

Physical and human resources in the healthcare system in Switzerland

Milestone 2 - 1st May 2020

Introduction

The goal of this project is to analyse the healthcare human and physical resources per canton in Switzerland. Does the number of beds in intensive care unit vary with the number of inhabitants per canton ? Does the number of resources per cantons vary with the growth domestic product per capita ? What is the gender repartition in healthcare practionners ? I will try to answer these questions through interactive dataviz, based on both recent datasets (2020) and historical data.

Design

The webpage will be divided into three sections: regional indicators, physical resources and the human resources. These three categories are displayed in the menu bar and one can smoothly go to one section to to other by clicking on the respective tab.

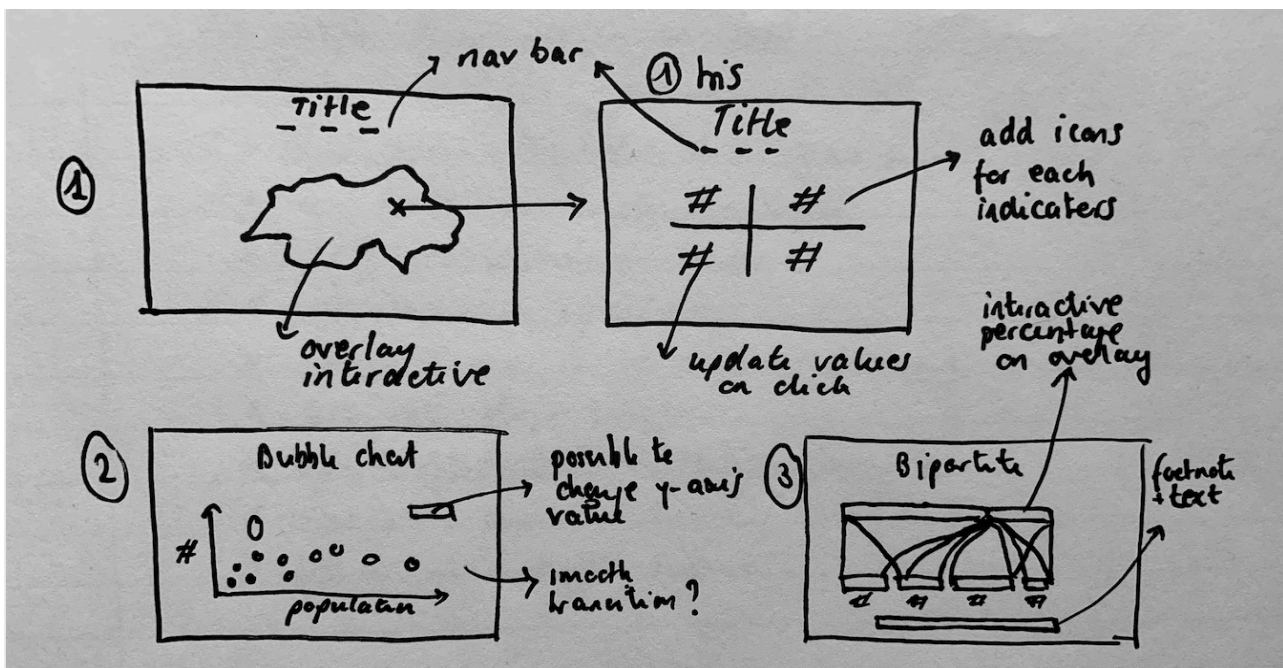


Figure 1: Sketches, brainstorm and ideas for design

1. Regional Indicators

The first section will display an **interactive map of Switzerland using TopoJSON**. It aims to provide general informations on the number of beds and practionners per cantons by selecting a canton on the map. When the mouse is not over any canton, the map is a choropleth shaded by the density of each canton. When a canton is selected, it will scroll into the regional indicators icons to provide the respective numbers.

2. Physical Resources

The second section will display a **bubble chart** with the population in the first coordinate and the number of resources (number of beds or numbers of doctors) in the second coordinate.

The bubbles will have different shades and sizes to illustrate a third variable, the growth domestic product per capita. A prior analysis of the variables has been done in the jupyter notebook given in the [github repository](#).

3. Human Resources

The third section will display an **interactive bipartite graph** with the primary variable being the gender and the secondary variable being the jobs in healthcare such as nurses, caregivers and doctors.

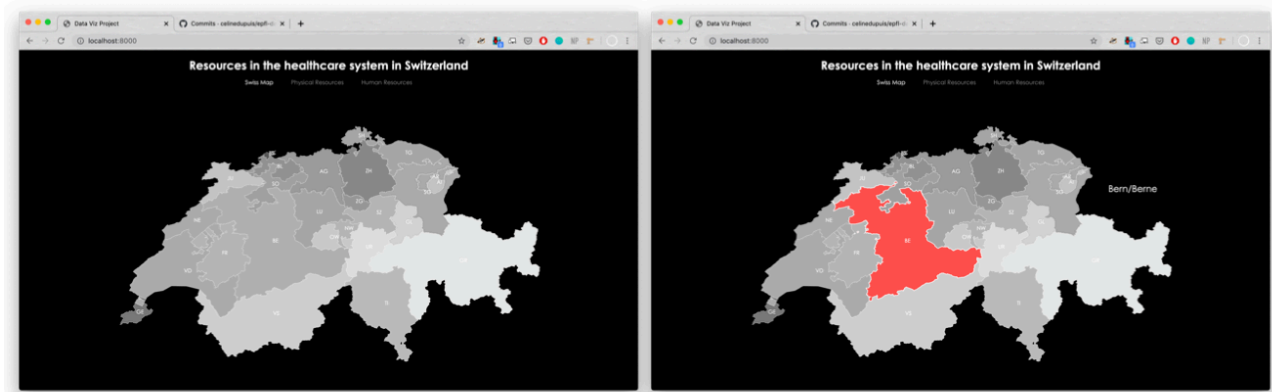


Figure 2: Interactive map running on the website. The selected canton is highlighted in red.

Minimum Viable Product

The webpage skeleton is available on the [github repository](#). The interactive map and the bipartite graph are already implemented. The table below lists what remains to be done; once the tasks in red are implemented, the MVP will be available. The tasks in yellow will be added if time permits.

Must have | Nice to have | Done

	Lecture	Tasks	Language
Regional Indicators	• Lecture 8 (maps)	interactive map	d3
		update regional indicator on the fly	d3
		zoom on canton	d3
Physical Resource	• Lecture 11 (tabular-data)	implement bubble chart	d3
Human Resource	• Lecture 5 (interaction)	bipartite graph	d3
Web Page	• Lecture 2 (web-dev) • Lecture 3 (javascript)	webpage skeleton	html, css
		update nav bar class on click	javascript
		add footnote with comment on the dataset	html, css
		responsive for mobile	html, css