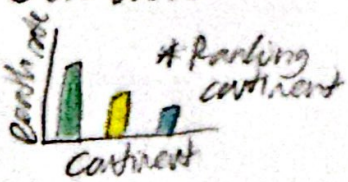
Ideas

Bar chart Sheet 1 Name MOH SHAZFYL AFIQ Date 1/10/2024

(A) Choropleth map

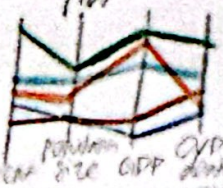
(C) Bar chart



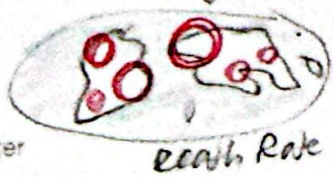
(E)

(F)

(H) Parallel coordinates plot



(B) Proportional Symbol map

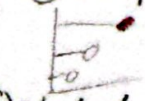


(D)

(I) Treemap

(G) Sunburst chart

(J) Lollipop chart



(K) Dot plot

(M) Radar chart

(L) Stacked Bar chart

Remove ✗:

(B) Proportional Symbol Map
- Not a good choice for death rates because death rates is normalized data, making it hard to distinguish size of marks

(M) Radar chart
- Not a suitable choice because it makes interpreting detailed, multidimensional data difficult, cluttered and less effective in conveying key insights

Categorise

Geographical Comparisons
* Shows location-based data, offering a global or regional view of CVD death rates & highlight most affected areas

→ Rankings & Comparisons
* Ranks or compares regions (e.g. continents/countries) to show disparities in CVD death rates, focusing on differences based on variables like death rates or GDP

→ Flows & Contributions
* Displays how risk factors contribute to CVD deaths across continents, emphasizing flow and relationships between categories

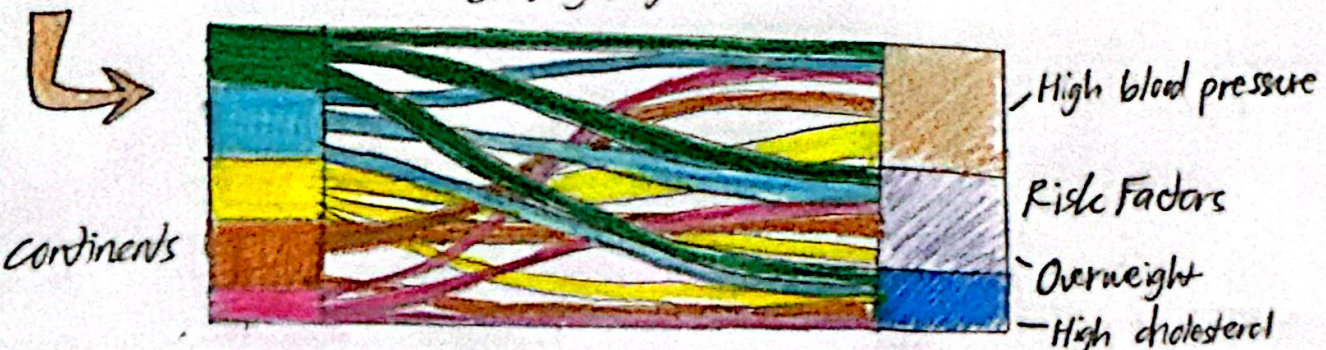
↓

Hierarchical Structure
* Breaks down multi-level data (e.g. disease type, gender), revealing composition of CVD deaths and providing insights into underlying causes

Combine & Refine

(D) + (E) + (F)

Sankey Diagram



Summarise and question
- Does the visualisation tell a clear story about cardiovascular diseases?
- Does it convey something that is considered thought-provoking?
- Is the visualisation implementation feasible to be done?

