

Monash University: Assessment Cover Sheet

Student name	Ng Kai Yi	Student's I.D. number	32156944
School/Campus	Monash Malaysia		
Unit name	FIT3179 Data visualisation - S2 2022 MUM		
Lecturer's name	Miss Ting Chai Wen	Tutor's name	Miss Ting Chai Wen
Assignment name	Data Visualisation I Report	Group Assignment: No Note, each student must attach a coversheet	
Lab/Tute Class: 02	Lab/Tute Time: 12 -2	Word Count: 1069	
Due date: 05-09-2022	Submit Date: 05-09-2022	Extension granted <input type="checkbox"/>	

If an extension of work is granted, specify date and provide the signature of the lecturer/tutor. Alternatively, attach an email printout or handwritten and signed notice from your lecturer/tutor verifying an extension has been granted.

Extension granted until (date):/...../..... Signature of lecturer/tutor:

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- I have read the university's Student Academic Integrity [Policy](#) and [Procedures](#)
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- I have taken proper care to safeguard this work and made all reasonable efforts to ensure it could not be copied.
- No part of this assignment has been previously submitted as part of another unit/course.
- I acknowledge and agree that the assessor of this assignment may, for the purposes of assessment, reproduce the assignment and:
 - i. provide it to another member of faculty and any external marker; and/or
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 - iii. submit it to a text matching/originality checking software which may then retain a copy of the assignment on its database for the purpose of future plagiarism checking.
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Date: **05 / 09 / 2022** Signature:..... **Ng Kai Yi** *

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Suicide Rate Worldwide From Year 1985 - 2016

URL:

https://public.tableau.com/views/Assignment1_16621263265440/Dashboard1?:language=en-US&publish=yes&:display_count=n&:origin=viz_share_link

WORD COUNT: 1069 words

Domain

The domain of my visualisation is suicide rate worldwide.

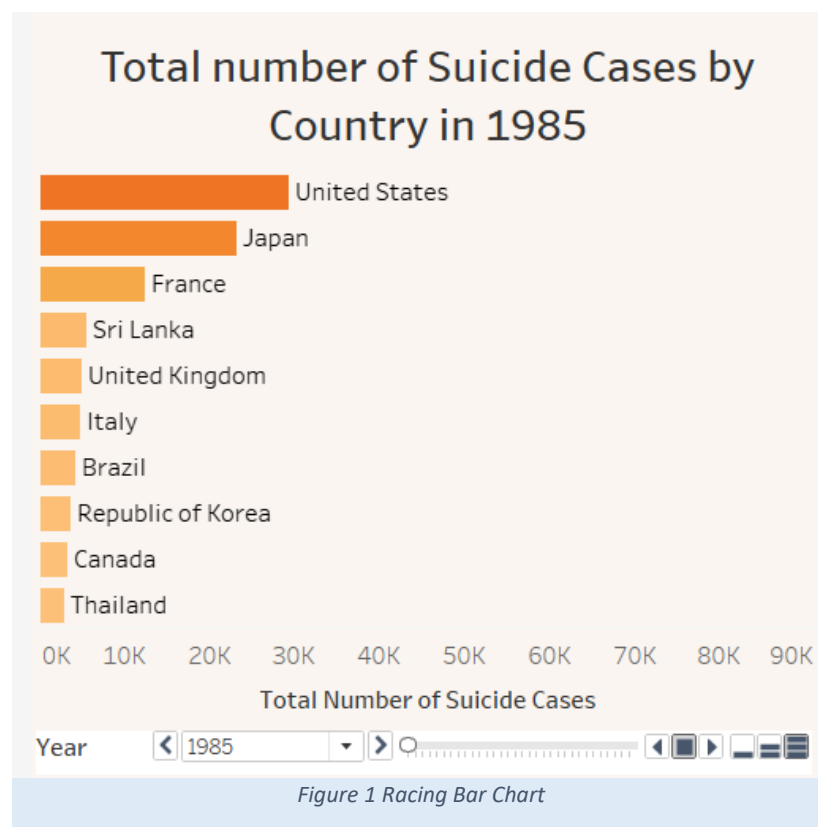
Why and Who?

It is because suicide is the third leading cause of death among young people and the global suicide mortality rate amounts to 1.4% of all deaths worldwide. It is a serious and multi-faceted issues which cannot be overlooked. The suicide prevention experts can make use of this visualisation to determine effective strategies to prevent suicide.

What?

It is a dataset consist of suicide data from 1985 – 2016, it was built to find signals correlated to increased suicide rates among different cohorts globally, across the socio-economic spectrum. The dataset is created by a Kaggle Author and the dataset is retrieved on Kaggle.

Why and How?



Why?

The reason of choosing racing bar chart is it can show and compare the top 10 countries with highest total number of suicide cases in the particular year from year 1985 – 2016 sequentially. The user can either choose to view it automatically and sequentially by pressing the button with arrow > or the user can visualise the data of top 10 countries in the particular year by choosing a particular year from the filter card.

