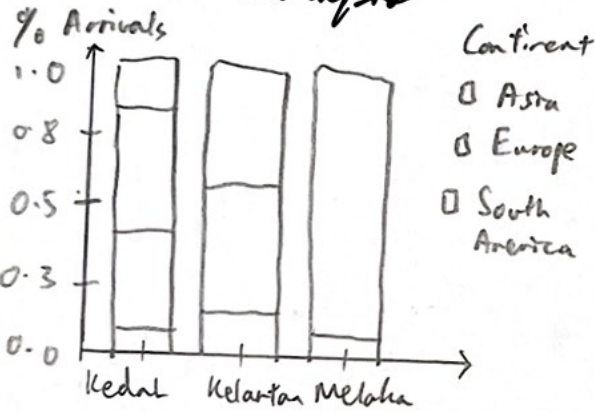
## Total Arrivals By State In Malaysia



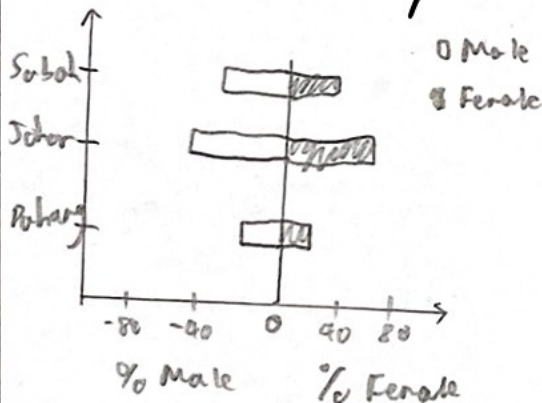
Year: 2020

Gender: IV

## % of Arrivals by Continent for each state In Malaysia



## % of Arrivals by Gender for each state In Malaysia



## Focus



others are same as sheet 2

Title: A2 FIT317A

Author: Aaron Singh Wei Ern

Date: 13/10/2024

sheet: 3/5

## OPERATIONS:

- Choropleth map shows total arrivals of each state in Malaysia Geography Map
- Stacked bar chart shows % of arrivals by continent for each state in Malaysia
- Population pyramid chart shows % of Arrivals by Gender for each state in Malaysia
- Tooltips include detailed data & exact values in Map / bars
- Users are able to filter by Year & gender (time slider & filter)

## Discussions:

### Pros:

- Users are able to see arrivals from where
- Easy to use
- Easy to compare

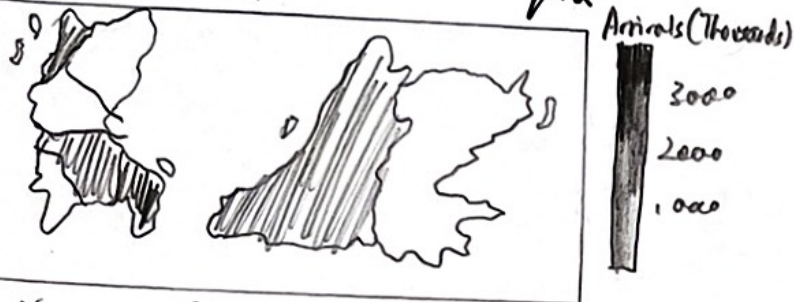
### CONS:

- Does not show northly data
- There are 2 similar idions



# LAYOUT

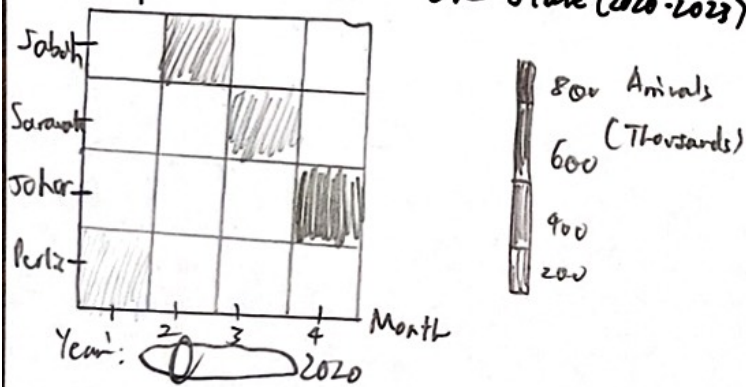
## Total Arrivals By State In Malaysia



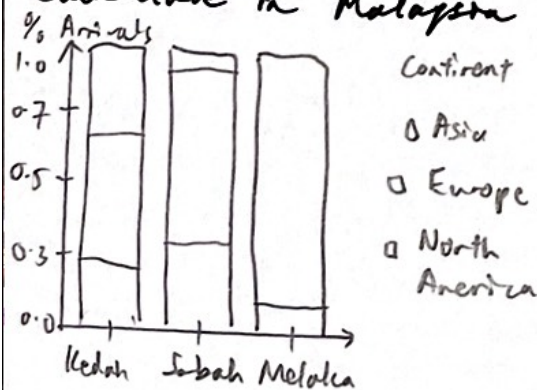
Year:

Gender:

