PROJECT
Design of a visualization tool

Objective

The aim of the project is to design a visualization tool for the exploration and analysis of changes in arbitrary context. For example the tool could be dedicated to visualise how a text document is changing over time. This could serve several purposes:

- helping users tracking changes over time;

- enabling users to count the number of changes;

- helping users analysing the importance of these changes (deletion of an entire section vs minor correction of typographical errors).

- help scholars track changes in the constitution of a country: how many laws have been added, edited, removed? Which part of the constitution have been changed the most? When?

- track changes in newspapers and see to what extent articles are edited over time.

- helping scholars understanding the evolution of translation of classical books;

- helping editors proofread articles;

- analysing the evolution of definitions in dictionaries, etc.

Requirements

▶ It must be an interactive website or software – i.e. mouse/keyboard interaction. You can choose any prototyping tool for the task.

▶ It must be composed of several views.

▶ It must include at least one temporal attribute (date of document creation, date of modification, etc.)

▶ It must enable users to perform at least 5 tasks of various complexities: e.g. displaying the number of changes for one document, being able to compare two versions of the document at the same time.

Report 1/2

Students must submit a report (pdf) as well as prototypes of the visualization tool. The report should be structured as follows:

1. **General info:**

   ▶ Author name and surname

   ▶ Enrolment number

   ▶ URL to demo video

2. **Overall description:** In this section, students must briefly explain who are the intended users of the visualization (e.g. historians vs citizens) and give an overview of the visualization tool (what is it used for, how does it work). Around 150 words, similar to an abstract

3. **Tasks:** In this section, students must identify and describe at least 5 tasks that the visualization tool should support. This corresponds to the "Why" dimension of Munzner's taxonomy of tasks – students are free to use this taxonomy to describe the tasks.

Report 2/2

4. Design of the visualization:

- At least 3 "non-polished" prototypes that were made to explore various options and what are their limits/advantages (a few sentences).

- The final and "polished" prototype, with annotations and/or detailed views if necessary. One should be able to understand how the system works by looking at this prototype only.

- Explanations regarding the design rationale of the final prototype, especially:

  - The choice of colors (if relevant)

  - The design principles that have (not) been followed

  - The use of views: whether and why they are linked, and if so, why; how the views are spatially organized and why is it a good choice

  - Interactivity: what interaction techniques are used, why are they relevant, etc.

  - The chosen visualizations in each view: why are they relevant?

- A summary of why the proposed tool matches the audience described in 1, the tasks identified in 2 and the design goals listed in 3.

5. Scenario: Students should present one scenario illustrating how one user (from the target audience) could perform one of the identified tasks using the system.