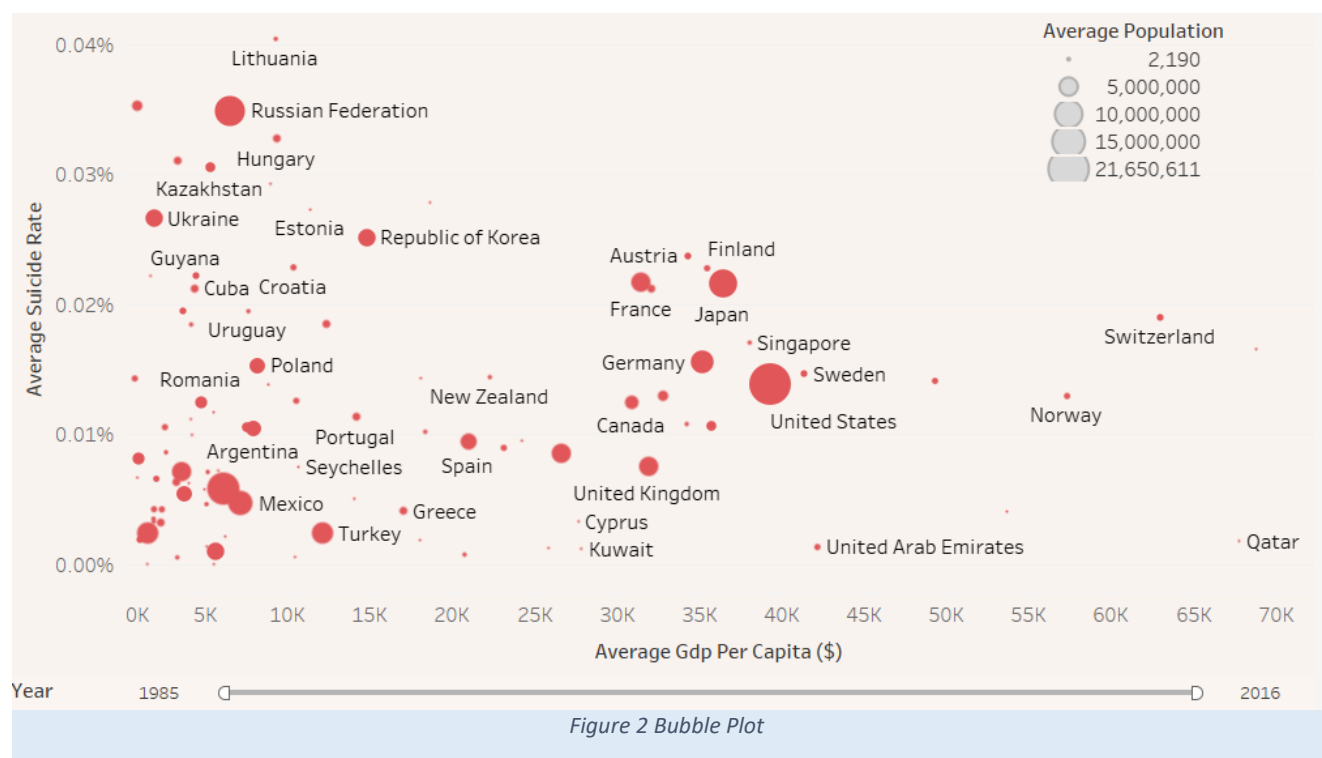
How?

Marks:

- Lines

Channels:

- Length to show the total number of suicide cases in each country
- Colour luminance to show the weight of the total number of suicide cases in each country.



Why?

The reason that I chose bubble plot because I would like to determine if the numerical variables are related and I would like to see if they share some kind of pattern. Bubble plot is a good choice as we can see the pattern from the position of the bubbles generated and from the differences in the relative sizes of the bubbles.

How?

Marks:

- Points

Channels:

- Horizontal position
- Vertical position
- Size, the size of the bubble determines the average population.

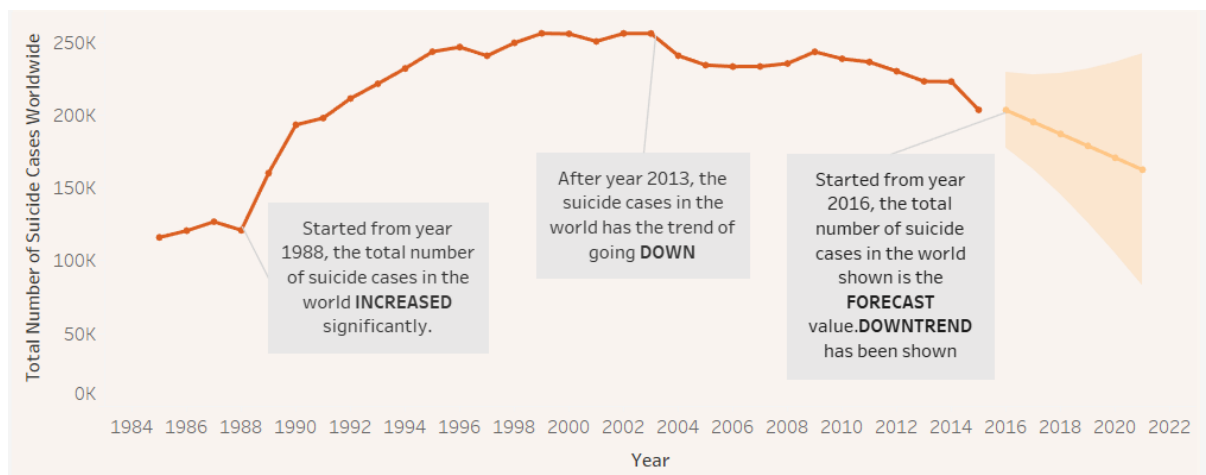


Figure 3 Line Chart

Why?

