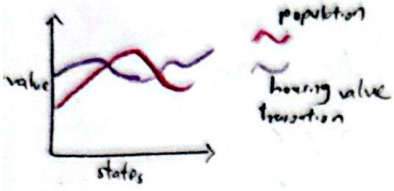
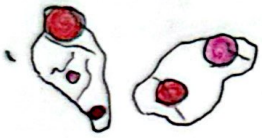
IDEAS

1) Line chart

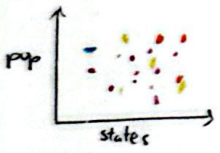


2) Choropleth map

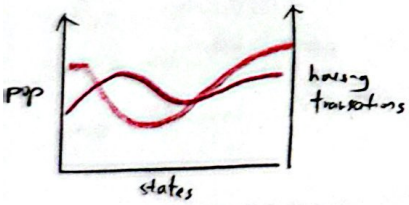
3) Proportional map



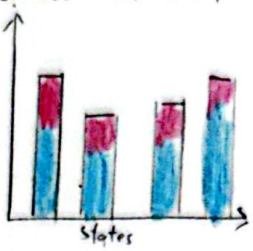
4) Bubble chart



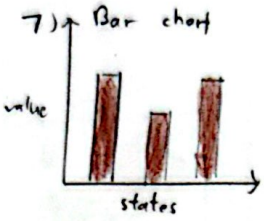
5) Dual axis line chart



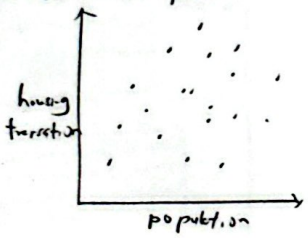
6) Stacked bar chart



7) Bar chart

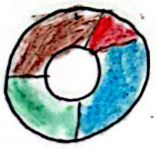


8) Scatter plot

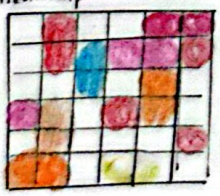


9) Pie chart

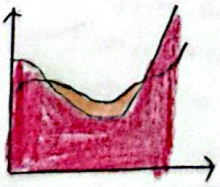
10) Donut chart



11) Heatmap

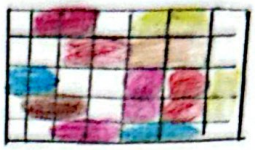


12) Stacked area chart



Filter

Heatmap



- less intuitive which may confusing users
- other charts able to provide more intuitive ways

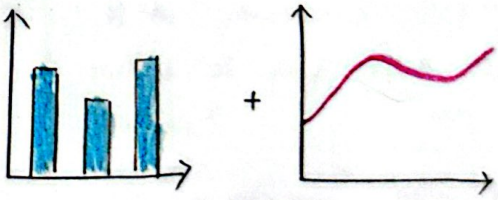
Stacked area chart

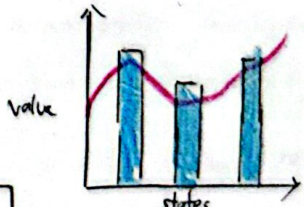
- hard to interpret the data
- may overlapping the data
- hard to identify correlations

Bubble chart

- hard to identify the patterns of the data when only few data
- confusing when having 3 variables

Combine & Refine





- better view and comparison
- line = population
- bar = housing transaction

Author : Stewart Tang Jia Heng

Date : 13/10/2025

Sheet : 1

Task : Ideas for visualisation

Categorise

Population & Housing Transactions

↓

Relationship between population & Housing Transactions

↓

Income for each states relate to Housing Transactions

Question

1. Is there a relationship between population and housing transactions ?
2. Does the charts chosen are showing all important information ?