Past projects: Text Visualizer [Java project]
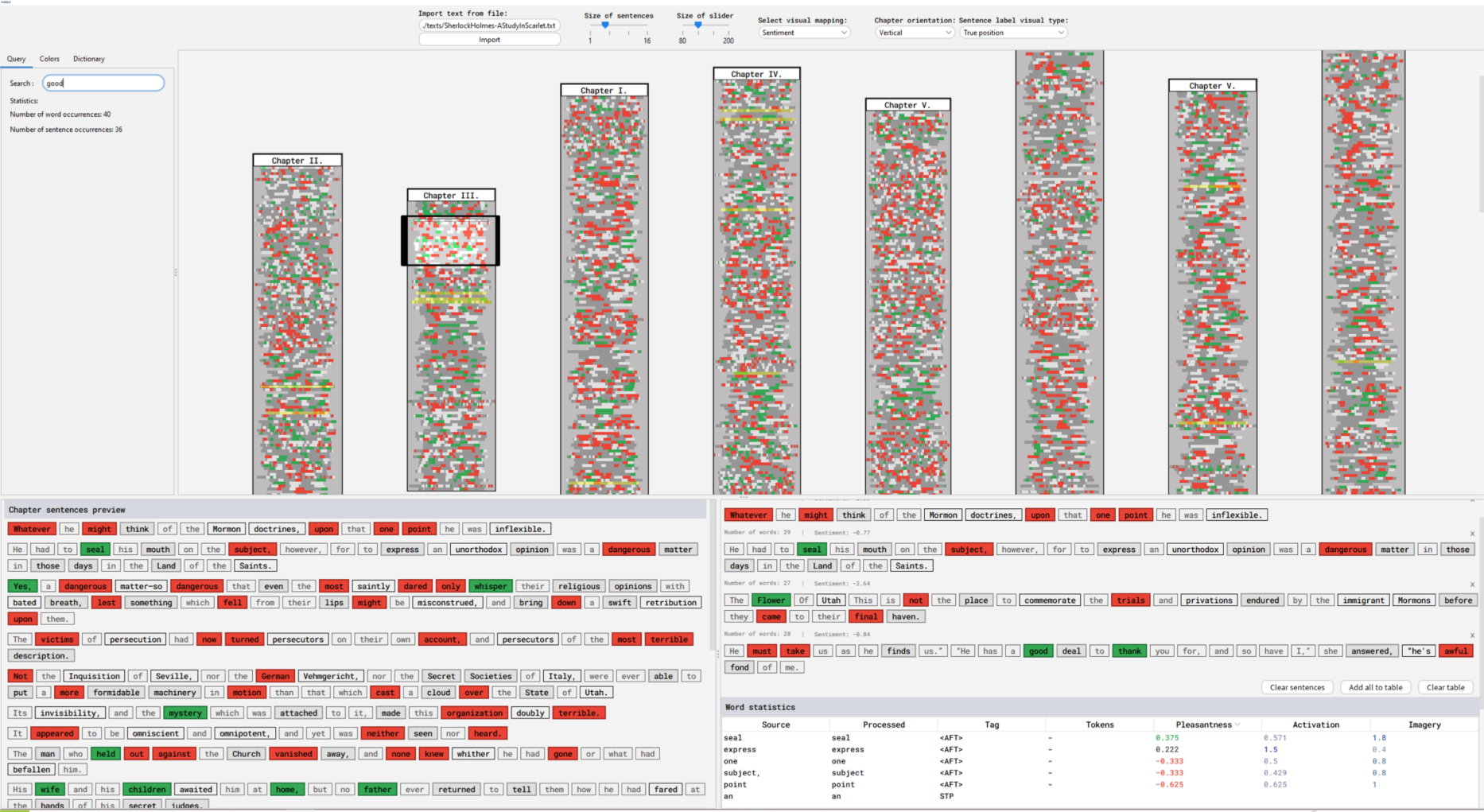
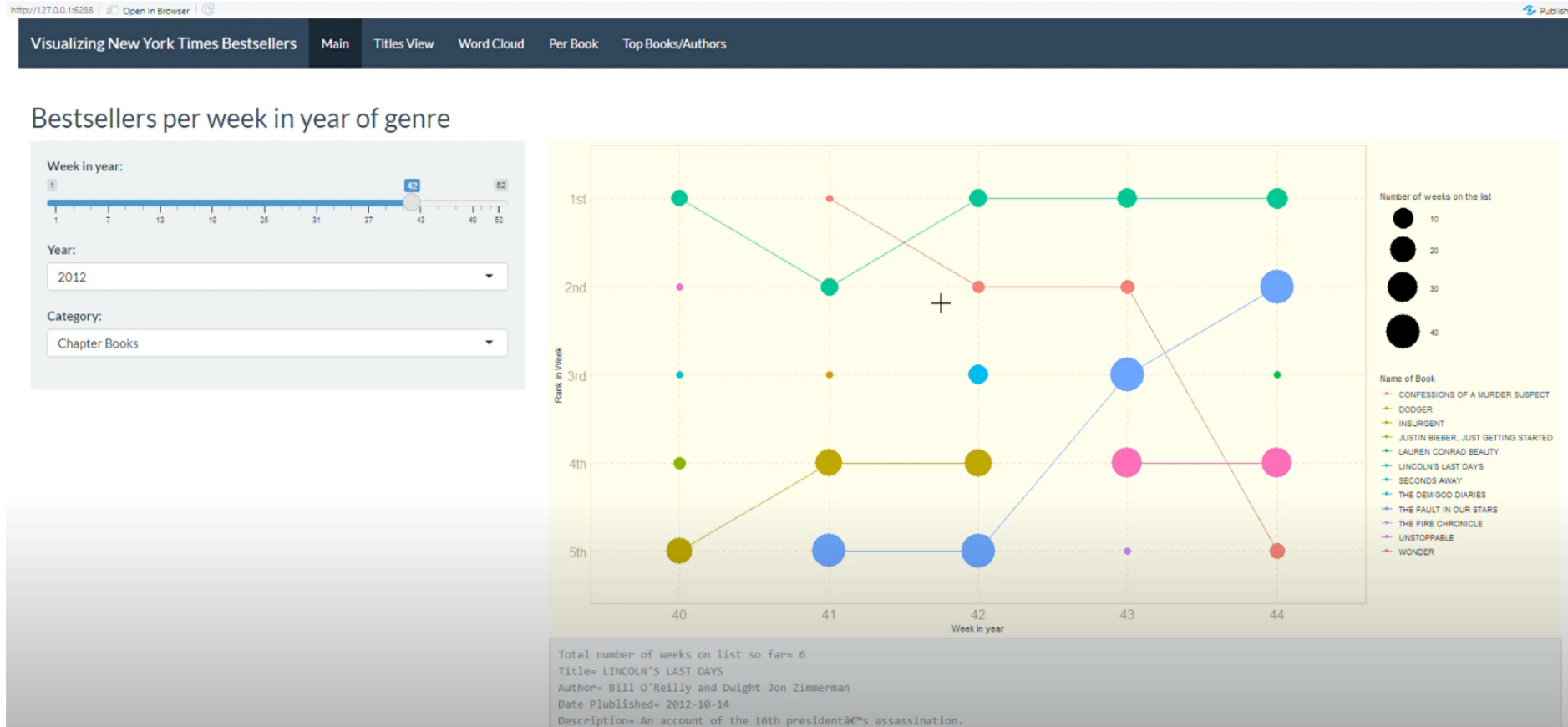# Past projects: Anime graphics [react project]