I chose line chart because I have one ordinal attribute (Year) and 1 quantitative attribute (Total Number of Suicide Cases Worldwide) and I would like to see how Total Number of Suicide Cases Worldwide develop over years. Furthermore, line chart is a suitable to find trend, peaks and lows as well as emphasises relationship between attributes.

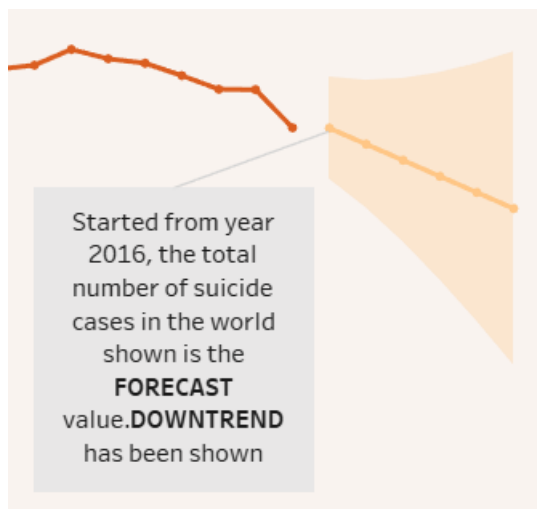
How?

Marks:

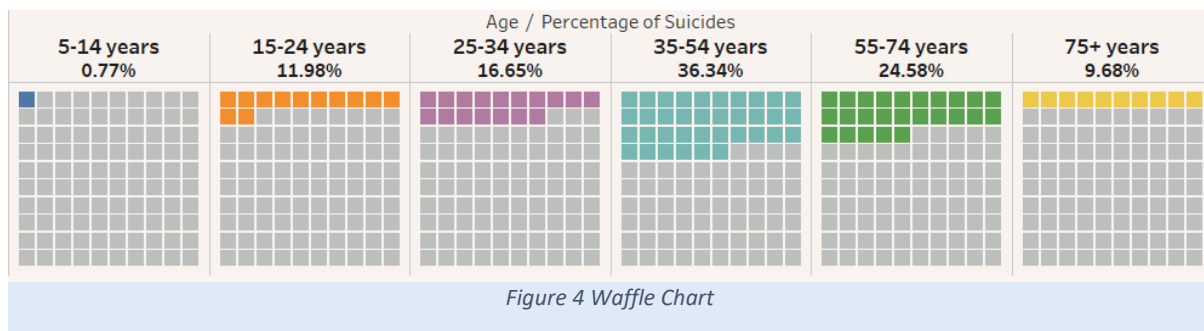
- Points
- Line Connection

Channels:

- Vertical positions express total number of suicide cases worldwide.



The special feature about this line chart is that I have forecasted the total number of suicide cases in the world from 2016 to 2021 and connected them.



Why?

I used waffle chart because waffle chart shows how proportions of quantities (Total Number of Suicide Cases) for different constituent categories (Ranges of age) make up a whole. It is also quicker to read when there are cluster of units as they can be easily recognised.

How?

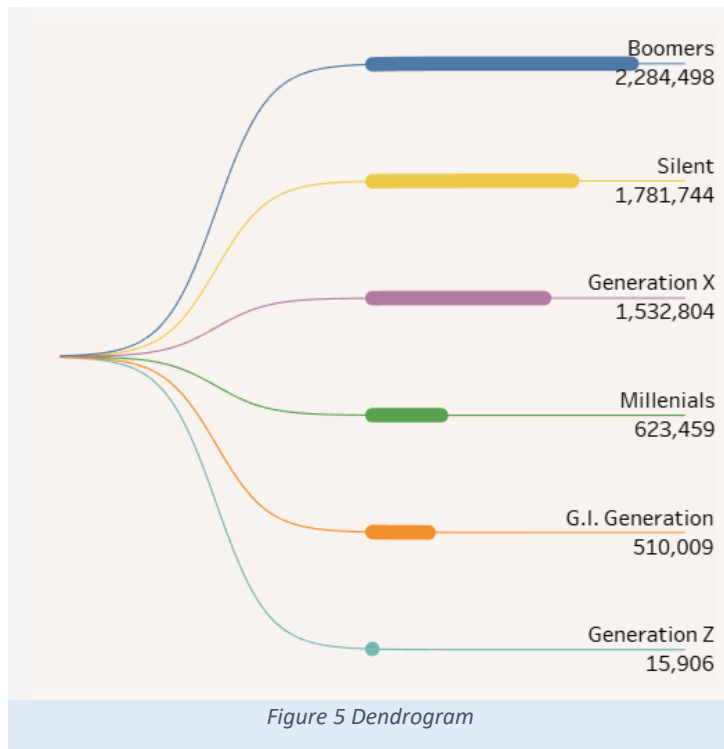
Marks:

- Points

Channels:

- Colour, different colour is used to differentiate each group range.