Big Picture / Layout

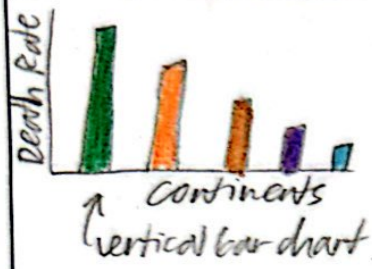
Beat of the World (2021)

Sheet 2 of 4
Name MIOR SHAZRYL AFIQ
Date 1/10/2024
Title Sheet 2
Description Initial Design (Sheet 2)

Global Death Rate

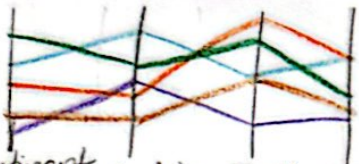
zoomable choropleth map

Ranking of Continent



vertical bar chart

CVD Death Rates vs GDP per Capita



parallel coordinates plot

CVD Death Rates by Risk Factor

sunburst chart

Components / Operations

Zoom: 3000

Map Centre: Select
Africa
Asia
Europe

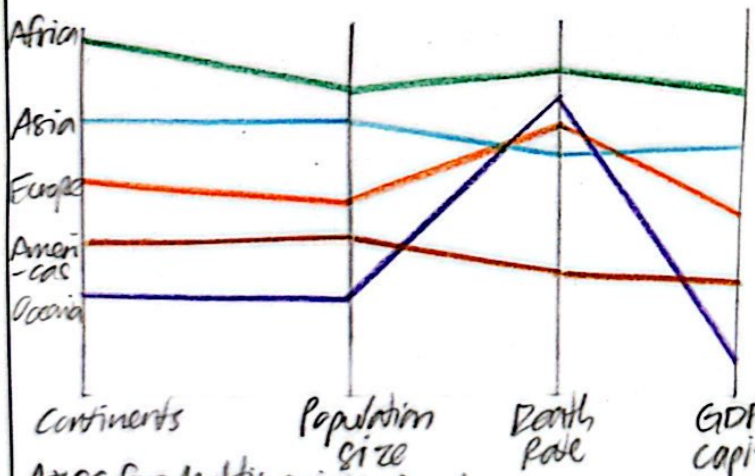
slide to zoom

user can adjust map view by continent

Zoom: can slide

Part / Focus

CVD Death Rates vs GDP per Capita



Axes for Multivariate Analysis:
Multiple vertical axes represent key variables like GDP per capita, death rate, and population size. Each line crossing the axes show how these variables relate for a continent

Line Paths for Comparison:
Users can follow the lines across axes to identify relationships between variables, such as GDP and death rate, revealing patterns across dimensions

Pro & Cons

Advantages
- Consists of user interactions making it more interactive and appealing
- Creates a clear story about CVD with well-defined sections
- Varies types of visualisations are used which makes them interesting

Disadvantages
- Zoom and map centre feature for the map idiom can be challenging to handle and time-consuming
- Layout requires careful attention otherwise it can be messy and confusing

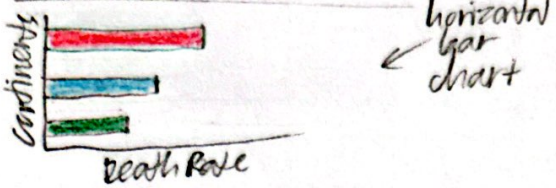
Big Picture / Layout

Beat of the World (2021)

