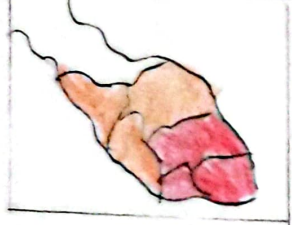


# IDEAS

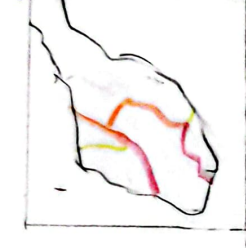
## Datasets

1. Air Pollution Index in Malaysia
2. Geo boundaries for Malaysia and surrounding countries
3. Transport Statistics Malaysia 2024
4. Open Street Map road data
5. Environment Quality Report 2022
6. Area of Permanent Forest Reserve by State

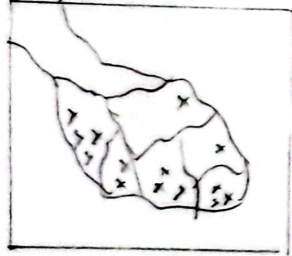
1, 2, 3, 5, 6



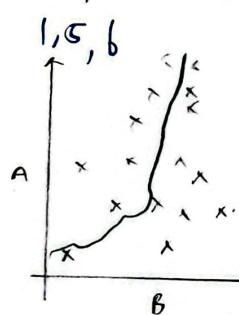
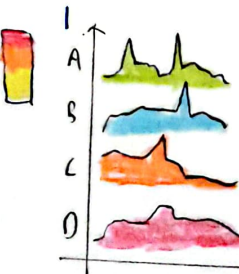
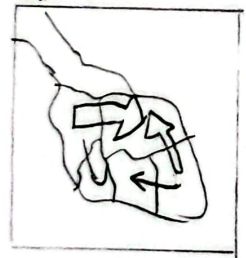
2, 3, 4



1, 2, 3



2, 3, 4



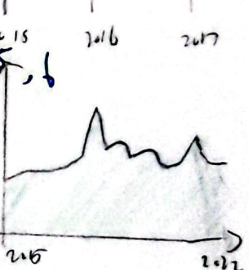
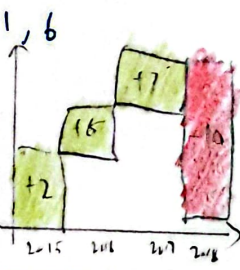
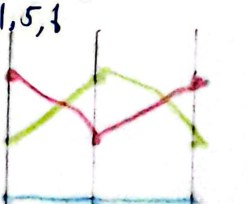
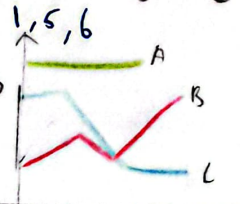
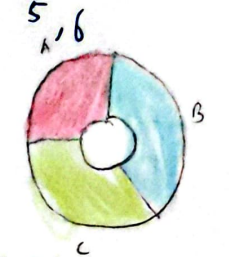
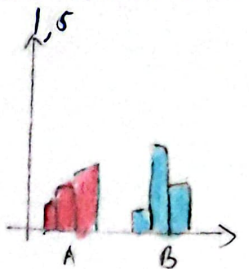
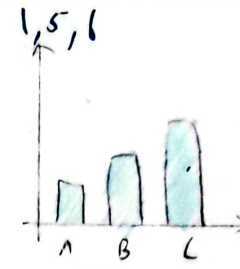
## Sheet 1

Author: Hsu Yang Lee

Date: 11/10/2025

Title: Air Pollution in Malaysia

Task: FIT3179 Assignment 2



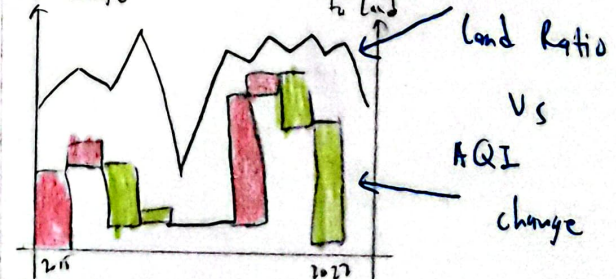
## FILTER

- Stacked bar chart



- Too many categories make it hard to see any changes
- Use grouped bar chart instead