Number of coloured squares to express the proportions of total number of suicide cases, it will remain grey otherwise.



Why?

I used dendrogram because it can show the proportion of each generation involved in suicide cases so that we can compare the values easily because dendrogram is easy to read.

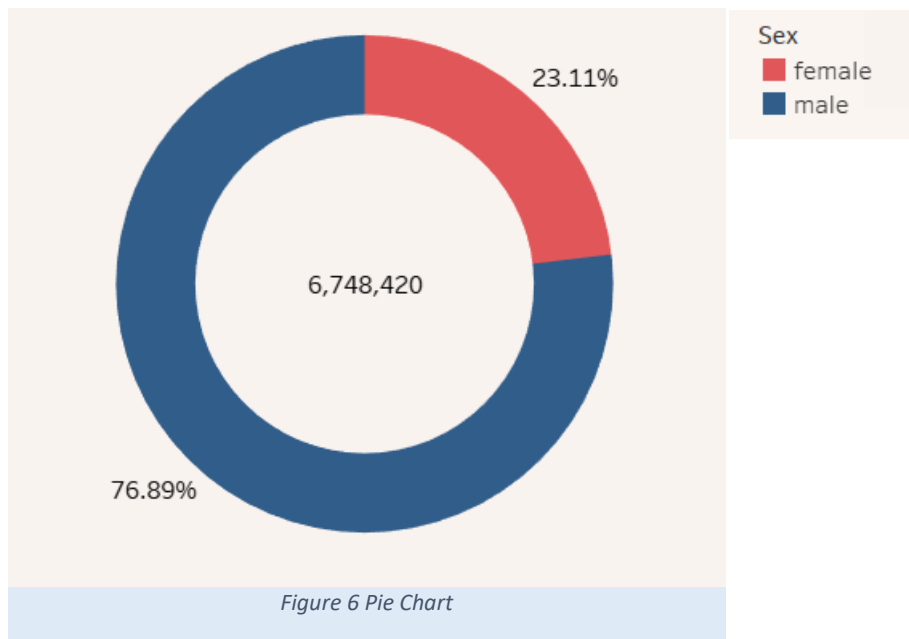
How?

Marks:

- Lines for edges

Channels:

- Colour, different colour is used to differentiate each generation.
- Length



Why?

To see the part whole relationship of different gender on total number of suicide cases from year 1985 – 2016 so that we can see that how many percent of male and female involved in suicide cases.

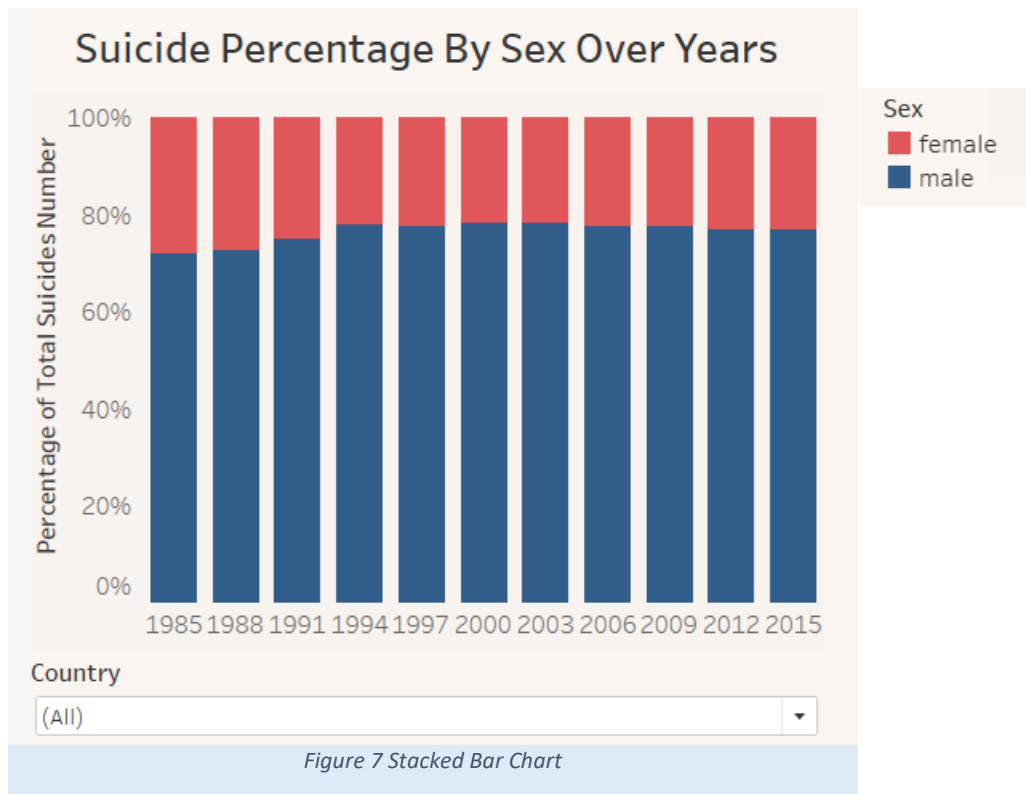
How?

Marks:

- Area

Channels:

- Size
- Colour hue used to show different gender.



