

*Stay at home*

*Wash your hands*



# DATA VISUALIZATION

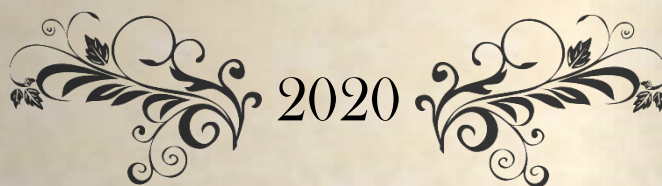
*Milestone 2*

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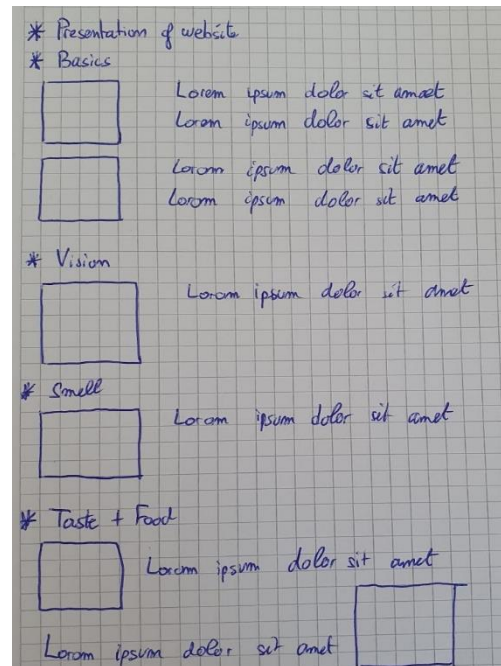
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## General view of the website

Here is a wireframe of the general design of our website. It is composed of 4 main sections. Each section consists of one or two visualization and a paragraph explaining the related concepts.



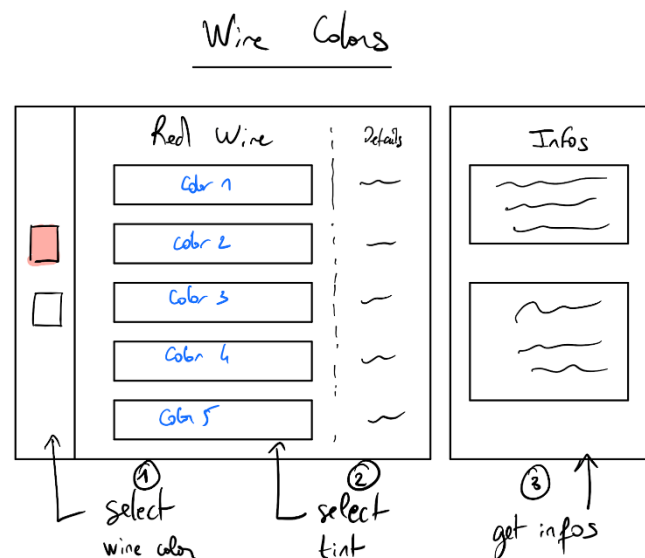
## Tint

The visual aspect of Wine is very important. You can learn a lot about a wine just looking at your glass. In particular, the different variations of the color of the wine can help us estimate the age of the wine and give us hints about its flavor.

We need a way to present to the reader the different variations inside the colors (the tints) of both red and white wine in a clear manner.

Obviously, the range of colors of wine is infinite. We choose to sample 8 relevant tints for both red and white wine and present them on a color chart so that the reader can tell the difference between the different tints at first sight.

As said above, color is directly linked to different characteristics of a wine. We thus want the user to be able to see those links without being distracted from the colors by having too much information. We thus choose to let the user have the ability to select a particular tint and obtain further information in a side panel. The user is thus



presented additional information associated to this particular tint on the right of the chart.

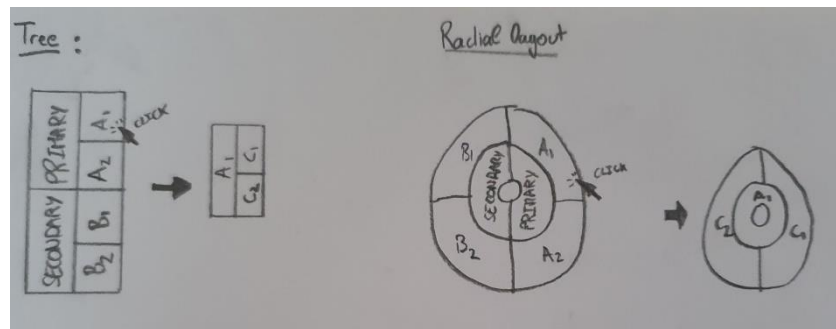
We used [knockout.js](#) to create an MVC model (model/view/controller) using html and javascript so that it is easy to use user input to control the data and the view.

