

FIT3179

Data Visualization 1 Report

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URL:

https://public.tableau.com/app/profile/rivaldi.purnama/viz/DataVis1_16936480381520/Dashboard1?publish=yes

Word count: 969 words

Domain, Why, and Who:

The domain of the visualization is about missing migrants. In the data provided, there is information regarding the numbers of missing migrants, survivors, and death that occur among the missing migrants. Since the cases of missing people is a universal issue and also a global relevance, it addresses a humanitarian issue that affects people from diverse backgrounds, and can enlighten readers that are curious and need the data. Consequently, the purpose of the visualization about missing migrants is to show the progression in numbers in terms of various aspects, especially time. It is mainly for the general public that are curious or experts and officials that may need the data for academic, research, or other stuff. Since this visualization may contribute to policy makers and Non-Governmental Organizations (NGOs), it could possibly increase public awareness and safety for everyone, especially for migrants.

What is the data:

The data used in the visualization is regarding missing migrants. It was taken from Kaggle, specifically a published dataset under the profile name of "Nidula Elgiriye withana". This data itself was compiled from the official website of International Organization for Migration (IOM) which has been collected annually since 2014 which was for the "Missing Migrants Project". The Missing Migrant Project themselves gather their data from various sources such as official records, media reports, NGOs, and surveys. The data are also collected by IOM and other institutions that receive survivors (International Organization for Migration, n.d.).

Why and How:

The visualization dashboard comprises of a multiple line chart, a waffle chart, a line combined with bar chart, an area chart, and a stacked bar chart. These are all showing different categories of the data regarding the migrants from across the world and years.

The Idioms:

- Line chart: The line chart serves to analyze and query the comparison of male to female to children comparison in terms of numbers of incident occurrence. This is to know which is the most prominent to missing/death for migrants. The numbers are on the y-axis, and incident year on the x-axis to show the progression.
- Tree map: This network chart is used to present the distribution of total and missing migrants in different regions of the world. It is able to show the proportion well by displaying the regions in a hierarchical way, from biggest to the smallest ones. It also uses color saturation to distinguish the values even more.

- Bar and line chart: The combined bar and line chart shows the estimation from the researchers and the actual number of reported cases. The estimation is the line chart colored in grey, and the bar chart is the actual cases, colored in red to capture the attention of reader to the actual missing and dead migrants data, and using a bar chart for a more detailed view of each of the yearly number of reported cases.
- Area chart: This chart is to analyze the trends of survival compared to deaths that may occur to the missing migrants. The survivor count is colored in blue and death count is in brown.
- Stacked bar chart: This chart is to show the total deaths for each month of the year, and the migrants' causes of death altogether. The causes are separated by different color hues to differentiate them.

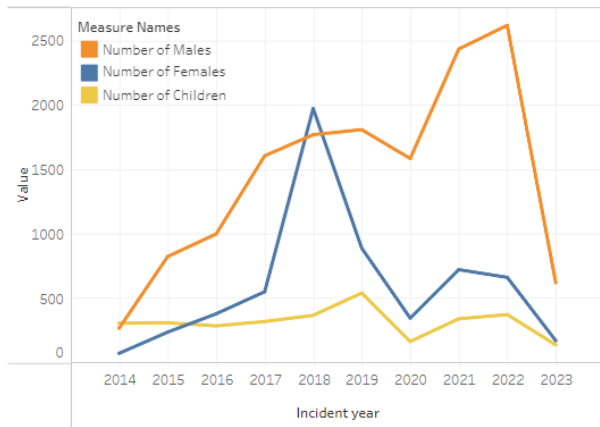
The special features:

The special features are the filters. As shown in Figure 1, there are 2 filters, 1 in the multiple line chart, and 1 in the stacked bar chart. In the line chart, when clicking on a mark, the tree map and the stacked bar chart will present their respective data based on the year. In the stacked bar chart, when clicking on a cause of death in a specific month, the multiple line chart and the tree map also shows their respective data based on the cause of death. When clicking on both 1 mark on the line chart and a cause of death in the stacked bar chart, the tree map shows the number of death and missing migrants for that region, during that month-year period, and based on the cause of death during the specific month. In addition to the filters, the stacked bar chart can also be sorted from lowest to highest and vice versa.