## COMBINE & REFINE



## CATEGORISE

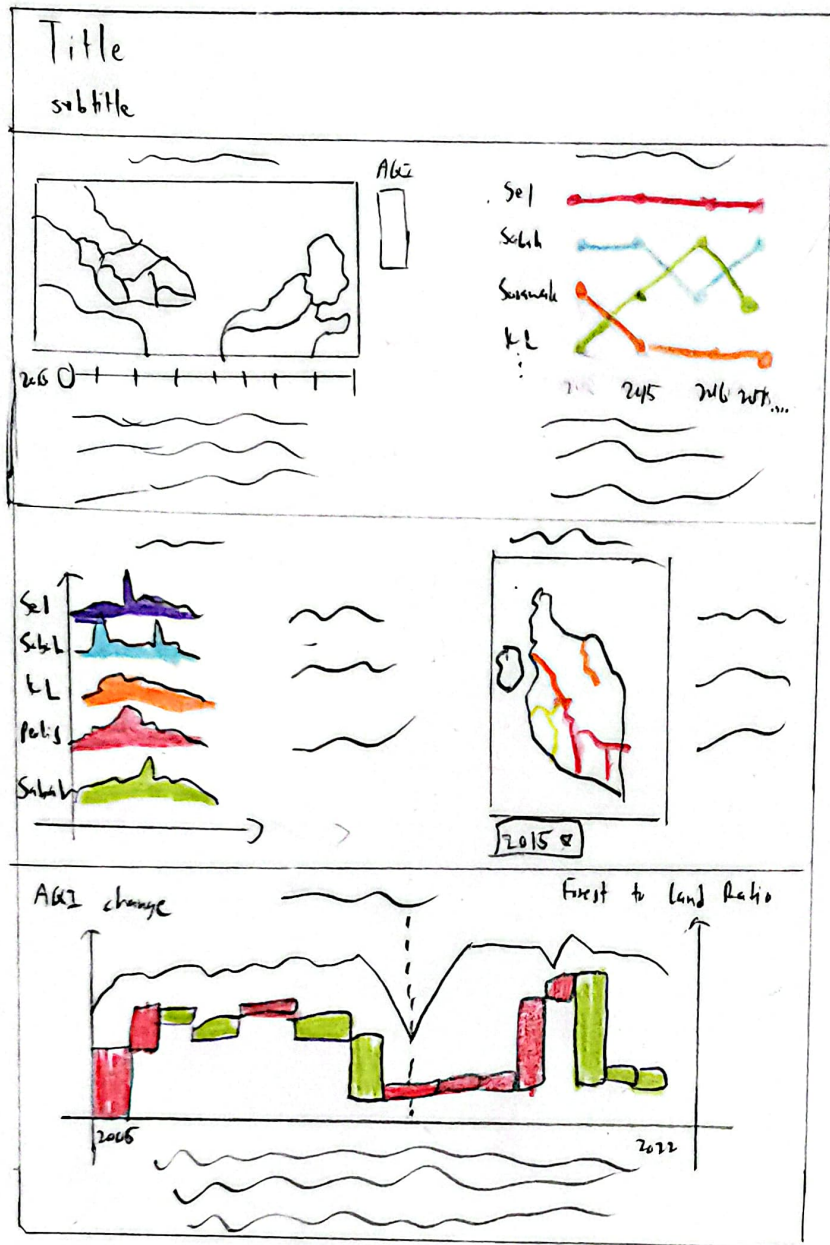
- Dataset 1, 2 → Show distribution of air quality in Malaysia
- Dataset 2, 3, 4 → Traffic analysis and relate to air quality
- Dataset 5, 6 → Forest area analysis and relate to air quality

## WHY

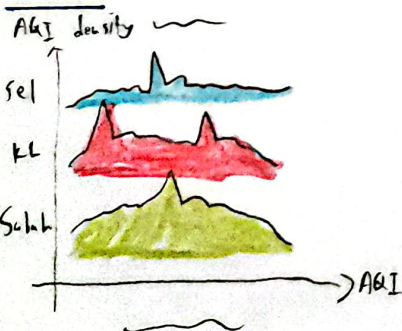
- Does the visualisations tell a story?
- Are all the visualisations needed?



