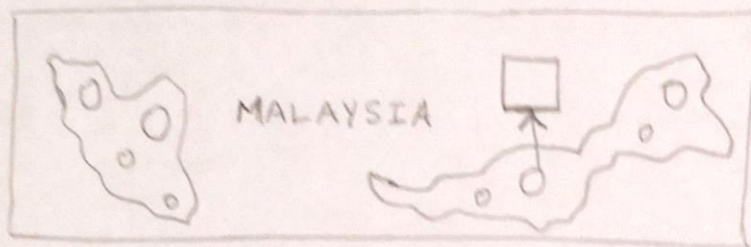
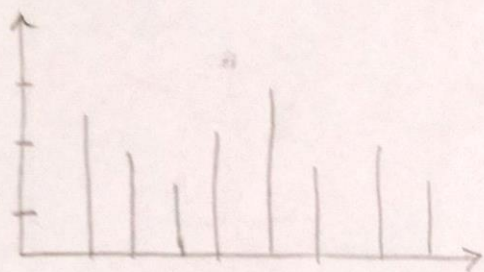


IDEAS



Bubble Plot



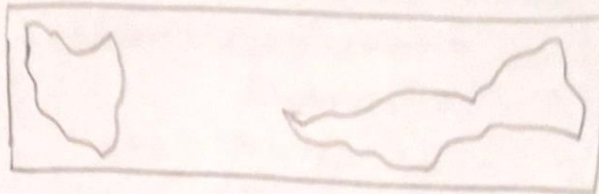
Line Chart

Pie chart



Heat map

FILTER



Heat map might make it confusing and not really relevant for our visualisation.



Does not look nice if too many categories included.

CATEGORIZE

Bubble plot is good as we can see the size and colour hue to identify the characteristics of that particular area.

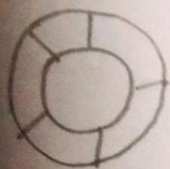
Bar chart would be more easy to understand so it can be combined

Donut chart: easy understanding

COMBINE & REFINE



We can use line chart and bar chart for easy data visualisation and understanding.



Donut chart is preferred over pie chart as it is less confusing and more convenient.

Heat map not necessary so can use bubble plot instead.

QUESTIONS

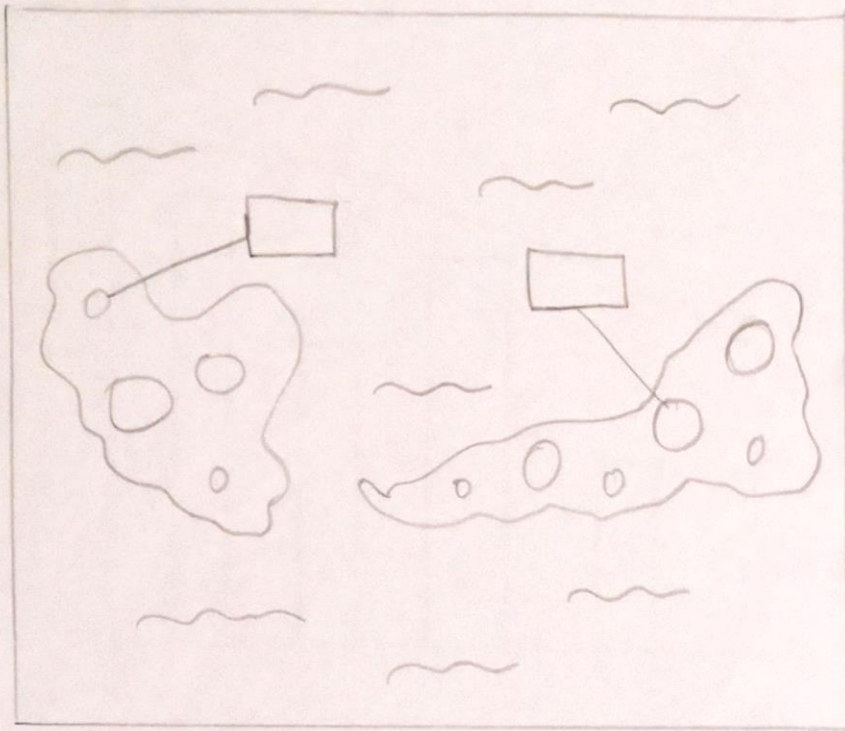
→ Is donut chart really necessary?
Mostly used only for percentage comparison.

→ Malaysia state borders necessary to be shown?

→ Need graticule + ocean background both?