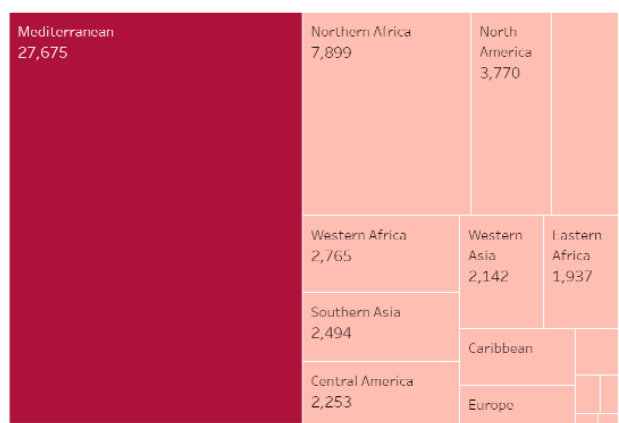
Missing and Deceased Migrants Across The Globe

The visualization tracks the data provided from The Missing Migrant Project since 2014 until mid of 2023. It contains recorded and estimated **disappearance**, **deaths**, and **survivors** among the migrants throughout the world.

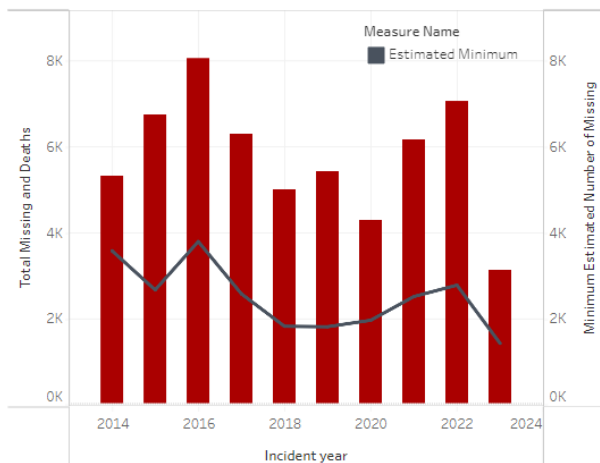
Yearly Incident Counts (2014 - Mid 2023)



Region of Incidents

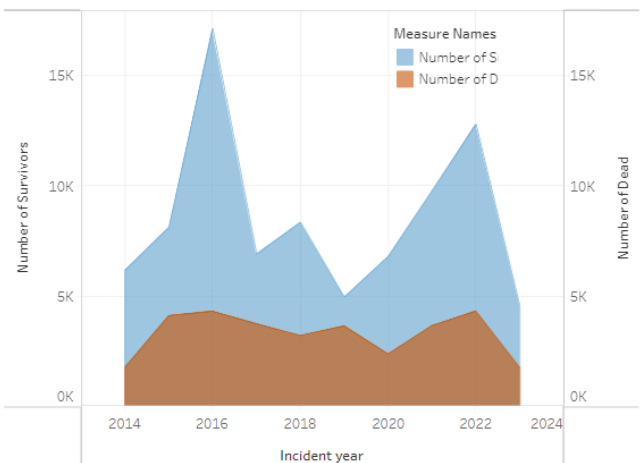


Estimated vs Reality Cases



Actual reported cases greatly exceed the initial estimations.

Survivor vs Death Count



However, survivor count still surpasses death count by a large margin.

