Research Methods-CW2

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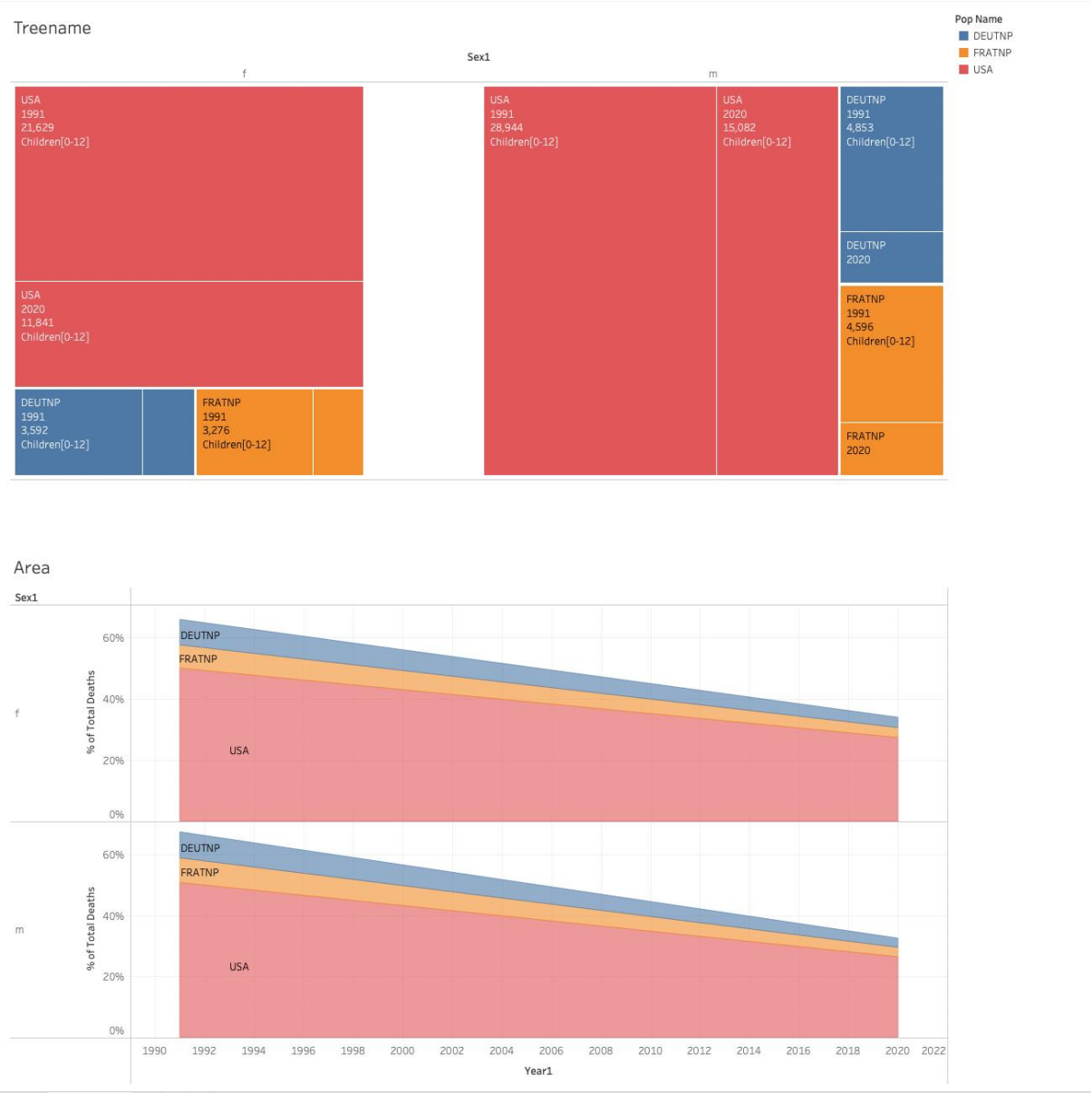
Children mortality comparison between year 1990 and 2019



Visual Design Type:

- Treemap
- area (continuous) charts

Name of Tool:

- Tableau

Country:

- United States of America (USA), France (FRATNP), Germany (DEUTNP)

Years: 1991-2020

- 1991: The year after Germany's reunification
- 2020 (Latest).

Visual Mappings:

- Treemaps
  - Colour: colours are mapped based on the countries (Red-USA, Blue-Ger, Fra-Orange).
  - Shape: each rectangle represents the sum of children aged 0-12 that died in that year in the specific country.
  - Position: The position of each rectangle is positioned by decreasing mortality rate (for females horizontally and for males vertically).
  - Hierarchy: the mortality rectangles are grouped by year, total death, and gender.
- Area charts
  - Colour: colours are mapped based on the countries (Red-USA, Blue-Ger, Fra-Orange).
  - Position:
    - X: year
    - Y: death percentage for the respective countries.
  - Hierarchy: the graphs are divided based on gender to show differences.

Unique Observation:

- The USA has a higher number of child death both in percentage and absolute numbers. This could be due to the lack of free healthcare when compared to Germany and France, countries that do have free healthcare services.
- Compared to 1990, all countries have a decreasing child death rate despite the covid outbreak in the year 2019-20.
- Female death is considerably lower in all countries compared to their male counterparts.

Data Preparation: Any modifications to the original data that had to be performed to generate your beautiful image.

1. Download the data from mortality.org and convert the death text files for the selected countries into Excel.
2. Upload the data on Jupyter-Notebook and merge them for data processing, using the pandas library Python.
3. Now, remove all the data that are not in the age range 0-12.
4. Afterwards, select the remaining data that have the year 1991 and 2020.
5. Remove columns that are not needed.
6. Use the current data frame to create a new Excel called, 'new-output.xlsx'.
7. Now use this data on Tableau to create the graphs shown in the picture.

URL GitHub:

- https://github.com/Gsoyeb/Research-CW
- The code is saved in the Data_processing.ipynb.
- The file used for tableau is called new-output.xlsx.
- The Tableau file is saved as CW2.twb.
- The picture is saved as FinalGraphs.jpg.