WINE JOURNEY

Our path

First, we started **brainstorming** about wine. We knew that wine was a very broad and technical topic. Yet, we wanted to find a way to make it simple and understandable for anybody, even someone that knew nothing about wine. We had to start **learning** a bit more ourselves about wine and oenology which is really hard to be able to get a sense about the most important points we needed to communicate.

Once we got a clear view about the information we wanted to present, we ended up with three main axes: vision, smell and taste.

Before starting designing actual visualizations, we needed to see what data was available to us and what we could work with. As there were no existing dataset covering our needs, we had to **collect data** and create all our datasets ourselves by scraping different websites (notably winefolly, which kindly gave us permission to do so) and linking different sources together.

Once we had all the data, we were able to start **designing and sketching** our different visualizations. We came up with basic ideas for each one of our 3 topics, as well as a wireframe for the overall website.

Then came the **coding** of the different visualizations, where we were able to apply what we had learned about html, css and d3js. Initially, we kept each visualization as an isolated prototype, in order to easily separate the work and not get into each other's hair. When the prototypes were ready, we decided to put everything together into a single website.

Our website was pretty blank at that point, so we started working on the texts that would accompany each one of the visualizations and link them together.

At this point, we weren't quite satisfied with the whole integration of the website. We really wanted to bring the reader through a journey in oenology but we didn't want them to get lost with too much information. The first thing we did was **rethink the layout** of the whole website. We started to think about the idea of isolated sections instead of a straight "one-page website". We adapted the design of the whole website around this idea of creating a clear physical separation between the different topics, first starting by creating different pages. The resulting website was much better, yet we weren't fully satisfied because some sections were still a bit complex and could still repel some readers. As a consequence, to make it even more clear and easy to read, we introduced a 2D navigation layered around the main topics with slides. Vertical navigation to switch topics and horizontal navigation to present the information for each topic. This allows to give very interesting info to the reader without losing him yet maintaining a very natural navigation. The 2D navigation also went well with the other aspect we worked on improving: **telling a story**.

We wanted something linear exactly as an oenologist would do when approaching a new wine: starting from the most evident and going to the most subtle, from the

most simple to the most difficult, from the vision to the taste… As a summary, re-creating kind of a full wine-tasting experience on the website.

For the storytelling, we used the journalist model. Since we'd collected a lot of information about wine, we made a selection of what facts we considered the most important and which ones we absolutely wanted to present. We did this for each topic and finally linked them together to produce a story. This helped to remove the overwhelming amount of information we had initially while succeeding to keep a very logical progression in the story.

After this was done, we turned our focus to creating a **visual identity** for our website. We selected a color palette that we used across the whole website and made sure to have a consistent look across the multiple sections of the website.

When we were satisfied with the overall structure, design and content, we sent out our website to friends and family in order to get **feedback**, because having a fresh pair of eyes is always useful. We tried to target both people who didn't know much about the topic and people who already had some experience. Our main focus was to find out if they found something unintuitive, unclear, boring or ugly, and we took their valuable feedback into account to produce the **final version** of our website.

Challenges

The first main challenge we faced was about creating the visualizations themselves. How to create visualizations around a topic which is very complex and sometimes hard to represent? How to represent a smell? a taste? It is not possible. Therefore, we had to find a way to explain the concepts to the reader and designing interesting visualizations without being able to materialize the underlying core concepts on a screen.

Another challenge was trying to keep the storytelling simple yet interesting and instructive. Wine is one of the most interesting subjects but is also very broad, abstract and can quickly become complex as there is a lot to say. Also, it is not an exact science. Trying to keep things understandable both for a wine nerd and wine newbies was not an easy thing.

Finally, on the technical side, we had to deal with the common issues of web development and web design: dealing with a whole bunch of web browsers that don't want to render the page in a same way… Why? :) We initially thought about taking the easy way out and simply prompting the user to switch to a different browser, but in the end, we managed to adapt our code in a way to take into account the different quirks of these browsers and made sure all visualizations worked properly. In addition to that, we had to put in some extra work in order to consolidate the various external libraries with our own custom code.