Why?

It is to compare the proportion of male and female committed suicide over years. The user can also select a particular country from the filter card so that it can also show the proportion of male and female committed suicide over years in a particular country.

How?

- Colour hue to show the different gender.
- Length, it expresses the percentage of total suicide cases of each gender.

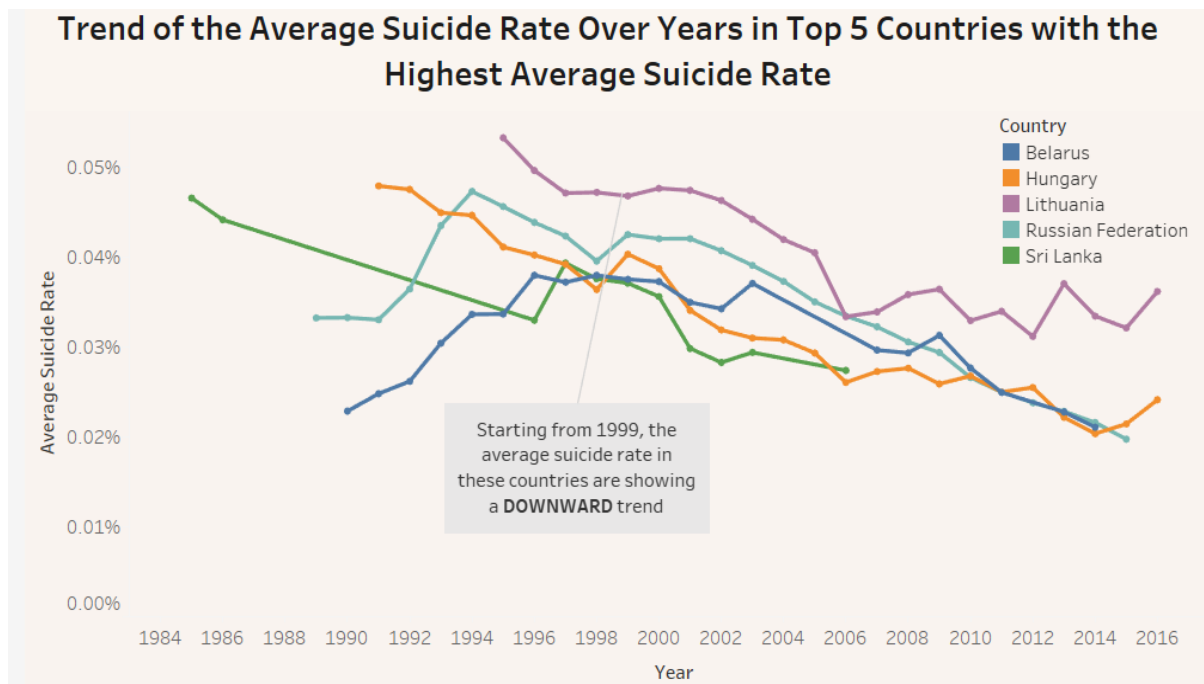


Figure 8Line Chart

Why?

It is I would like to see the trend of average suicide rate over years in top 5 countries with the highest average suicide rate.

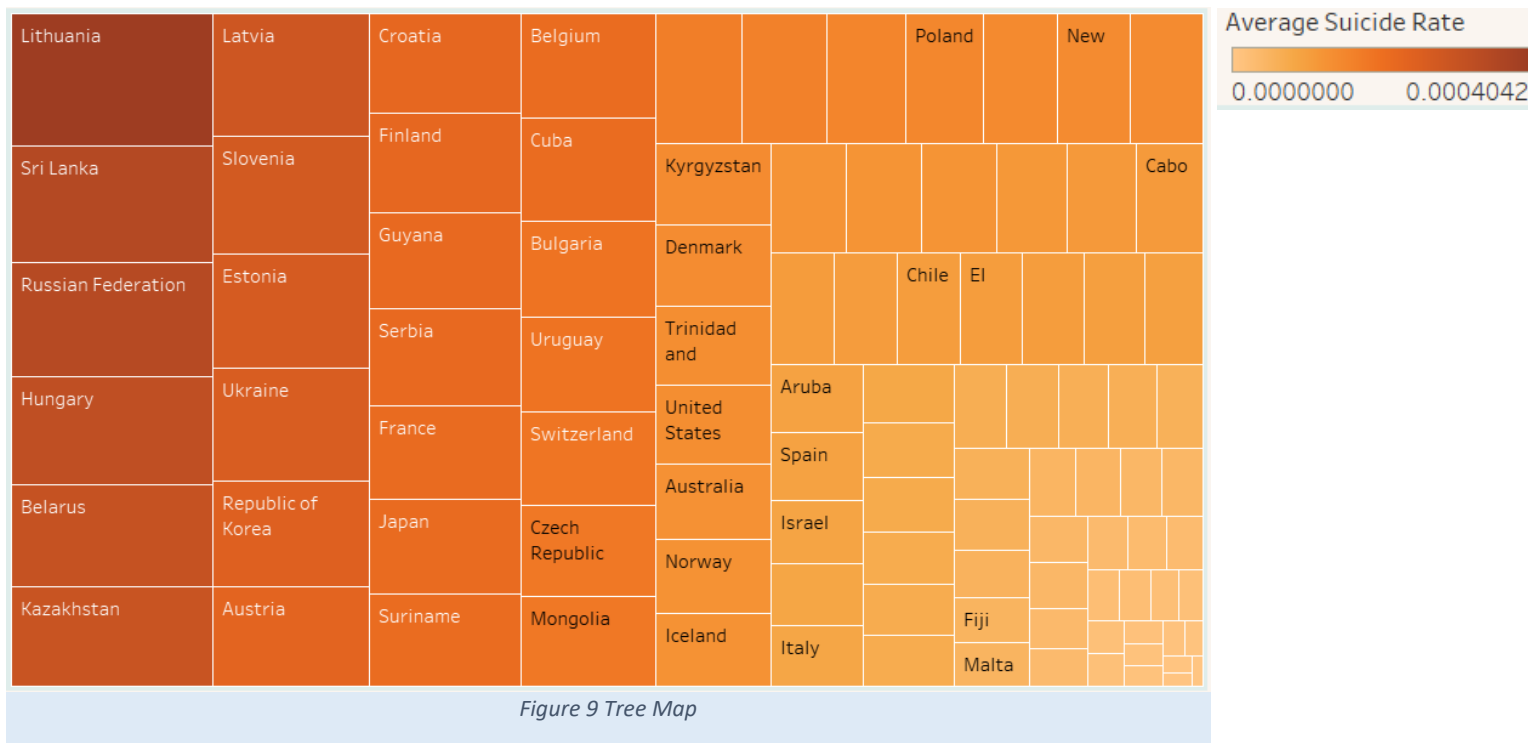
How?