# LAYOUT

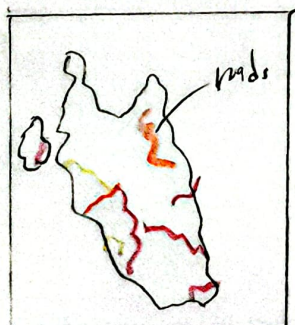


## Focus



\* Show distribution of AGI value for states

\* Relate traffic density of certain states with AGI



## Sheet 2

Author : Hsu Yang Lee

Date : 11 / 10 / 2025

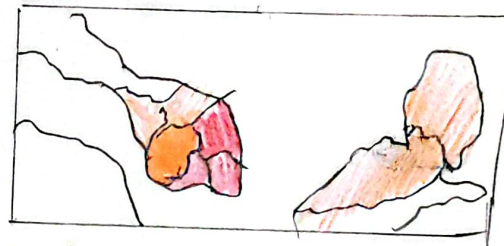
Title : Air Pollution in Malaysia

Task : FIT 3179 Assignment 2

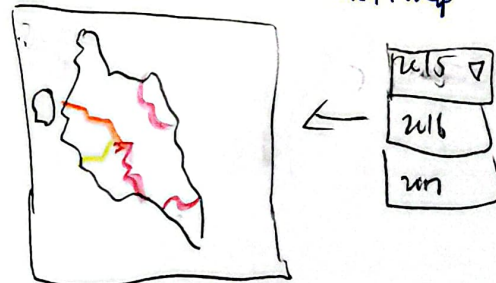
## Operation

• Time slider to control choropleth map

2015 2016 2017 2018  
June 2015



• Dropdown menu to control year of linear heatmap



## Discussion

### Pros

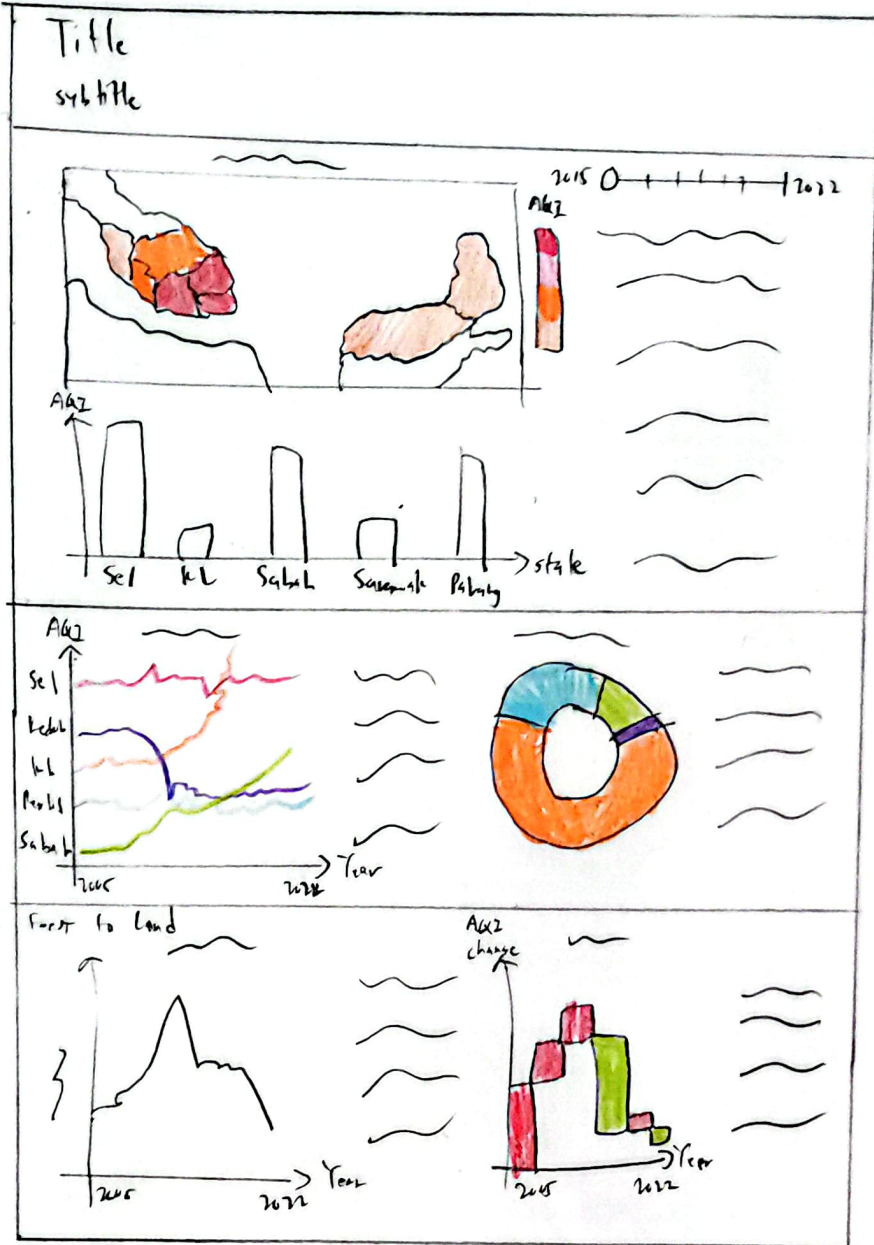