## Aroma

To represent the aromas, we wanted the user to start with something general and to dive into details progressively. Our data can be seen as a Tree where the root is the more general categories and the leaves are the

subcategories. Hence, we believe that two different visualization would suit to represent our data: one stylized tree (where information is linear) and one radial layout (as seen in the lecture on Graphs).

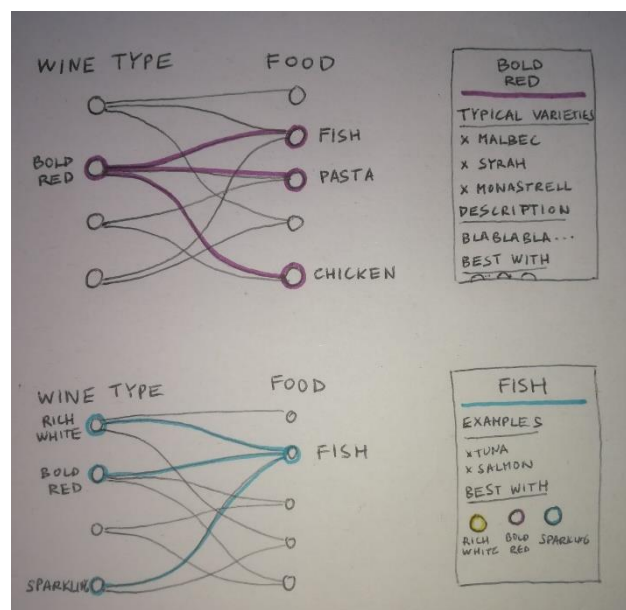
We decided to keep the circular visualization (ie. the visualization on the right). We believe that a radial layout is more intuitive that the linear one and it also looks better. The graph has been done using [D3.js](#).



## Pairing with food

We chose to present the data using a bipartite graph, with wine types on one side and types of food on the other, as the matching can be done (and is interesting) in both directions. As there are many connections, the graph becomes dense. However, selecting a node would highlight the relevant connections, as seen on the sketch.

As separate panel on the side would provide both additional information about the selection as well as a summary of the relevant information given by the bipartite graph. We believe that presenting this information in 2 different manners (once as nodes of the graph and once as a list of icons/text in the panel) reinforces the information and also lets the user choose which representation they feel more comfortable with reading.



We have a contrast between on one side the global and maybe a bit chaotic graph, and on the other a well-organized panel that focuses on a particular element.

We found that an open source library [viz.js](#) that offers a “bipartite graph” but after trying it out, we realized that it was more a Sankey diagram (where nodes with more edges are given more importance). Although interesting, our focus isn't to show what wine type goes with the most food or which food is the easiest to match.

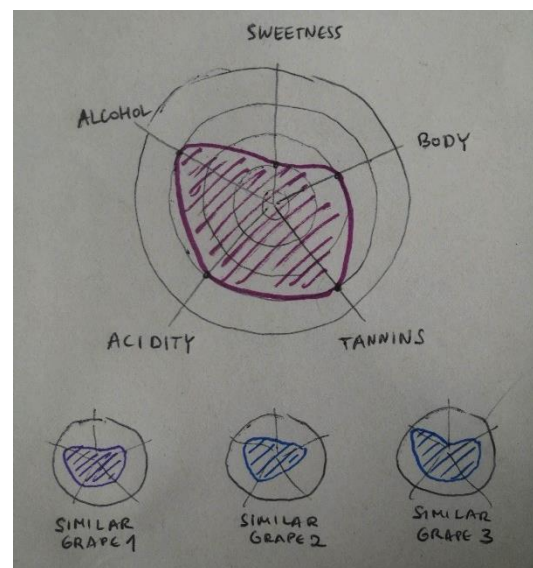
In the end, we decided to write our code using [D3.js](#) from scratch as adapting the library's code to fit our vision would have taken more time.

## Taste

As opposed to other attributes such as colors or food pairing, taste is harder to represent visually. The data we obtained from winefolly gave us 5 different attributes about taste: Acidity, Sweetness, Lightness/Fullness of the body, Tannins level and Alcohol level. We tried to use them as axis in a radar chart to create a visual profile of the taste for each grape variety. Although radar charts aren't the best way to present data clearly, in our case it serves more as an interesting way to visualize something as abstract as taste.

From this, we would like to create an interactive radial chart where the user can modify the 5 attributes to match the wine they are currently tasting, which could find the wines that are the closest. Of course, we need to experiment with different definitions of “closest” as a simple euclidean distance might not give the best results.

The radar charts are implemented purely in [D3.js](#) and are based on code by Nadieh Bremer.



## Extra Ideas

- The first creative idea that we might implement is to make our website completely scrollable. One beautiful example of such website is [chartipedia](#). Adding such features would allow us to create much smoother transitions between our different parts.
- One more challenging idea is to create an interactive map of wine grape variety. There exists many [map of France](#) at the moment, but adding an interactive version is uncommon.