Marks:

- Points
- Line Connection

Channels:

- Vertical positions express average suicide rate.
- Colour Hue, each colour represents each country



Why?

To compare the average suicide rate of the countries and we can see the countries with high average suicide rate easily as they have greater size.

How?

Marks:

- Area

Channels:

- Size of the area to express average suicide rate
- Colour luminance to express the weight of average suicide rate

Layout

- The visualisation has enough white space to increase the readability.
- The alignment of the charts is good as I used sightlines to place the charts.
- Layout is also surrounded with the visual centre.

Colour

- The colour selected to highlight the element in description is the same as the colour used in the chart for the element so that the user can easily find the element from the chart while reading the description.

- For colour selection used for charts and highlighting, I did not use red and green together so that it is colour-blind friendly.

Figure Ground

- I have applied figure ground in figure 1 and figure 9, darker colour is used to emphasize greater rank or value while lighter colour is used to emphasize lower rank or value.

Typography

- The typeface I used for description and labels is Sans Serif. It is because Sans Serif has clean and crisp lines, which can provide greater readability. Other than that, I have use greater size and bolded letters for sub-titles so that it can emphasize the topic of the description and catch reader's attention.

Storytelling

- I have applied magazine style for the narrative visualisation. Firstly, the user is guided with a brief introduction about suicide rate, then the readers will be guided to see the suicide rate / total number of suicide cases by a few factors. Then, the user will discover how gdp of a country affect the suicide rate. Lastly, two line charts are shown to show the trend of suicide rate over years.