\* Simple 2x3 grid layout  
\* Interesting and eye-catching visualizations e.g. Bump Chart

### Cons

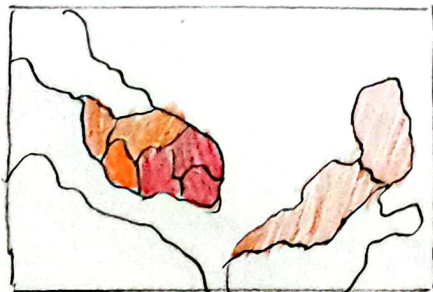
\* Hard to interpret violin chart if it is first time seeing it



# Layout

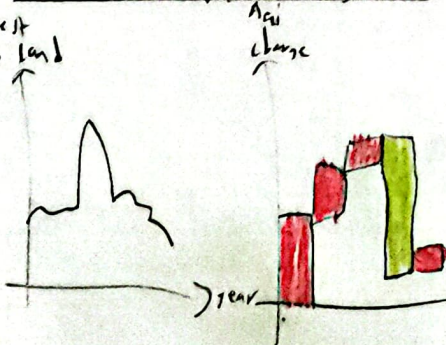


## Focus



\* Show distribution of AQI value across all states in Malaysia

\* Relate change in forest to land ratio to AQI



## Sheet 3

Author: Han Yang Lee

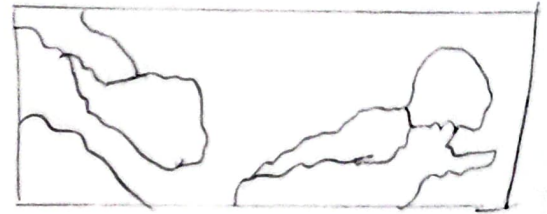
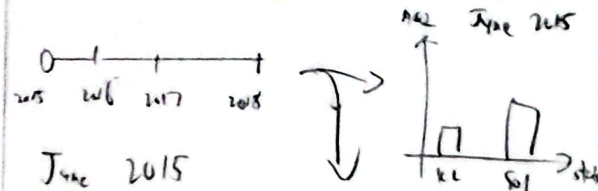
Date: 11/10/2025