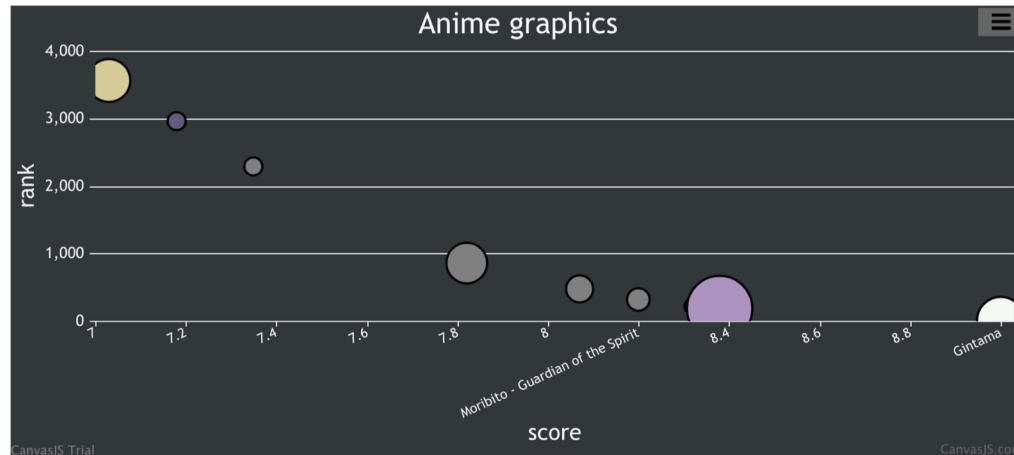
https://anime.yazasnyal.dev/

Past projects: Bestseller [R (ggplot2) & Shiny package]

https://www.youtube.com/watch?v=SaknaFwbHj0&ab_channel=BigCatEmpathetic