→ Annotations for all or only few?

LAYOUT



Bubble Plot

FOCUS

The main focus of this design to show the no. of species in each region.

→ The bubble size shows us the density of species count in that particular region.

→ The darker the colour, the more dense that area is.

→ This visualisation easily helps the viewers to see and understand what is the size and colour of the bubble.

→ Annotations can be used for more important information.

Title: FIT 3179 Data
Visualisation 2

Name: Galidevara
Sharmila

Date: 01/10/2025

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OPERATIONS

→ Hovering over bubble shows further details.

→ Important info is annotated

→ Ocean background for better view of the country and also borders to make it easily visible.

DISCUSSION

PROS

→ Provides easy to view layout by looking at the sizes and the colour of the bubble.

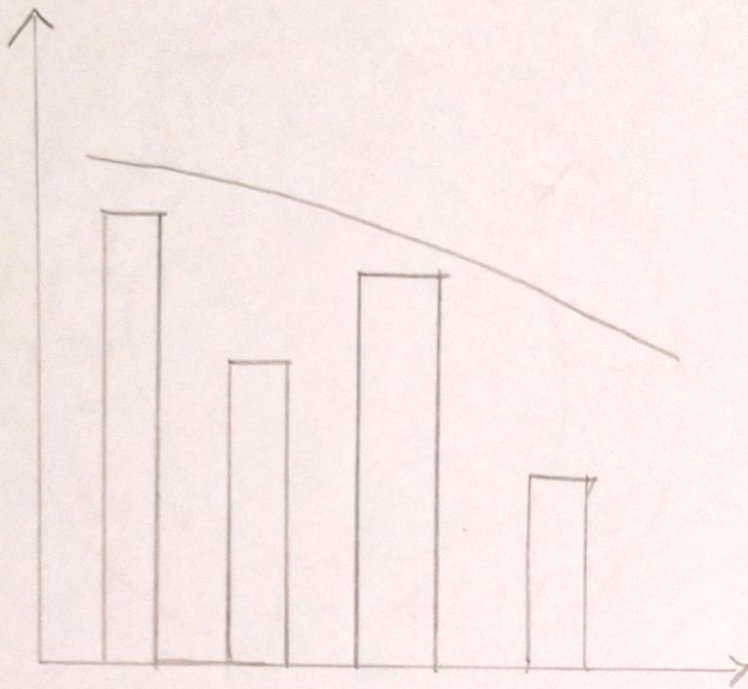
→ Visually easy to see and understand.

CONS

→ Need to have proper colour distinguishing category / scaling otherwise all might look like the same colour.

→ Cannot have range over time unless combined with dropdown menu if desired.

LAYOUT



Bar chart

FOCUS

The bar chart is an easy visualisation for comparison between different areas of Malaysia.

- We can check which region is the highest contribution and which is low easily.
- Having bars allows viewers to compare information easily and is better.
- Bars can be sorted for more simplicity.
- Selecting one bar can make it highlighted if needed.

Title: FIT 3179 Data Visualisation 2

Name: Galidevara Sharmila

Date: 03/10/2025

Sheet: 3

OPERATIONS

- We can hover over the bars to show more specific details.
- Can be useful for multiple plot of data/to represent multiple datas in different plots.

DISCUSSION

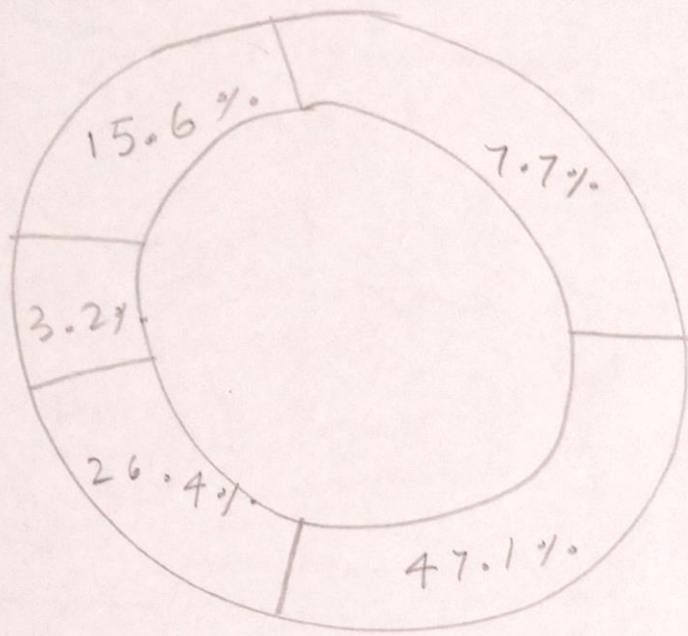
PROS

- Simple and easy to understand.
- Labelling prevents any confusion.
- Easy for comparing values.