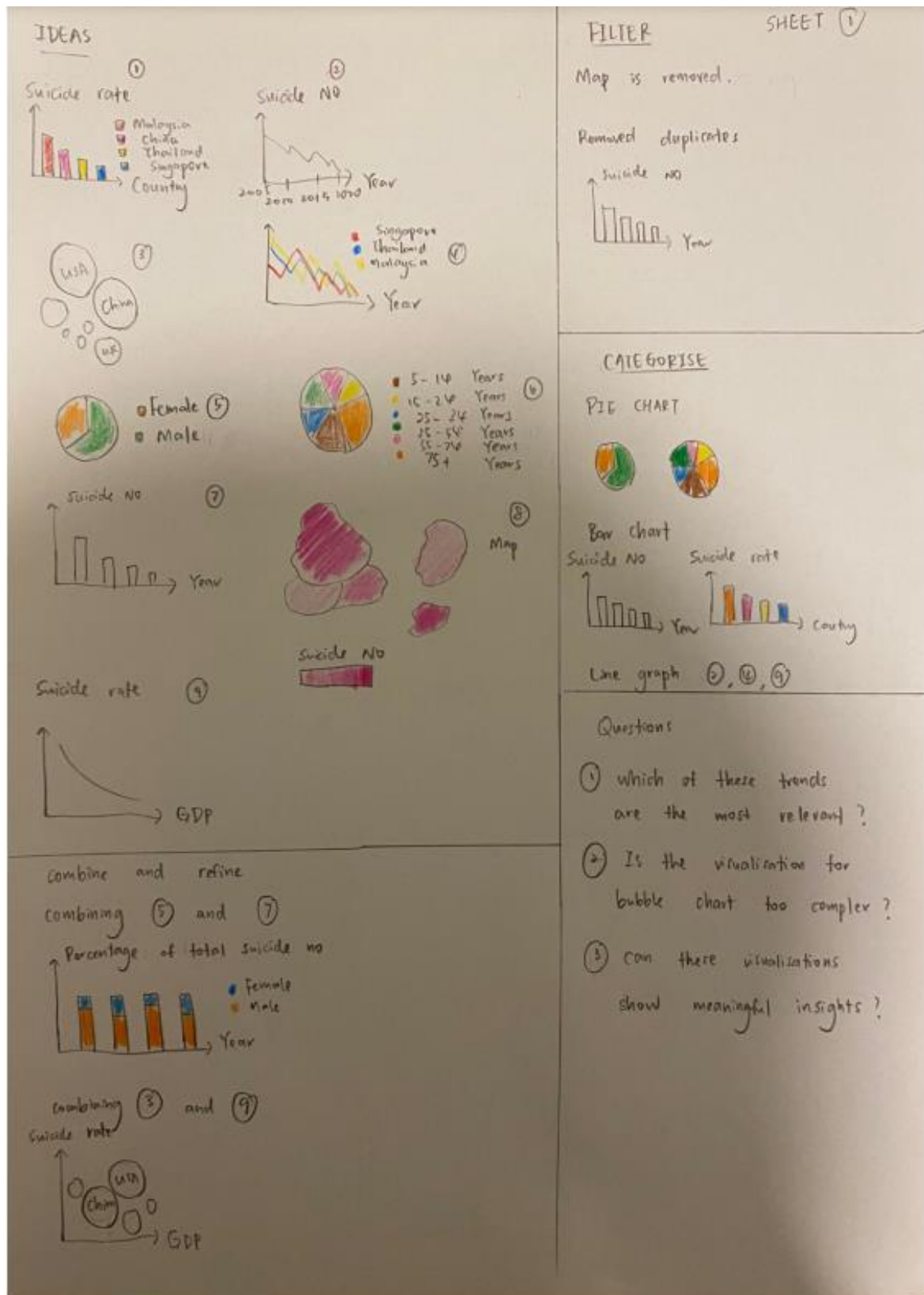
Remarks: The orientation and layout ran after I saved it to Tableau Public, and the animation for racing bar chart is not available at Tableau Public, if possible, could you please download the Tableau worksheet, and view it from Tableau instead of viewing it at website through the link. Sorry for the inconvenient caused. Thank you.

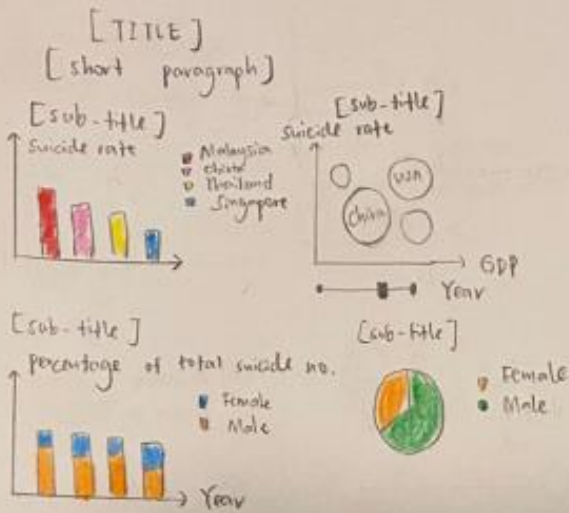
Bibliography

Source of dataset:

- [1] Rusty. (2018, December 01). Suicide rates overview 1985 to 2016. Retrieved August 20, 2022, from <https://www.kaggle.com/datasets/russellyates88/suicide-rates-overview-1985-to-2016>

Attachment for 5DS



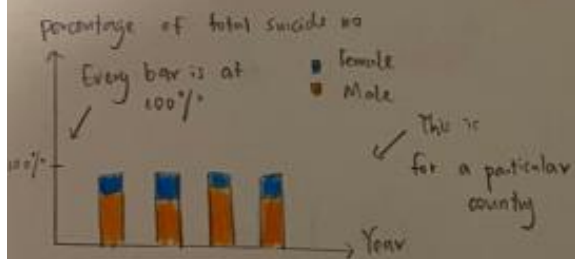
LAYOUTOPERATION

For bubble chart



↑ can adjust to visualise the data according to year.

For the bubble chart, tooltip is used.

FocusDISCUSSION

advantages: It is neat and well arranged.

: It is clean and simple

disadvantage: Too little visualisations
It doesn't show the trend.

LAYOUT

[TITLE]

[Sub-title]



Male
Female

[Sub-title]

Age



5-14
15-24
25-34
35-44
55-74
75+

[Sub-title]

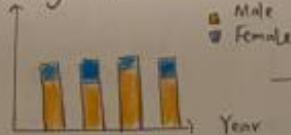
Suicide rate



Malaysia
China
Thailand
Singapore

[Sub-title]

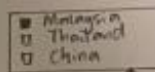
Percentage of total suicide No.



Male
Female

Year

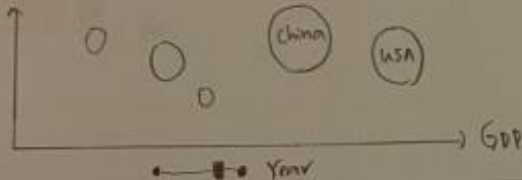
→ For this bar chart,



↑
Toolbox to select
the data from the
country which
the user want
to visualise.