We are convinced that design is very important and that it matters a lot even if it is subconscious for the reader. We wanted the design of our website to match and reflect the subject. We started brainstorming around wine: What is wine appealing

to us? Generally, we can think of wine as something luxurious, aesthetic, elegant yet quite simple. We focused on creating a design that is pleasant and coherent with our conception of wine choosing wisely colors, fonts, and overall element placement. We used a problem-driven design approach: we started with the different visualizations. We then created the overall website design around those visualizations but faced a problem: there was a lack of coherence and too much complexity. As a consequence, we had to start rethinking the whole design thinking better about the overall flow and the good integration of the different visualizations to create something that was both understandable, pleasant, coherent and not overwhelming. That's how we ended up with our final design. We tried to really focus on having something coherent across the whole website and between the different visualizations.

Sketches

Wireframe

We changed a lot the general architecture of the website compared to our initial plans. As discussed earlier, the main change was to introduce this idea of a 2D navigation in order to be able to separate each topic in a clear way yet keeping a semantically good and logical link between them. The reader is thus able to scroll down to switch between topics and scroll to the right in order to discover all the information and learn about a particular topic. We chose to keep a similar structure for every section: first some theory / knowledge, followed by an interactive visualization to illustrate said theory and let the user play around. The advantage of this 2D navigation is that it enables us to give quite a lot of information to the reader without losing him. Indeed, it allows us to take the reader on a journey and teach him going from the basic to the most advanced things as a real oenologist would do.

Basics

The basics section is composed of 3 small interactive visualizations. We already knew the topics we wanted to discuss hence we only had to illustrate. The first one is pretty straightforward: the user must fill a glass with the correct amount by clicking on the glass. They can also switch between red and white wine, a choice that affects multiple visualizations throughout the website, reinforcing our concept of "a journey" instead of having just a bunch of unlinked parts. The second visualization features the same glass that the user just filled, but with a different kind of interaction: clicking on the right part to pick it up. To guide the user, we added hover boxes for the different parts of the glass. To make the visualization more alive, we decided to add small animations that are triggered on click. Finally, the last one was not planned and was added during the third milestone. We believe that labels

are something characteristic of spirits (in particular wine and beers), so we could not make a wine guide without mentioning the labels. We created our own label (in case we drop out of EPFL to start a winery) and added some explanations when the user put its mouse above important part.

Vision

For the vision part, we mostly settled on our initial design idea. The topic can appear simple but is in fact very hard. We therefore had to start the section by giving the reader a bit of theory on colors and the main link between their intrinsic characteristics and wine. For the visualization, we kept our initial idea to show the reader a subset of the most common tints we can find in red and white wines. The user can select the color of wine he is interested in. He is then presented a color chart of 8 different tints from which he is able to select one in order to obtain further information about that particular tint and the way it relates to wine. We also present the user 10 other colors that are very close to the selected tint (5 variations and 5 shades) which could theoretically share common tasting characteristics.
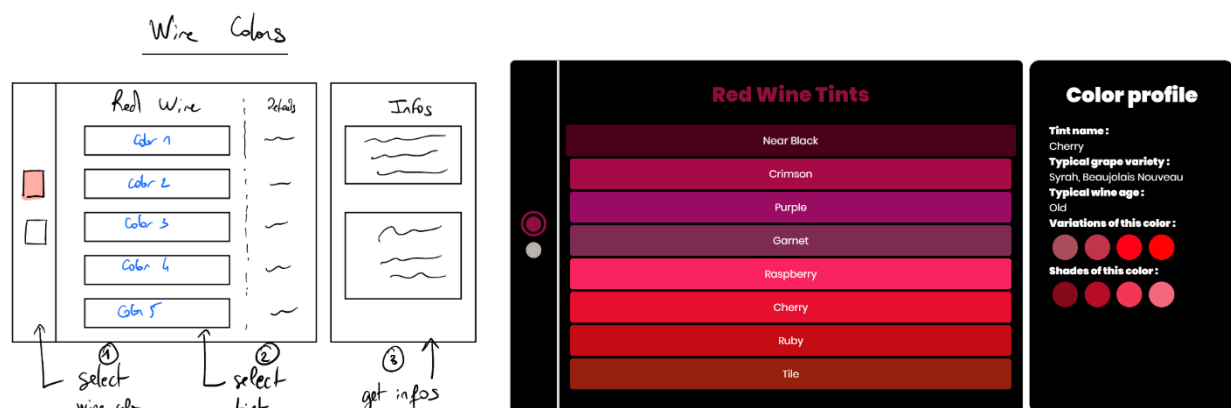
Smell

The smell is the visualization that has changed the most. Initially we wanted make a circular visualization where the most inner circles correspond to the broader categories and the outer circles are more refined aromas.