Death Types of Migrants Every Month

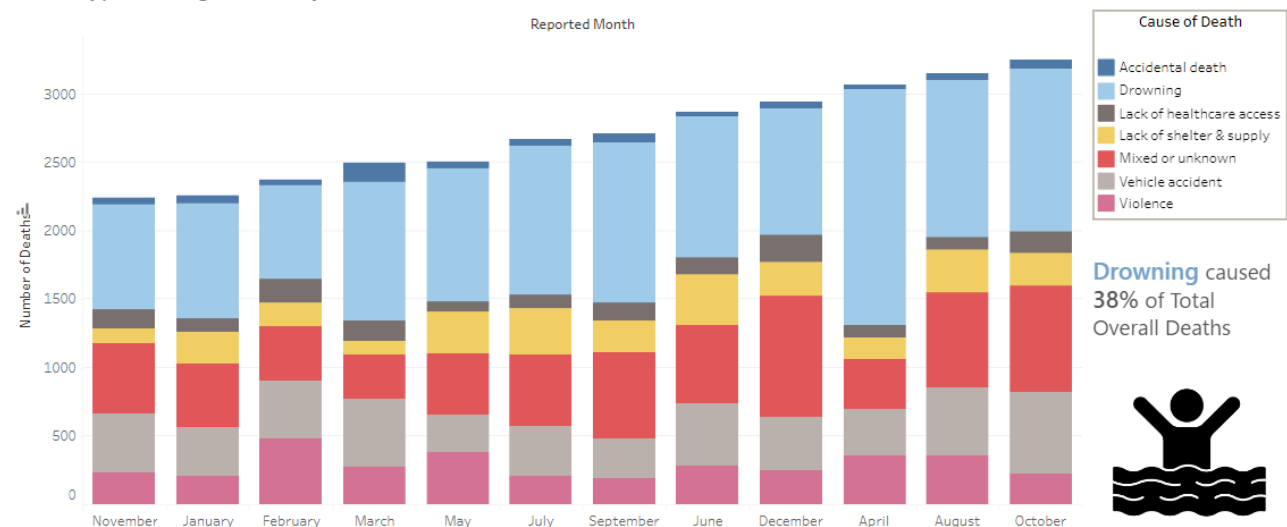


Figure 1: The full visualization dashboard.

Design:

As shown in Figure 1,

- **Layout:** The whole dashboard is structured around vertical and horizontal containers and using the blank element that Tableau offers. By doing this, the idioms and text can be placed in an orderly manner and can create clear visual sightlines.
- **Color:** The background of the visualization remains as white for simplicity purposes and to emphasize the charts and text to the readers. Survivor count is associated with blue, death with brown, and missing count with red. These colors are consistent throughout the texts and the color in the charts.
- **Figure-ground:** The text are mainly the ones that have clear visual hierarchy. The title of the visualization is the biggest, and bolded. Meanwhile, the sub-headers are bolded and bigger than the regular body text.
- **Typefaces:** The typeface used is sans serif. This is to provide a more minimalistic approach, and a clear view of the texts. The fonts used are Yu Gothic, the fonts: Yu Gothic, Yu Gothic UI, Yu Gothic UI (Bold). There is a text below the visualization title to show what the data is about. Also, there are some texts in the body of the visualization to describe the data being presented by some of the charts.
- **Storytelling:** The readers are meant to read it top to bottom, and left to right. This is to fully understand the data. In the annotations of each charts, there are information regarding the migrants. Yearly, regional, monthly, cause of death, and gender are all there to give useful information about the visualization.

Bibliography

Elgiriye withana, N. (2023). *Global Missing Migrants Dataset*. Retrieved from Kaggle:
<https://www.kaggle.com/datasets/nelgiriye withana/global-missing-migrants-dataset>

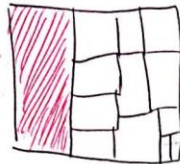
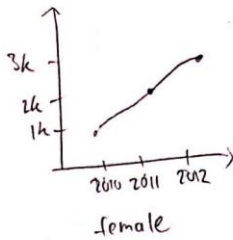
International Organization for Migration. (n.d.). *Methodology*. Retrieved from Missing Migrants Project: <https://missingmigrants.iom.int/methodology>

Appendix

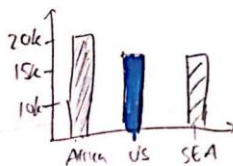
Sheet 1

IDEAS

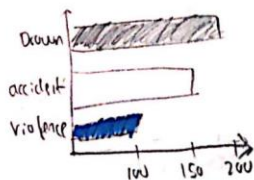
Time frame → missing persons



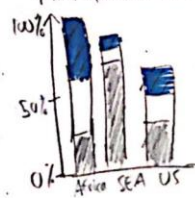
Region → missing and dead persons



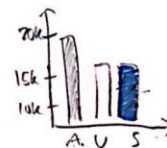
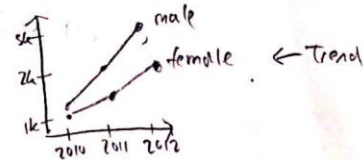
Types of Death



Total persons
male : female : children



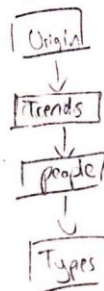
FILTER



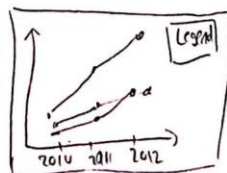
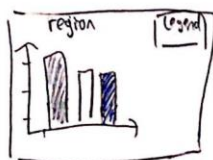
← proportion



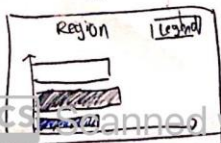
CATEGORIZE



COMBINE & REFINE



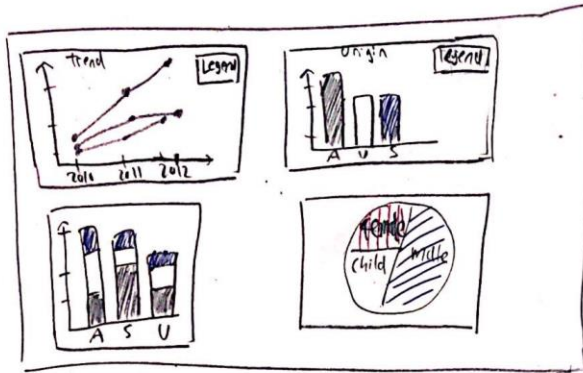
Visualizing gender, region,
and time together.