Global Death Rate

choropleth map →

Ranking of Continents



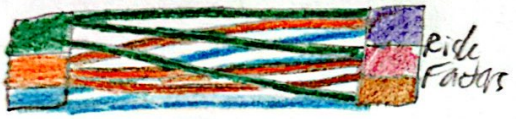
← horizontal bar chart

CVD Death Rates vs GDP per Capita

bubble plot →

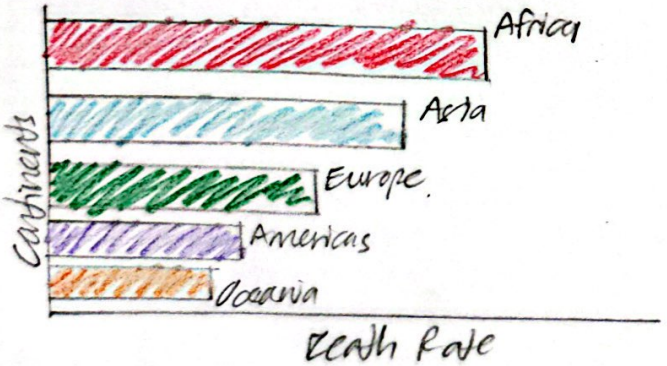
CVD Death Rates by Risk Factor

sankey diagram →



Part / Focus

Ranking of Continents by CVD Death Rates



Position Channels:
vertical axis (y-axis) lists continents while horizontal axis (x-axis) represents CVD death rates

Length of Bars:
The length of each bar is proportional to CVD death rate, providing a straightforward visual cue for comparing values.

Color Hue:
Color hue is used to differentiate between the continents, giving a visual distinction that helps users quickly identify geographic regions

Sheet 2(3)4
Name NUR SHAZRYL AFIQ
Date 1/10/2024
Title Sheet 3
Description Initial Design (Sheet 3)

Components / Operations

→ when user click on a country, only the clicked country will show color while other countries are greyed out — allows user to focus on a specific country

Hover for tooltips on any country on map — allows user to get detailed information in a neat manner

Pro & Cons

Advantages
- Easy to follow along and understand
- consists of good structure and aesthetics are interesting

Disadvantages
- Bubble plot using normal axis or scale can make bubbles look too small * maybe use log scale for both x- and y-axes?
- Horizontal bar chart might be too simple and less interesting * how about lollipop chart?

Big Picture / Layout

Beat of the World (2021)

Sheet 2,3,4

Name MIOR SHAZRYL AFIQ

Date 1/10/2024

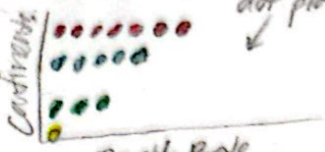
Title Sheet 4

Description Initial Design (Sheet 4)