Title: Air Pollution in Malaysia

Task: FIT3179 Assignment 2

## Operation

Time slider to control choropleth map and bar chart



## Discussion

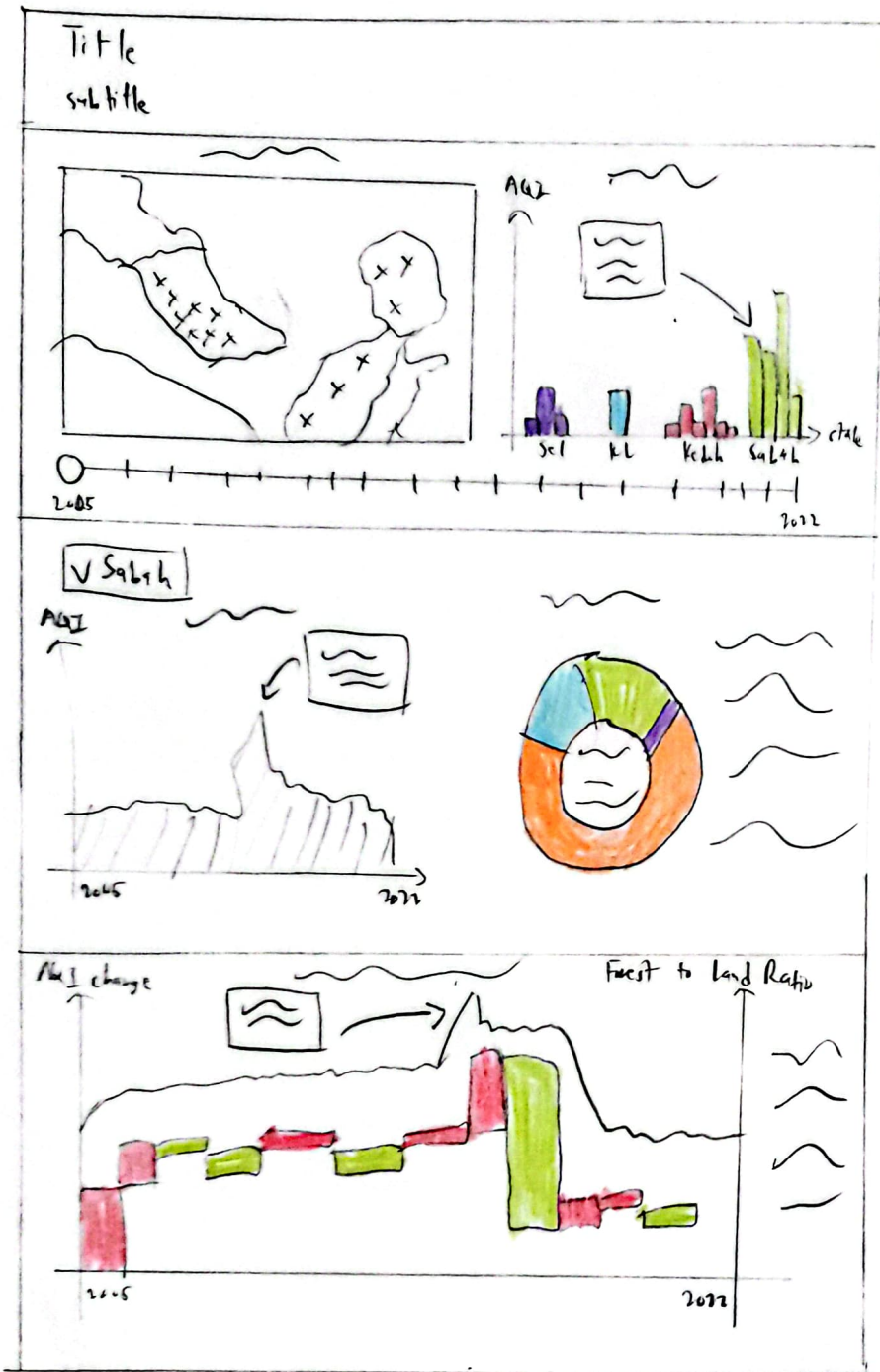
### Pros

- Layout is easily understandable
- Good summary view of temporal trend of AQI across all states