Question

- Does this properly present the data?
- Can it be done more concisely?

LAYOUT



Title = Dashboard View

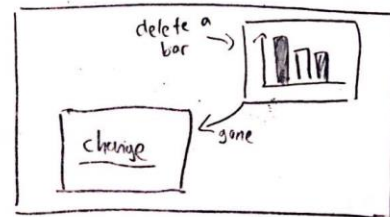
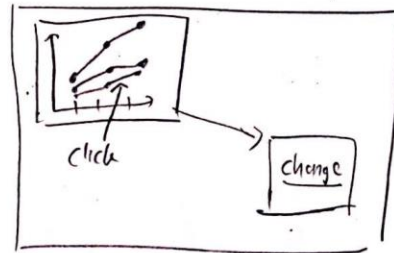
Author: Rivaldi Purnama

Date: 25-8-2023

Sheet: 2

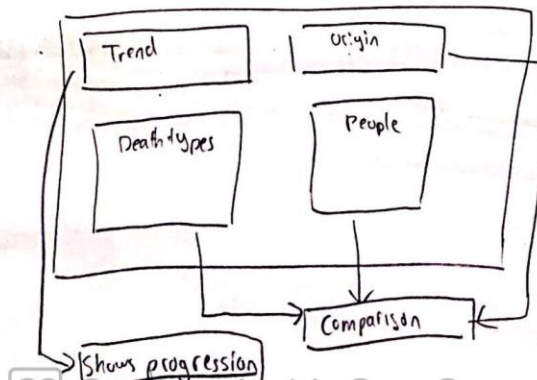
Task: Missing and deceased migrants

OPERATION



Focus

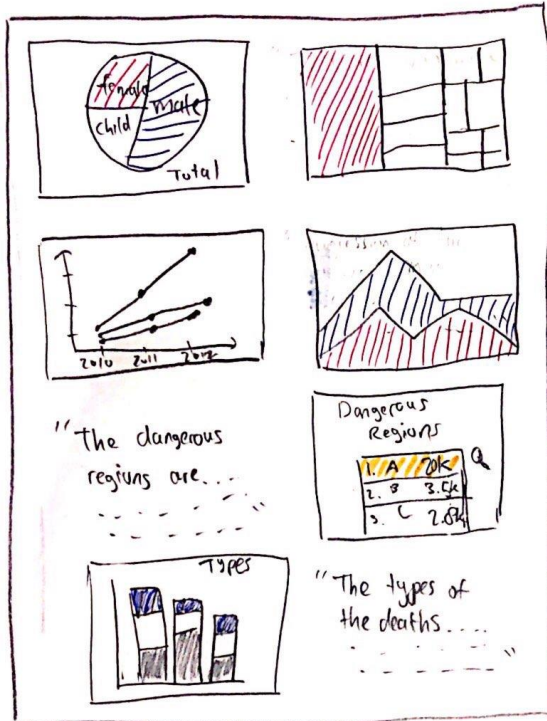
The whole dash board is focused.
All components are focused.