However, we realised that there was too many information, it was not practical and not intuitive. We also had some text problem which made our visualization hard to read.


For those reasons, we decided to change it to a bubble graph: apart from being prettier, we believe the amount of information is the perfect amount and the visual reminds us of wine grapes. You can find the final result below:
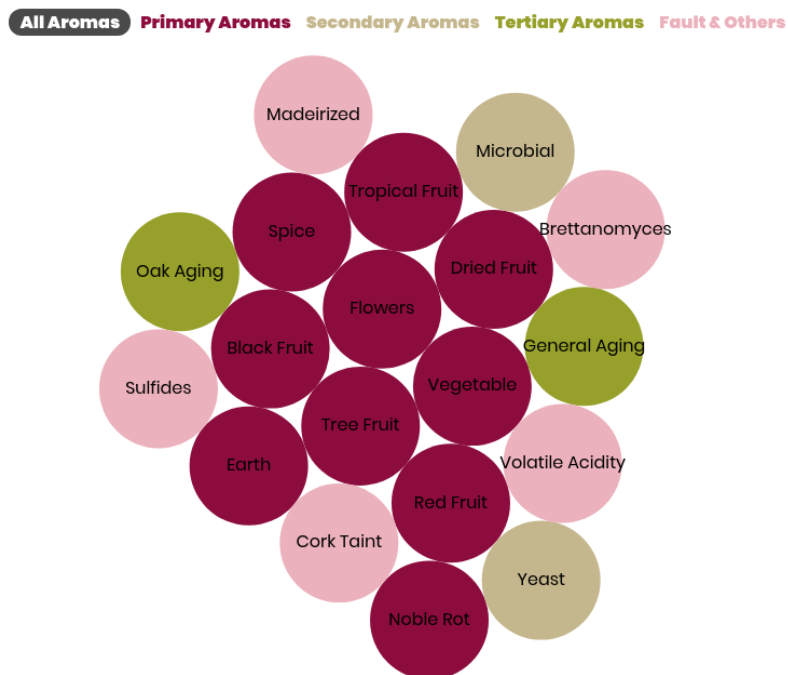
Taste

The final implementation greatly resembled our initial sketch. We modified the colors to match the overall look of our website. Furthermore, we decided to place a tooltip in the center of the radar chart, which is multipurpose: it displays the name of the grape variety, and also displays the value of the feature currently being hovered / modified (e.g. when the user drags the tannins component to a value of 5, the tooltip displays "high tannins"). The fact that the tooltip is contained inside the chart and that it can display a variety of things made the layout much cleaner (not cluttering the chart with unnecessary text) and made the use of space more efficient. For better readability, we also added a subtle background to the tooltip, in case the color of the "wine blob" was too similar to the tooltip's text color.