Global Death Rates

↑ choropleth map

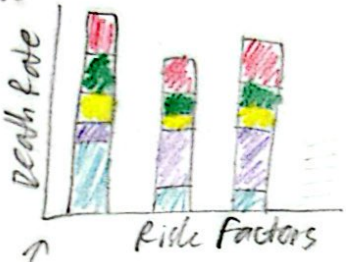
Ranking of continents by dot plot



CVD Death Rates vs GDP per capita

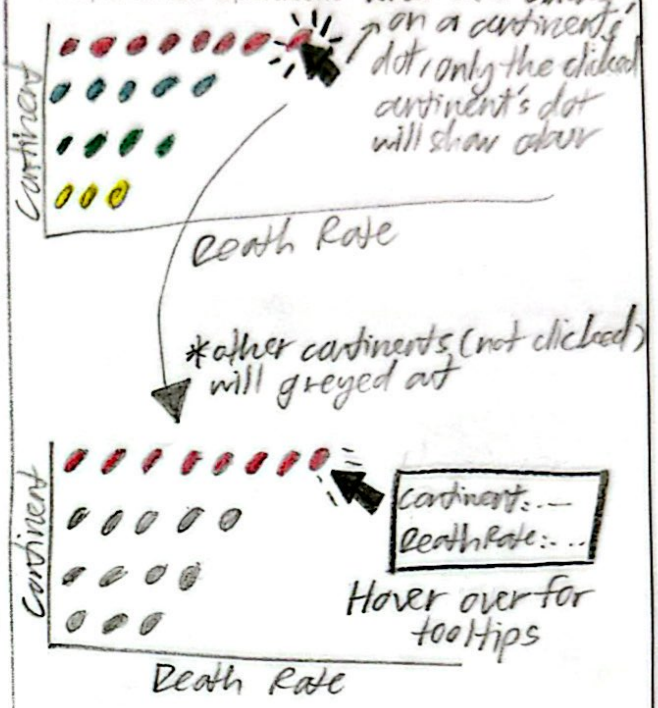
↑ treemap

CVD Death Rates by Risk Factor



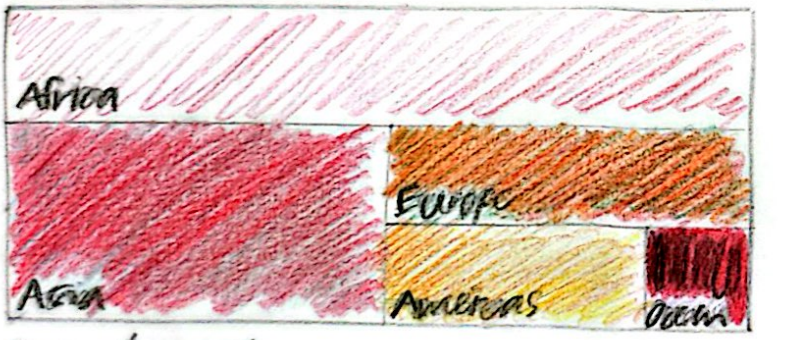
↑ stacked bar chart

Components / Operations



Parti / Focus

CVD Death Rates vs GDP per Capita



Size channels:
The size of each rectangle represents GDP per capita for each continent. Larger rectangles correspond to higher GDP, providing users with a clear indication of economic strength of each continent.

Color saturation:
color saturation of each rectangle represents CVD death rates. Darker colors indicate higher death rates, while lighter colors indicate lower rates. This visual cue helps users make quick identification.

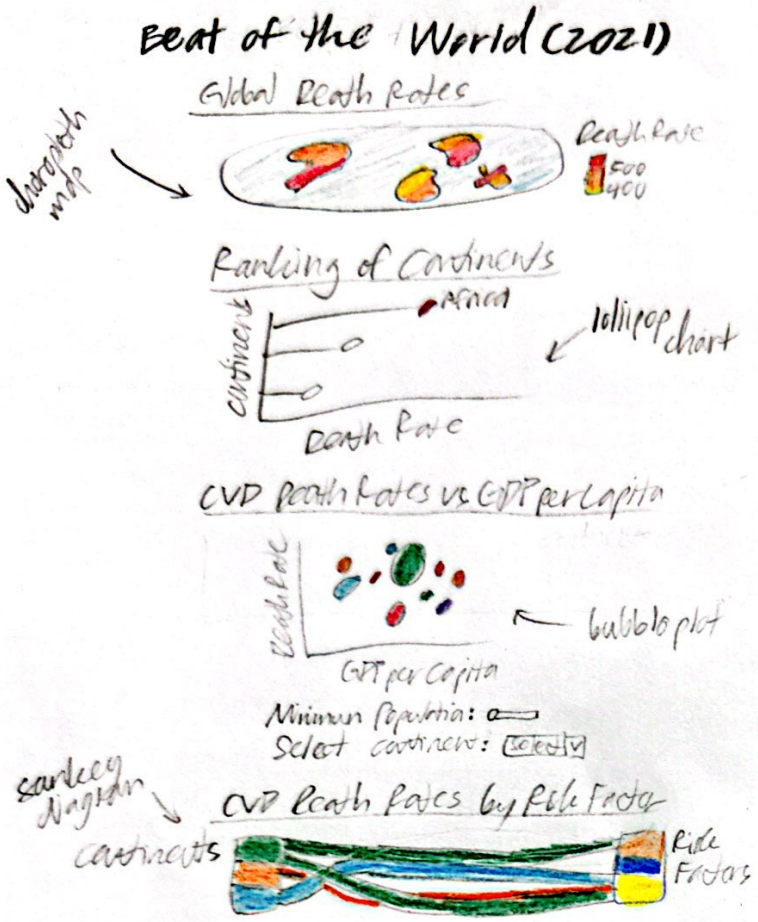
Pro & Cons

Advantages
- Simple yet interesting
- Each visualisation is easy to understand and conveys clear message