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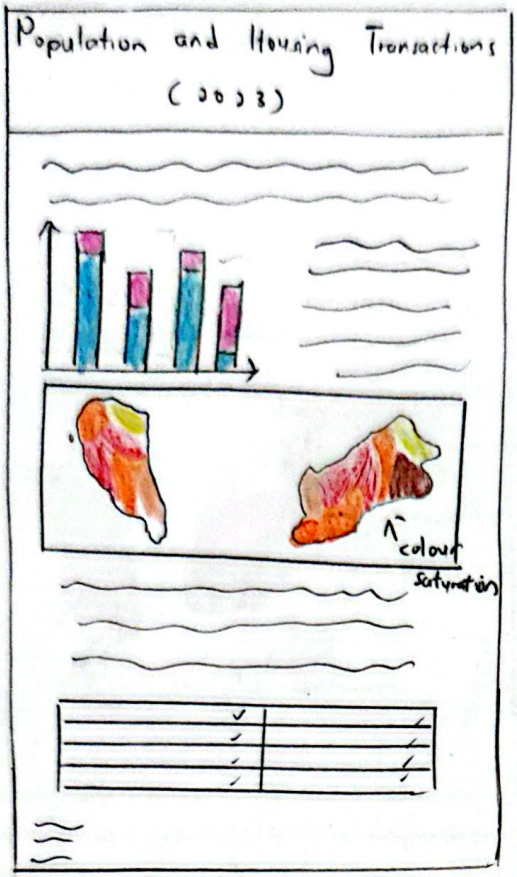
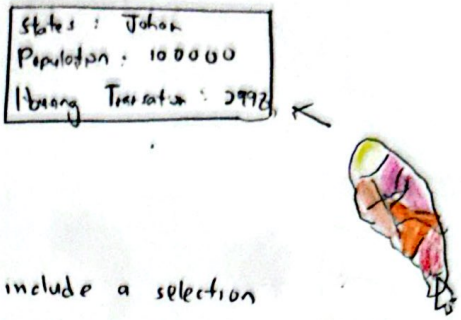
Layout



Operation

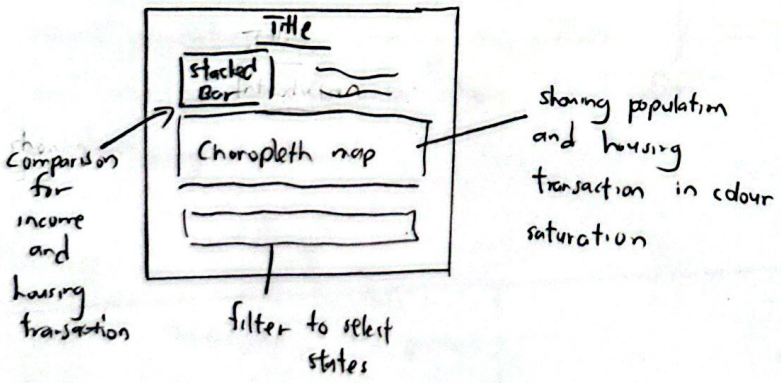
- When hovering on each states on the choropleth map, tooltip was shown as below:



- include a selection menu also to allow viewers to select states to be shown on the map

FOCUS

- Focus on the map, all the analysis are based on the map visualisation. The map chosen is choropleth map.



Discussion

- Is the selection menu able to implement in Vega-lite?
- Is the visualisation too wordy instead of using charts to make analysis?
- Can a viewers without any visualisation background understand what is it about?
- Is the image necessary for the dashboard.
- Does the visualisation provide enough information for researching?
- Is colour saturation appropriate for choropleth map?

Title : Overview analysis
Author : Stewart Tang Jia Heng
Date : 13/10/2025
Sheet : 2

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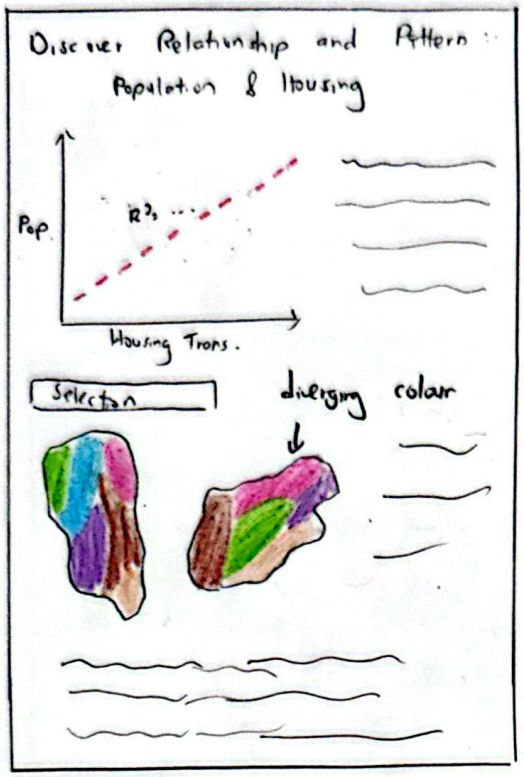
Layout

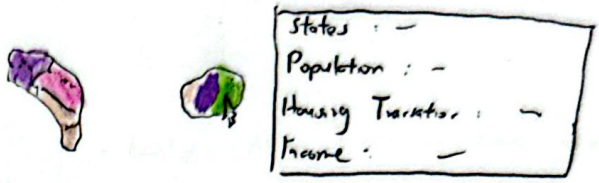


Operation

- the selection menu allows users to select certain states to discover the relationship for that states and also selection for the map.