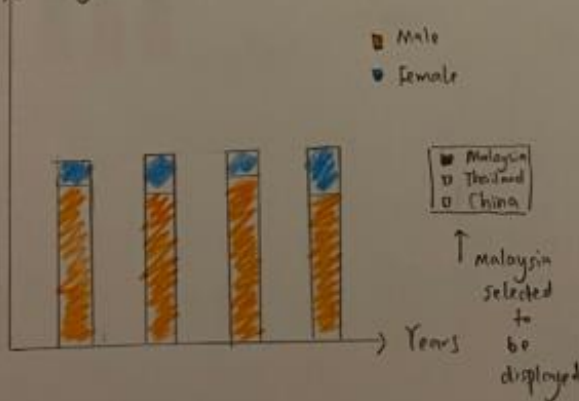
Suicide rate

[Sub-title]

Focuscountry
Malaysia

← Showing which country its visualising

Percentage of total suicide No.



Male
Female

Malaysia
Thailand
China

↑ Malaysia
selected
to
be
displayed

OPERATION

For bubble chart

• — • Years

↑
used for adjusting the year
to visualise the data according
to years.

DISCUSSION

Advantages: Interesting and neat
arrangement of chart.

: Meaningful charts

Disadvantages: No trend is
shown

LAYOUT

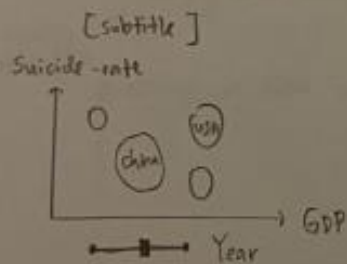
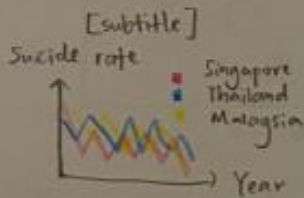
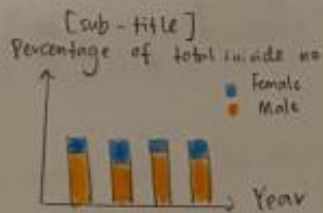
[Title]

[sub-paragraph]

[sub-title]



Female
Male

OPERATION

For bubble chart

Year
↑
can adjust to visualise the data according to year.

Tooltip is used

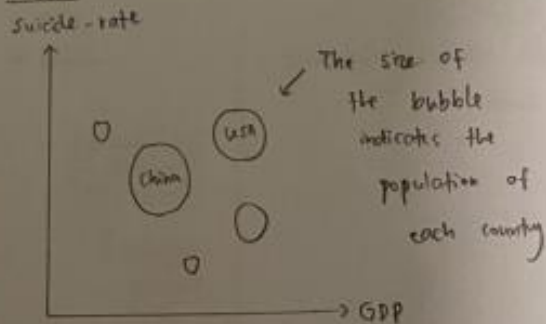
DISCUSSION

advantages: Neat, centre-aligned

: Meaningful charts which bring out good insights.

disadvantages: It is boring.

: The visualisations are not enough.

FOCUS

Year
↑
user can adjust it to visualise it according to year.

LAYOUT

[TITLE]

[short paragraph]

[Sub-title]

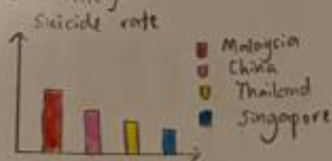


[Sub-title]

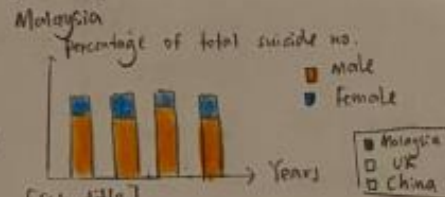


Age
 5-14
 15-24
 25-34
 35-44
 55-74
 75+

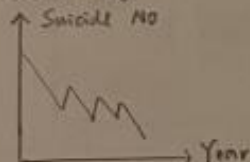
[Sub-title]



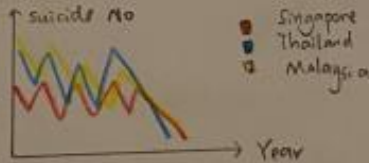
[Sub-title]



[Sub-title]

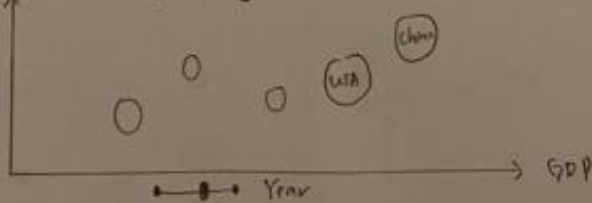


[Sub-title]



suicide rate

[Sub-title]

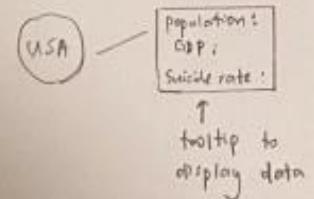


[conclusion]

OPERATION SHEET (5)

For bubble chart,

adjust the year to visualise data according to year



Detail

* Data will be cleaned and aggregation will be made using SQL.

* charts will be drawn using Tableau.

* Time to draw/implement: 1 week

Focus