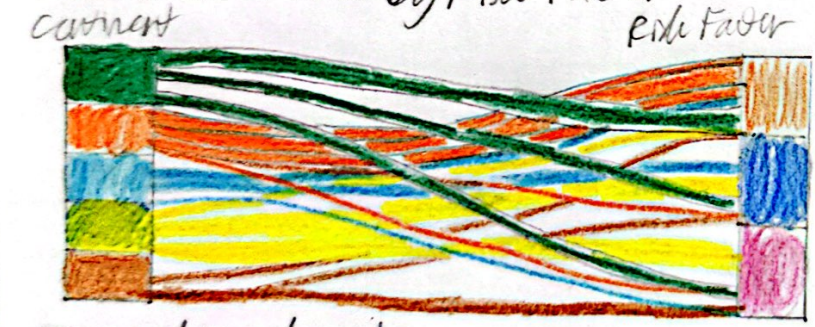
Disadvantages
- Treemap might take up huge space * maybe change layout structure?
- Treemap is unable to show population size, CVD Death Rates and GDP per capita simultaneously.

Big Picture / Layout

Beat of the World (2021)



Parti / Focus

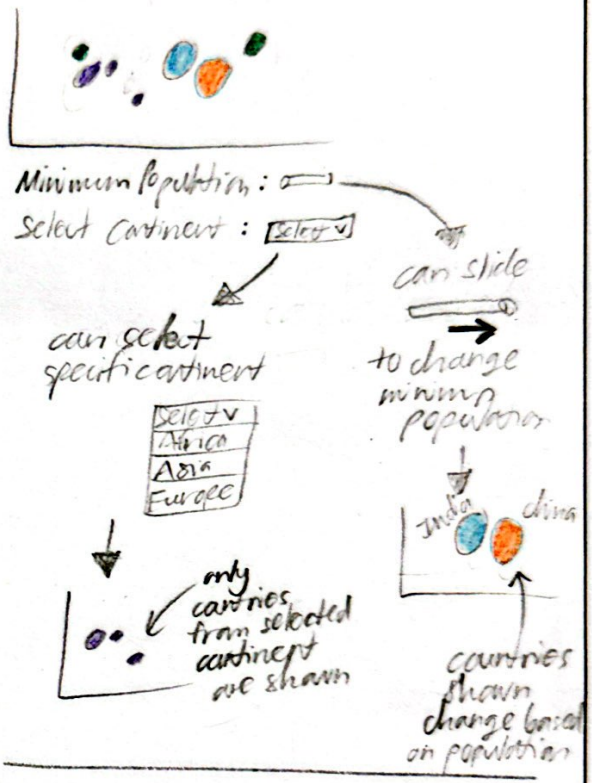


Flow and Size Channels:
Flow width represents magnitude of each risk factor's contribution to CVD deaths, allowing users to quickly spot significant contributors (e.g. high blood pressure, overweight)

Position and Hierarchical Structure:
Continents are positioned on left and risk factors on right, creating a structural flow that guides users through connections between regions and specific health risks

Sheet 5
Name MIOR SHAZRYL AFIQ
Date 1/10/2024
Title Final Design Sheet
Description
Design the final layout
- Based off of Sheet 3

Components / Operations



Details

- Use Colabrewer 2.0 to decide color options for charts that use sequential / diverging / qualitative color schemes
- Include text & diagram annotations about cardiovascular diseases via Google
- Estimated time & effort
  - ↳ 2 days for choropleth map
  - ↳ 2 days for lollipop chart
  - ↳ 2 days for bubble plot
  - ↳ 6 days for sankey diagram