CONS

- Too many bars would make the plot messy and need to switch to alternative plot for visualisation.
- Data misinterpretation might be possible for this plot.

LAYOUT



Donut Chart

FOCUS

This design focuses on categorical distribution of data.

→ It shows how much each of the sector contributes to loss of trees in Malaysia.

→ By using a donut chart over a pie chart, we can easily view details without getting confused.

→ We can visually see which is the biggest contributor by this visualisation.

Title: FIT 3179 Data Visualisation 2

Author: Galidevara Sharmila

Date: 29/10/2025

Sheet: 4

OPERATIONS

→ Labels show us which sector is how much percentage.

→ Hovering over will give us more details related to each of it.

→ Can label in the centre of the donut for necessary info.

DISCUSSION

PROS

→ Simple and very clear to view and understand.

→ Donut chart has space in the centre which makes it easy to view compared to a pie chart.

CONS

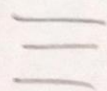
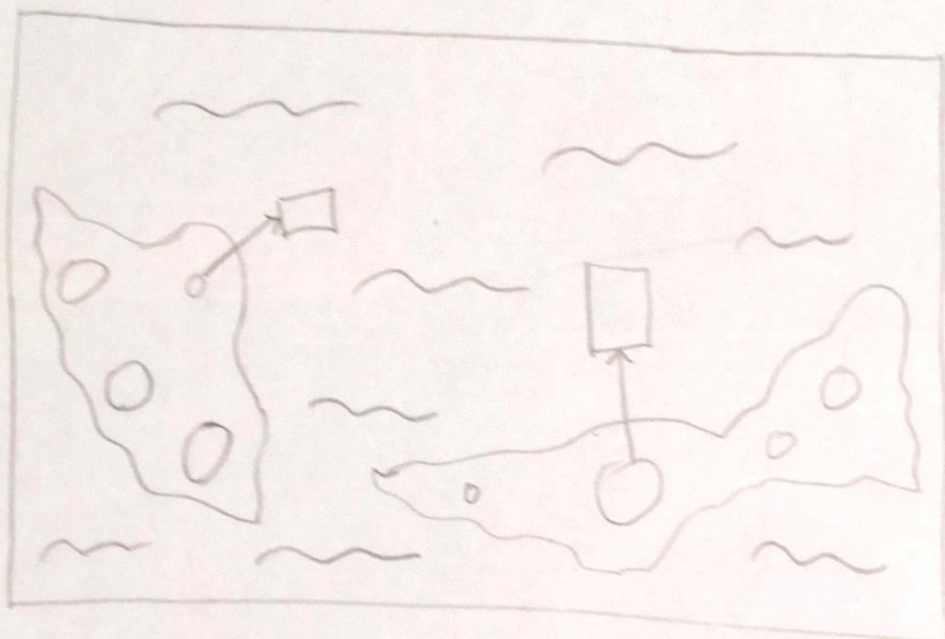
→ Works best only with few categories.

→ Many categories would make it very messy and cluttered.

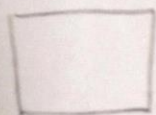
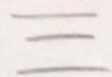
→ Requires proper colour choices to avoid confusion while viewing.

DESCRIPTION OF ALGORITHMS

The main focus of the final design is:



Bubble plot being the main focus, we have all our other charts in a neat order with information box beside each relevant one with explanations.



SPECIFIC REQUIREMENTS

- Devices: can view on both mobile and laptop but might need to add adjustments for the mobile view.
- Software requirements and Hardware requirements must be followed to get working website.

Title: FIT 3179 Data Visualisation 2
Name: Galidevara Sharmila
Date: 05/10/2025
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DEPENDENCIES

Software: vega-lite, html, CSS (for main design of our visualisation).

Data sources: UNEP, World Bank Data, Global Forest Watch (datasets for forest and species count).

Hardware: Phone / Laptop to view the deployed link.

Also need vscode to view source code & edit.

ESTIMATE TIME AND EFFORT

- Data collection and cleaning: 4-5 hours
- Chart creation in initial phase: 1-2 hours (each)
- Integration of charts for layout: 3-4 hours.
- Total estimated time for completion of the DV2 project is around 20 hours over few weeks.