### Cons

- Hard to ~~identify~~ identify trend of one state at only
- Hard to compare AQI value if AQI values are very similar across all states in line chart

# Layout



## Focus



\* Show distribution of air monitoring station across Malaysia

\* Compare distribution of AQI value between states



## Sheet 4

Author: Hao Yang Lee

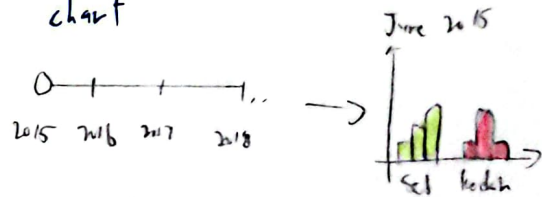
Date: 11/10/2025

Title: Air Pollution in Malaysia

Task: FIT3179 Assignment 2

## Operation

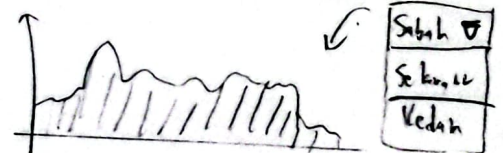
- Time slider to control def map and grouped bar chart



June 2015



- Dropdown menu for selecting state in area chart



## Discussion

### Pros

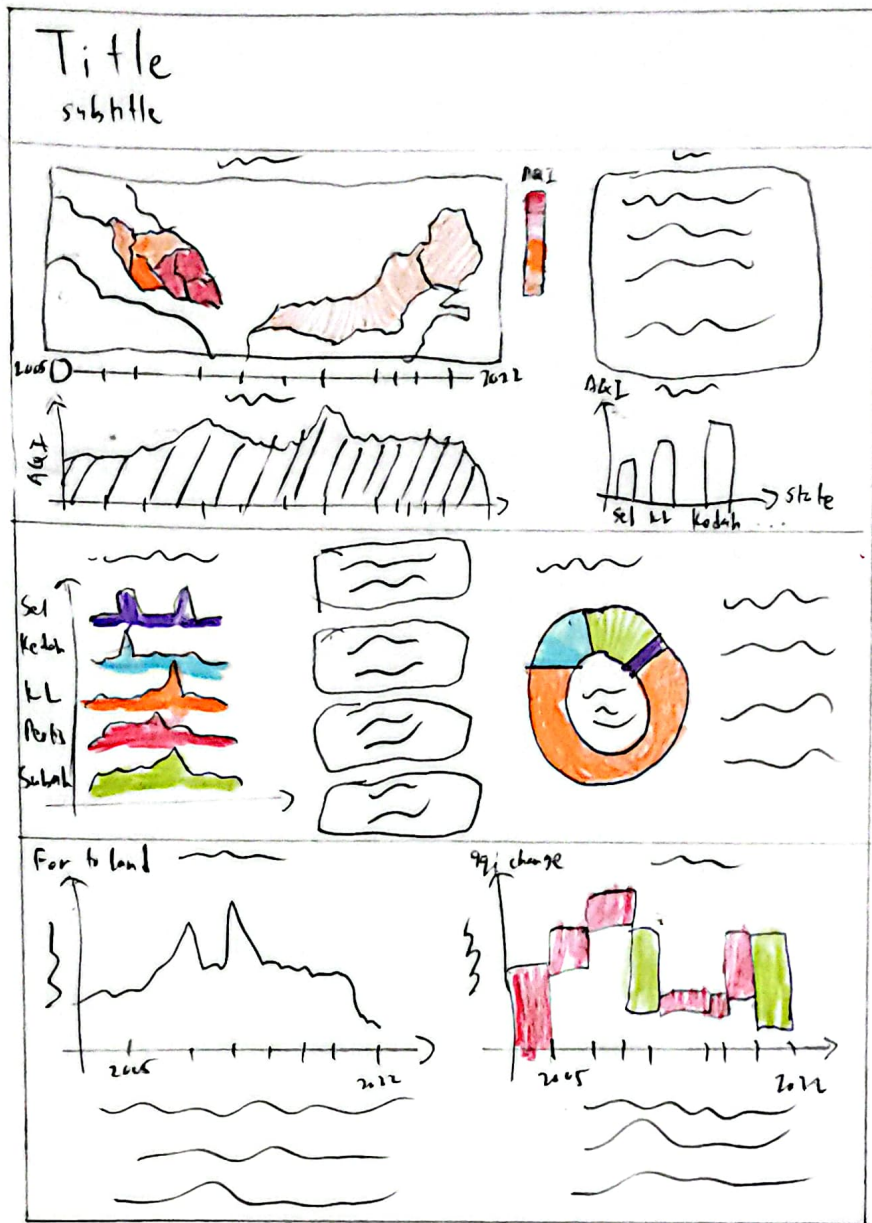
- \* Able to see detail AQI readings from every station
- \* Easier to pinpoint districts that have worse air quality

