Milestone 2: SPRINGERs

Visualization Goal

We visualize the historical GDPR fines to answer the following question: “How are offending web-service providers changing their behavior after receiving a GDPR fine?”. .

Visualization Components

We plan to have the following visualizations: Minimal viable visualizations are shown in black, and extras to be implemented if time permits are shown in yellow.

- Maps of European countries (Fig. 1), showing (with an interactive slider to vary the time range considered):
  - GDPR fines per country
  - Fined sectors per country
  - Fine articles per country
- Charts showing the correlation (Fig. 2) between:
  - GDPR articles (articles cited together)
  - GDPR fines and articles
  - GDPR fines and sectors
  - Sector and articles
- Charts (Fig. 3) showing the rate of recidivism:
  - Broken down by country
  - Broken down by sector
  - Broken down by article
- Tentatively, other basic statistical figures as described in Milestone 1.

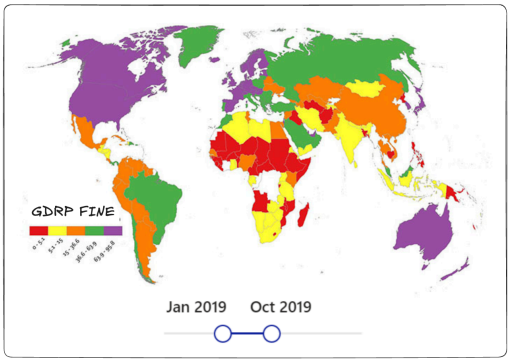

Figure 1: Map of countries showing GDPR fines (cumulative) given a time range.

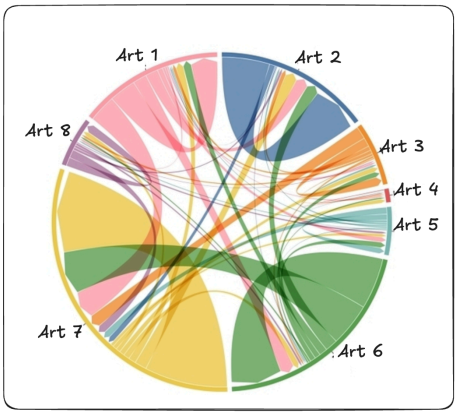

Figure 2: Sankey Diagram showing correlation between articles citations.

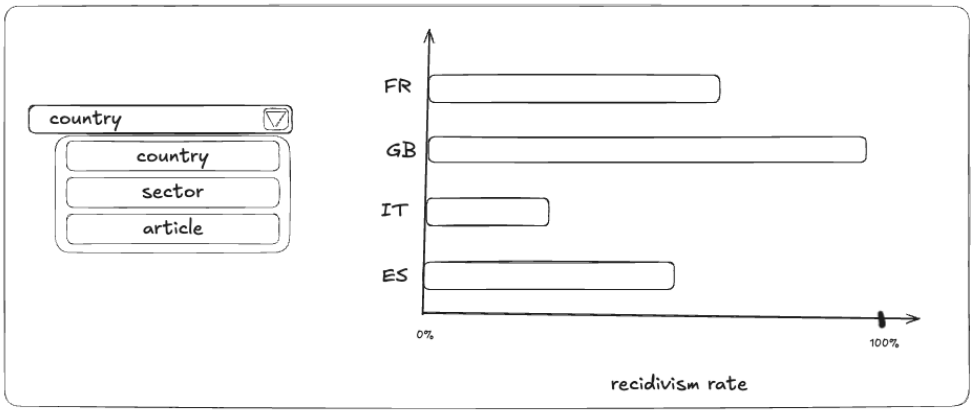

Figure 3: Recidivism Chart with drop-down menu.

Tools

We plan to use the following tools and concepts:

- D3.js *(Week 4, lectures on Data and D3.js)*
- JavaScript *(Weeks 2 and 3, lecture on JavaScript)*
- For interactions with the data visualisation, such as filtering, linkin,g or aggregation *(Week 5, lectures on Interactions)*
- i want hue and Chroma.js Color Palette Helper to choose color palettes for our plots. *(Week 6, lectures on Perception, Colors and Marks, and channels)*
- Perception principles to draw attention efficiently to the data of interest. *(Week 6, lectures on Perception, Colors and Marks, and channels)*
- Correct use of marks and channels to represent the information expressed by the dataset *(Week 6, lectures on Perception Colors and Marks and channels)*
- Sketching *(Week 7, lecture on Designing)*
- A lot of our plots will be maps (distribution of fines/number of offenses/ect. across countries): potential use of GDAL, Leaflet.js, and D3 to create data-driven maps *(Week 8, lecture on Practical Maps)*
- We will maybe do some textual visualization when analysis GDPR articles: use basic NLP principles DT-Matrix and word count viz/tag cloud *(Week 10, lecture on Text Viz)*
- Graph visualization (with Cryptoscape.js) for correlations between countries and articles for example (edge bundling) or matrix representations *(Week 11, lecture on Graph Viz)*
- Stacked bar charts *(Week 12, lecture on Tabular Viz)*
- Make sure to tell a compelling story through the data visualization *(Week 13, lecture on Storytelling)*

Prototype

The prototype is included in the GitHub repository. To run it, open the HTML file (./website/index.html) with your browser (by pasting the **absolute** path to the file in your URL bar). The website for Milestone 2 contains a skeleton and template which we will fit with the actual plots in Milestone 3. We implemented basic site navigation and interactivity and layout.