Finally, we added a search bar that lets the user browse through the different grape varieties or search for a specific one. To ease the search process for the user, we added dynamic suggestions based on the user's input that they can choose from.
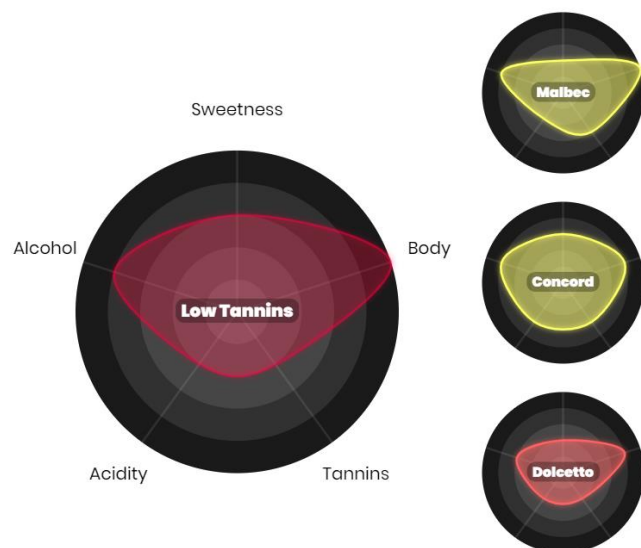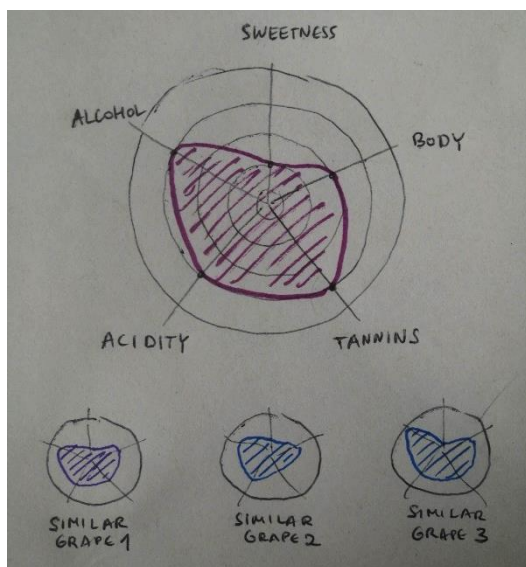
Food pairing

Apart from visual tweaks such as using nicer colors, designing a better layout and adding animations we stuck to our original idea of using a bipartite graph and a separate panel for displaying additional information.
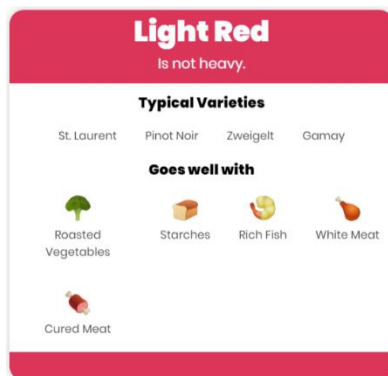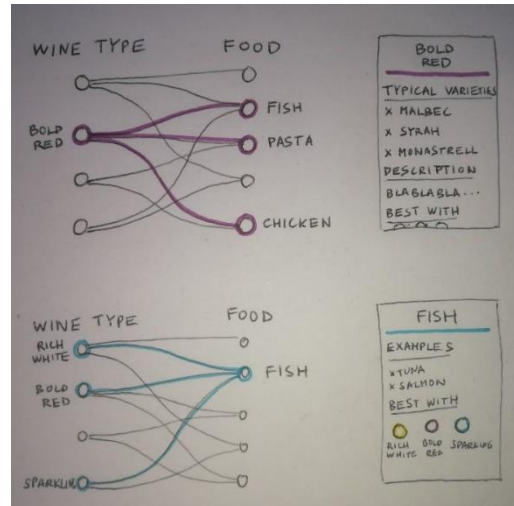
Peer assessments

During the whole project, we always tried to think and take all the important decisions together. Each one of us always brought new ideas which helped a lot always going forward. It was not always easy due to the current COVID situation but we managed to call each other very frequently in order to debate and take the best decisions.

Then, we split the actual implementation work between each one of us. Here is a breakdown:

Anton Ragot

I helped with the animation of the first page (creating the line that shape as a glass). I have also done the third basic by creating the label and the explications. I was also in charge of the smell part (gathering the data, the explanations and the visualization). Of course, other members of the team tweaked some of the things I have done to make it prettier or better fit with the website. I really like doing this project with Peter and Valentin.

Peter Krcmar

Did the first 2 basics as well as the taste and food pairing sections. Apart from that I also played around with some css, worked on the visual identity of the website, got lost multiple times in our countless nested `<div>`'s and helped fixing stuff when it broke in firefox.
Overall, I enjoyed doing this project with Tonton and Val very much and feel like I've learned a lot about wine.

Valentin Quelquejay

As each of us, I started by helping scraping the data. Then, I mainly worked on the visual topic. Finally, I helped on several other things and particularly on the overall design of the website. It has been an amazing experience to work with both Peter and Anton which were amazing teammates during the whole project. I am very proud of what we accomplished together.

Enjoy the website!
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