i)

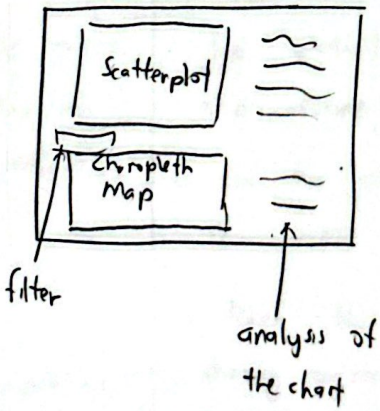
ii)



- the tooltip will show when hovering on the particular states or points on scatterplot showing the information about it.

Focus

- scatterplot showing the relationship between population and housing transactions for each states in Malaysia, 2022. (include showing the R^2 value on the chart)
- choropleth map showing the information about population and housing transactions and also income for each states in diverging colour.



Discussion

- Is the choropleth map showing too much information about the title ?
- Is it intuitive for viewers to understand the visualisation ?
- Is choropleth map a good choice to represent the pattern of malaysia ?
- Is multiple selection menu suitable for scatter plot, how the scatterplot will look ?

Title : Relationship and pattern
Author : Stenart Tang Jia Heng
Date : 13/10/2025
Sheet : 3
Task : Annotated chart

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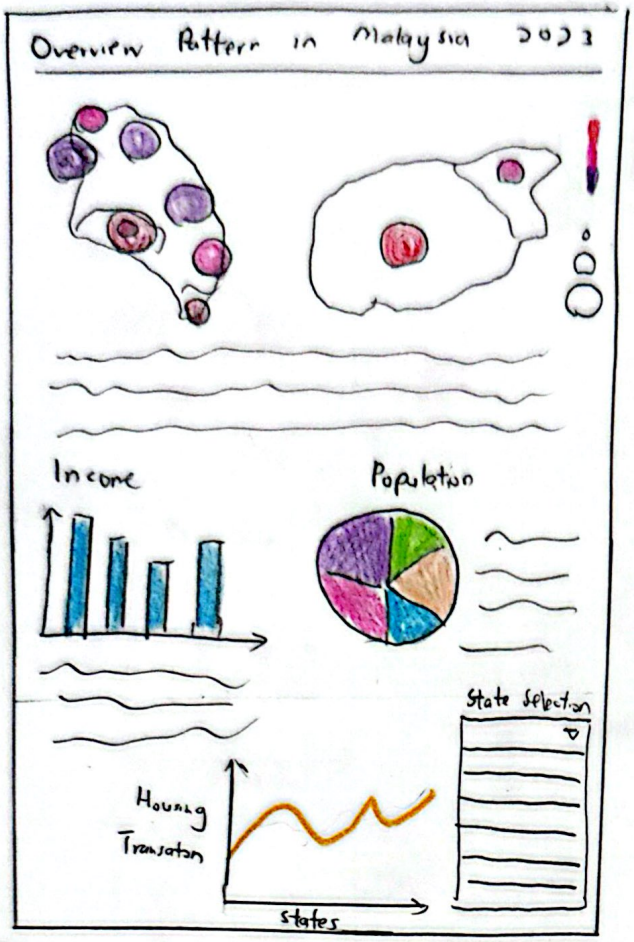
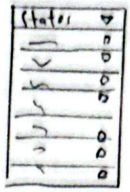
Layout



Operation



- all the charts will linked to the filter to show that particular states.

- tooltips shown for all chart when hovering around the segments

Discussion

1. Is the pie chart able to show all the states without repeating colours ?

2. Does the entire visualisation looks neatly and concise for viewers to interpret ?

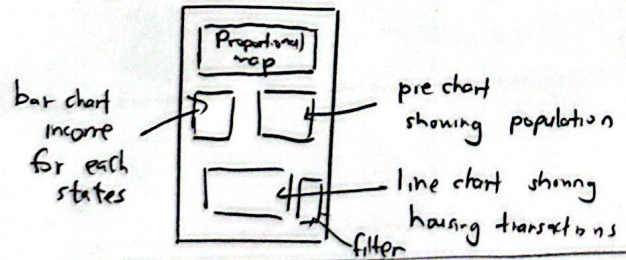
3. Does the proportional map shows the important information clearly and intuitive ?