## Monthly Arrivals for each State (2020-2023)



## % of Arrivals by Continent for each state in Malaysia



## Focus

Save as Sheet 2 & Sheet 3

Title: A2 FIT3179

Author: Aaron Siah Wei Ern

Date: 13/10/2024

Sheet: 4/5

## OPERATIONS:

- choropleth map shows total arrivals for each state in Malaysia geographically
- Heatmap shows monthly total arrivals for each state & able to see density
- stacked bar chart shows % of arrivals by continent for each state in Malaysia
- Tooltips include detailed data & exact values when hover over map / bars
- Users are able to filter by Year & gender (line slider & filter)

## DISCUSSIONS:

### PROS:

- Users are able to compare monthly data
- Easy to use
- Easy to see density

### CONS:

- can't compare male arrivals VS female arrivals easily

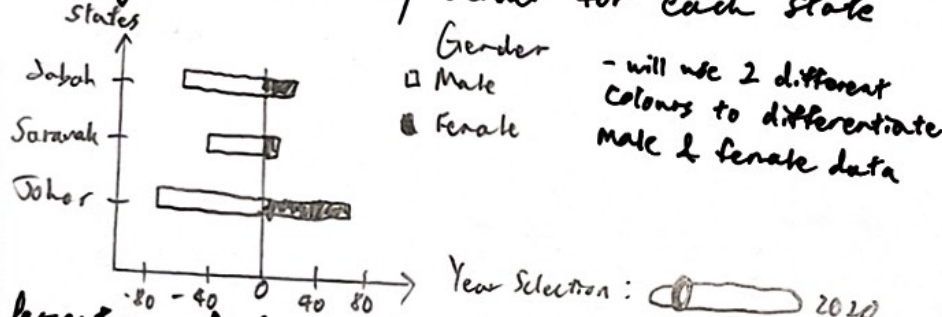
# LAYOUT

## Malaysia's Arrivals Across Different States

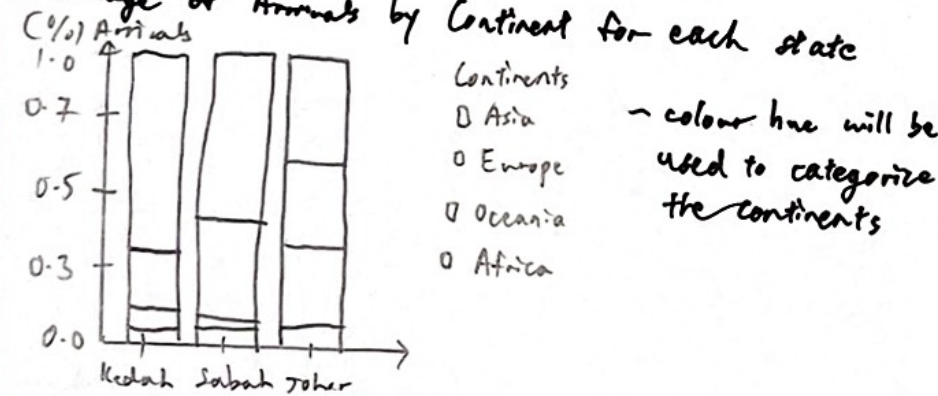


Year:  2020  
Gender: ☒ Female ☐ Male

## Percentage of Arrivals by Gender for each state



## Percentage of Arrivals by Continent for each state



Title: A2 FIT317A

Author: Aaron Stan Wei Ern

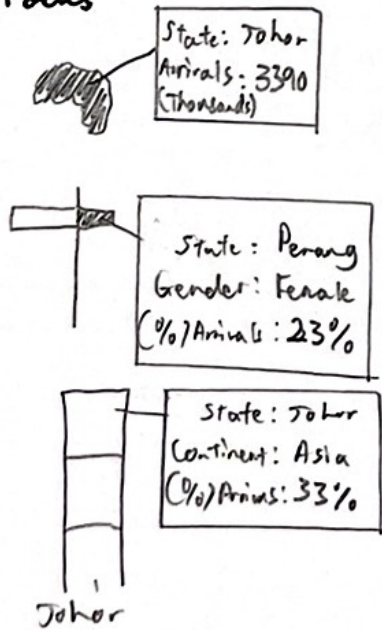
Page: 13/10/2024

Sheet: 5/5

## OPERATIONS:

- choropleth map shows total arrivals of each state on a geographic map
- ↳ Hover over the states to see details of which state & arrivals (in thousands)
- Population Pyramid Chart shows the percentage of arrivals by gender for each state, easy to compare data (male vs female)
- ↳ Hover over the bars to see which state, what gender, & % of arrivals
- Stacked bar chart shows percentage of arrivals by continent for each state
- ↳ colour hue will be used to differentiate each state
- ↳ Hover over the bars / sections to see which state, which continent, and % of arrivals
- choropleth map: normalized values values will be shown in sequential colour
- Population pyramid chart: 2 different colours for male & female

## Focus



Year:  2020

Gender: ☒ Female ☐ Male

Dropdown menu for gender filtering

## DETAILS:

- Datasets are in CSV files
- ↳ cleaned, combined, accurate
- ↳ cleaned with Google Colab
- Visualizations are done on Vega-Lite Editor
- layout & sight lines arranged with HTML & CSS
- Time to implement: 1 week
- Tool tips details are included
- Filters Available
- Time Slider Available