Discussions

- many whitespace
- more information could be included

LAYOUT



Title = magazine / narrative view

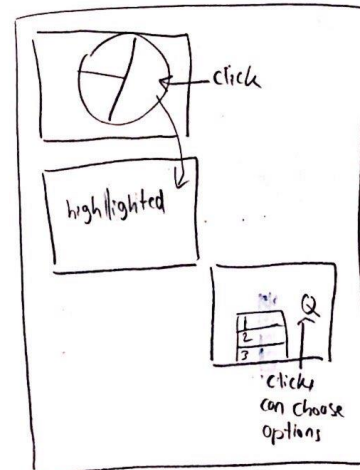
Author = Rivaldi Purnama

Date = 25-8-2023

Sheet = 3

Task = missing and deceased migrants

OPERATION



FOCUS

1	A	20k deaths
2	B	15k deaths
3	C	9k deaths
4	D	55k deaths
5	E	2.8k deaths

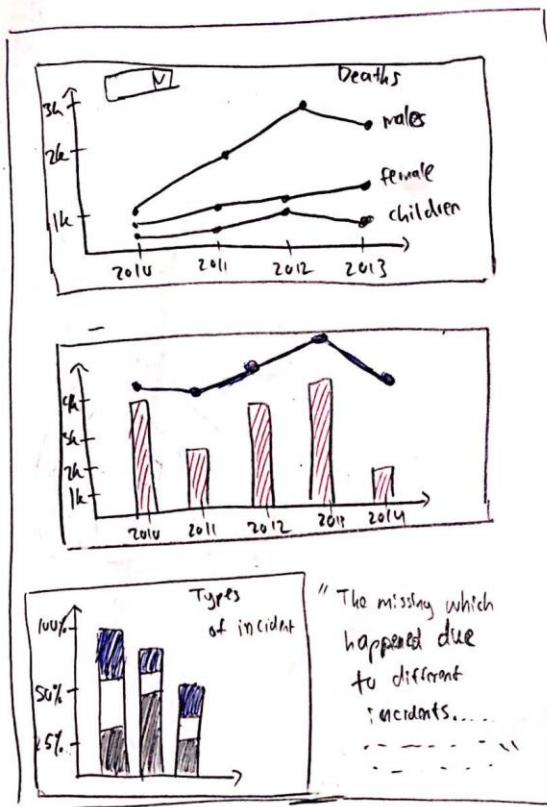
To choose region

Can clearly see the numbers by themselves

Discussions

- Might have too many text
- Is the implementation doable?
- Clearly describes each chart

LAYOUT



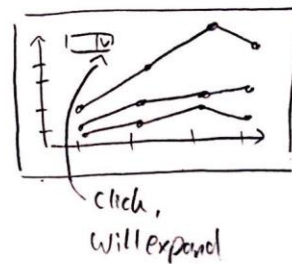
Title = Dashboard new

Author = Rivaldi Purnama

Sheet = 4

TASK = Missing and deceased migrants

OPERATION



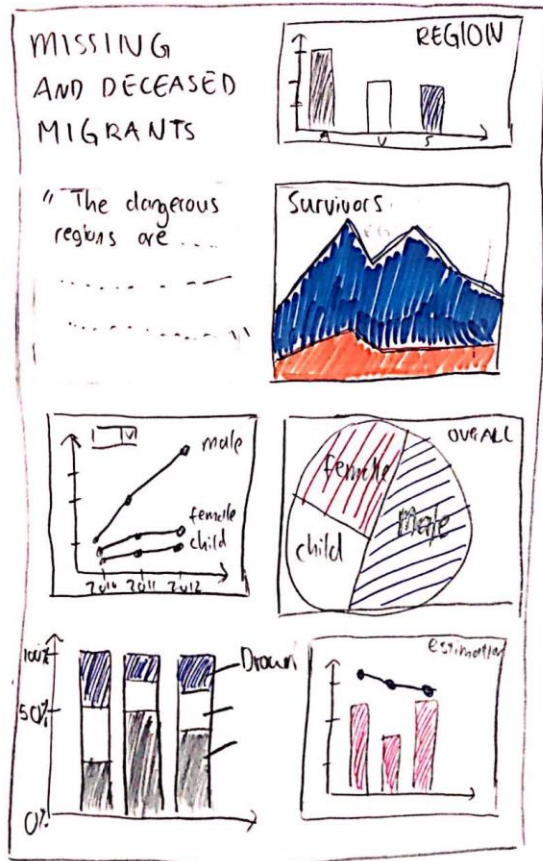
FOCUS



DISCUSSIONS

- Is the implementation doable?
- Too focused on the trend
- Operation too simple
- Clean

LAYOUT



Title = Realization

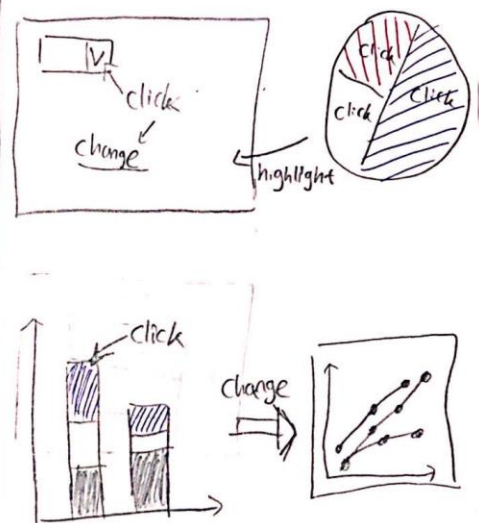
Author = Rivaldi Purnomo

Date = 25-07-2023

Sheet = 5

Task = Final Implementation

OPERATION



FOCUS

The regions and gender distribution.



DETAIL

- The dataset risks
- software
- Server to view and edit
- Time to implement, 1 week