4. Can the charts modified again to show more important details ?

5. Does the bar chart for income showing anything important eg. relationship or etc ?

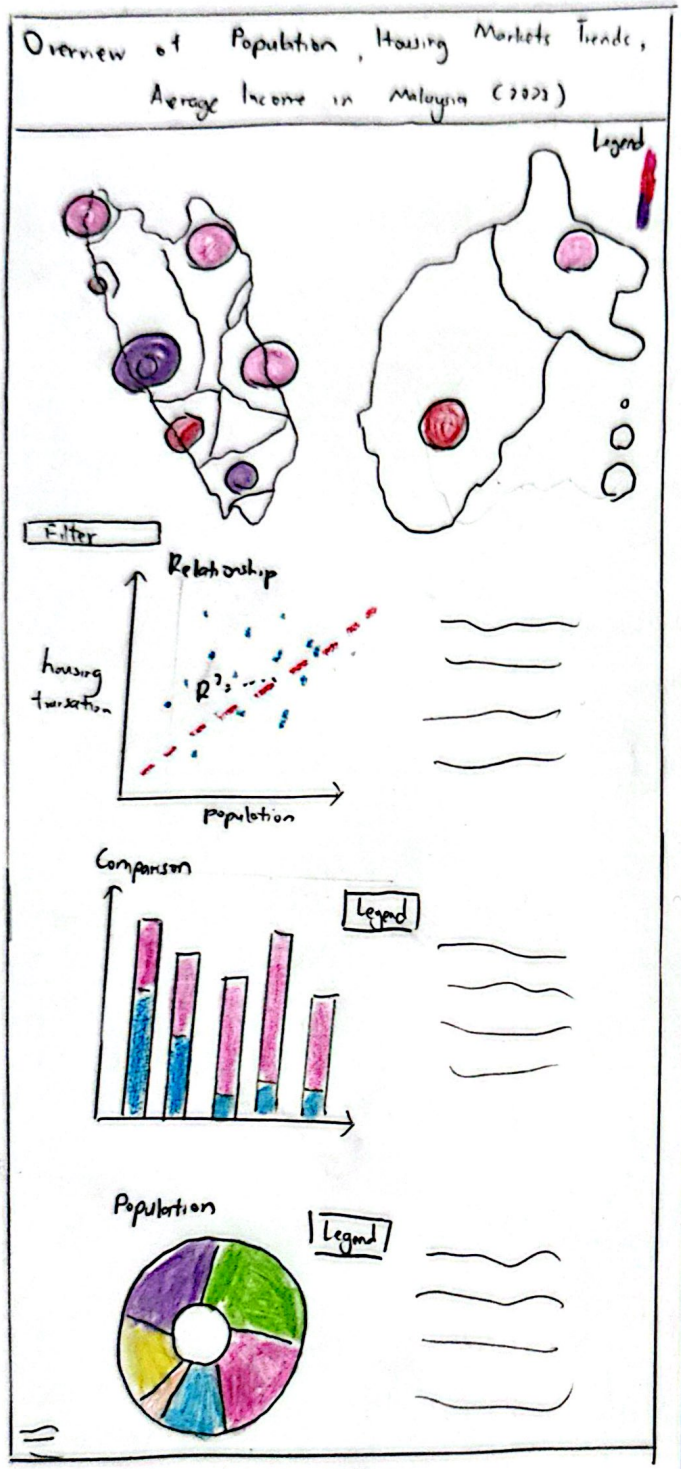
Focus

The proportional map was used and as the main focus of the visualisation with the size of circle indicates the population and colour saturation indicates housing transactions.



Title : Pattern in Malaysia : Population, income, housing
Author : Stewart Tang Jia Heng
Date : 13/10/2025
Sheet : 4
Task : Partitioned Poster

Layout



Focus

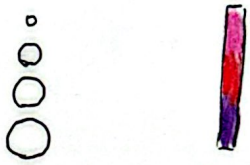
- The main focus is the proportional map with the size of circle indicates the population and colour saturation for the housing transactions.

- showing analysis for the scatter plot and stacked bar chart which is less intuitive to make the viewers without any background to understand.

- the donut chart showing the overall distribution of population in Malaysia.

Operation

- the size of the bubble on proportional map indicates population while colour saturations means housing transactions.



- the filter selection allow viewers to select a states to show on the map.

- all the charts will show the information in tooltips when hovering around it.

- the R^2 value was calculated in Excel and added inside the scatterplot.

Details

- All charts are designed and created in Vega-Lite and published in github using HTML.

- Sans serif was chosen for titles.

- all the charts are feasible to create using Vega-Lite.

- all the data from reliable data source and cleaned for data visualisation.

Title : Final Design

Author : Stevent Tang Jia Heng

Date : 13/10/2025

Sheet : 5

Task : Final layout

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