### Cons

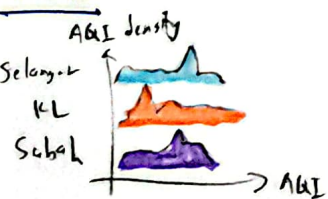
- \* ~~Readings~~ AQI reading is not very informative unless aggregated by state



# Layout



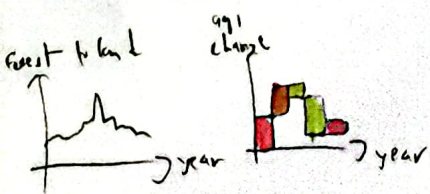
## Focus



\* Show distribution of AQI values for states

\* Show proportion of CO emission from various source

\* Relate change in forest to land ratio to AQI change



## Sheet 5

Author : Hoo Yang Lee

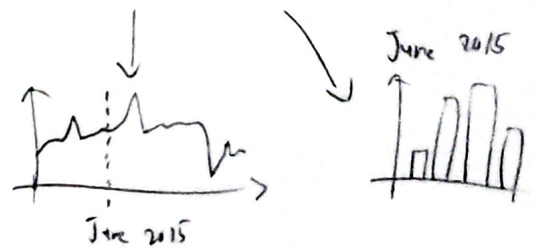
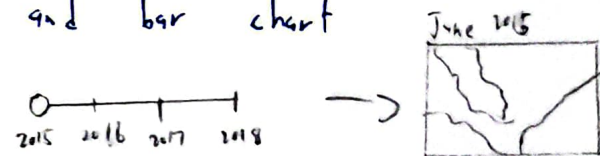
Date : 11/10/2025

Title : Air Pollution in Malaysia

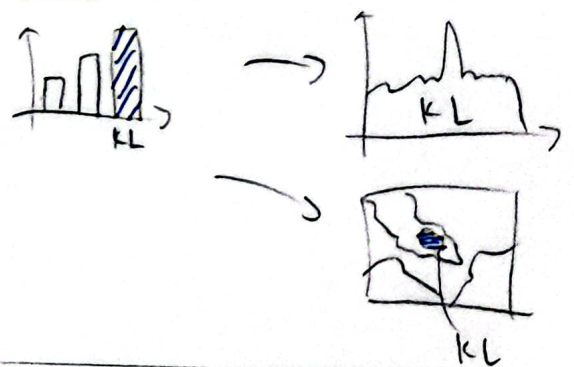
Task : FIT3179 Assignment 2

## Operation

• Time slider to control choropleth map, area chart and bar chart



• Clicking on bars will highlight state



## Detail

\* Vega lite for all charts

\* Custom javascript for advanced interactivity

\* Tailwind CSS for styling

\* Fit horizontally on laptop screen without scrolling

\* ~ 1 week to create