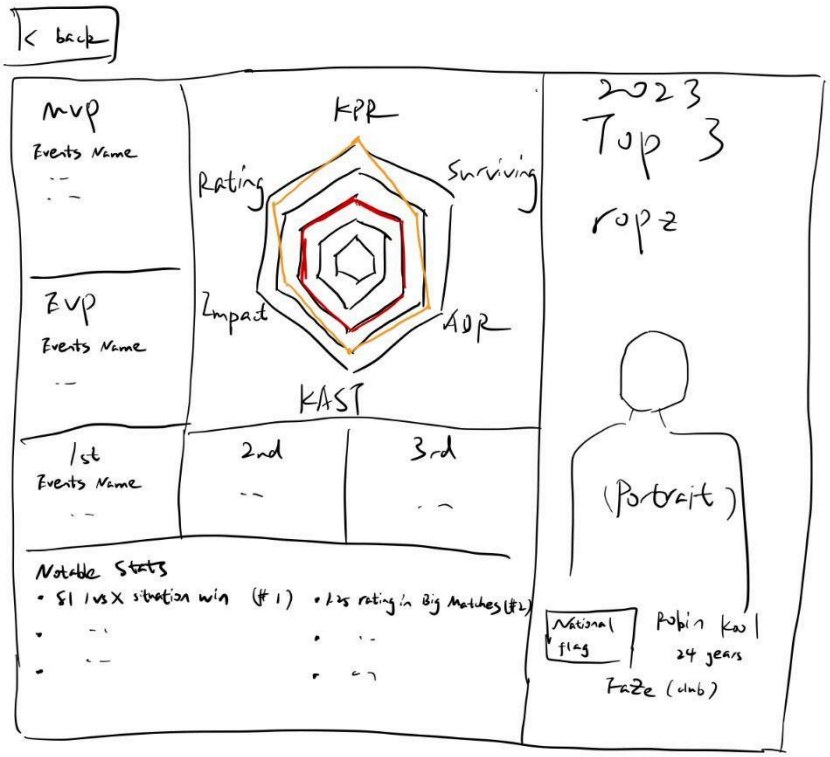
Milestone 2

Visualization 1: Top 20 Players in each year

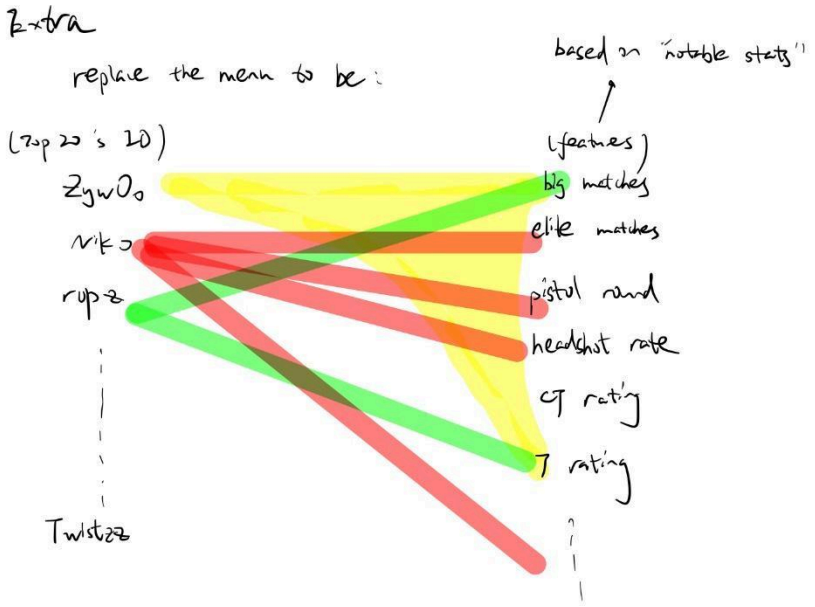
Above shows the menu of the first visualization – Top 20 Players in each year. By scrolling on the timeline (below), each year's top 20 players will be shown and updated above. By clicking on one of the players, detailed information is shown as below.



On the right side, the basic information includes year, top number, player's ID, portrait picture, nationality, real name, age and club. The hexagon represents six representative dimensions to measure player's performance as introduced in milestone 1. Red hexagon represents the average among all players, while the orange hexagon represents this specific top player. MVP

and EVP section list the events that the player gets MVP and EVP within the year. 1st to 3rd section list the events that the player's team wins within the year. Notable stats include the player's feature. For example ropz is good at 1 vs X situation and he performs extraordinary in big matches. Clicking on "<back" on the left top corner can go back to the players' menu.

Extra Implementation:

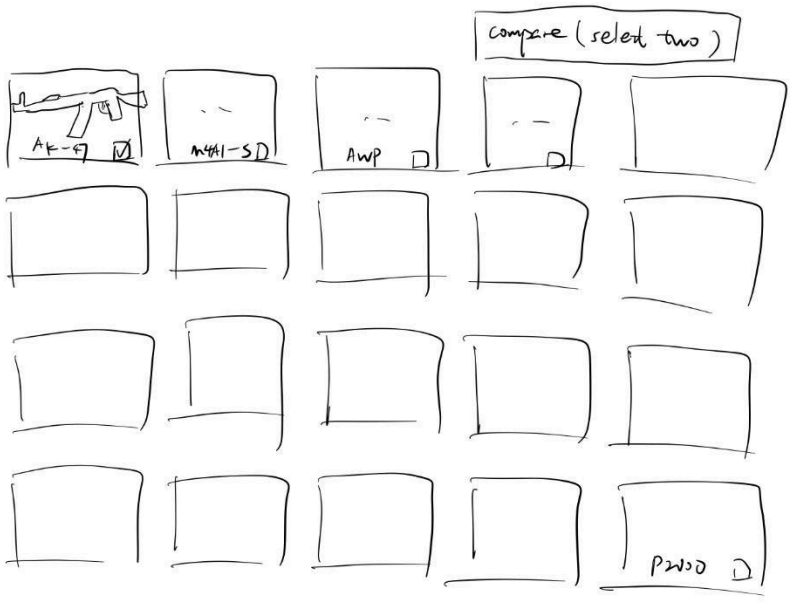


If we have enough time, we may replace the menu in the first figure with the figure above. On the left side is the top players' ID, on the right side is the features (based on "notable stats"). From this graph, we can see clearly what each player's advantages are. And by clicking on their ID, we can also go to the detailed information in the second figure.

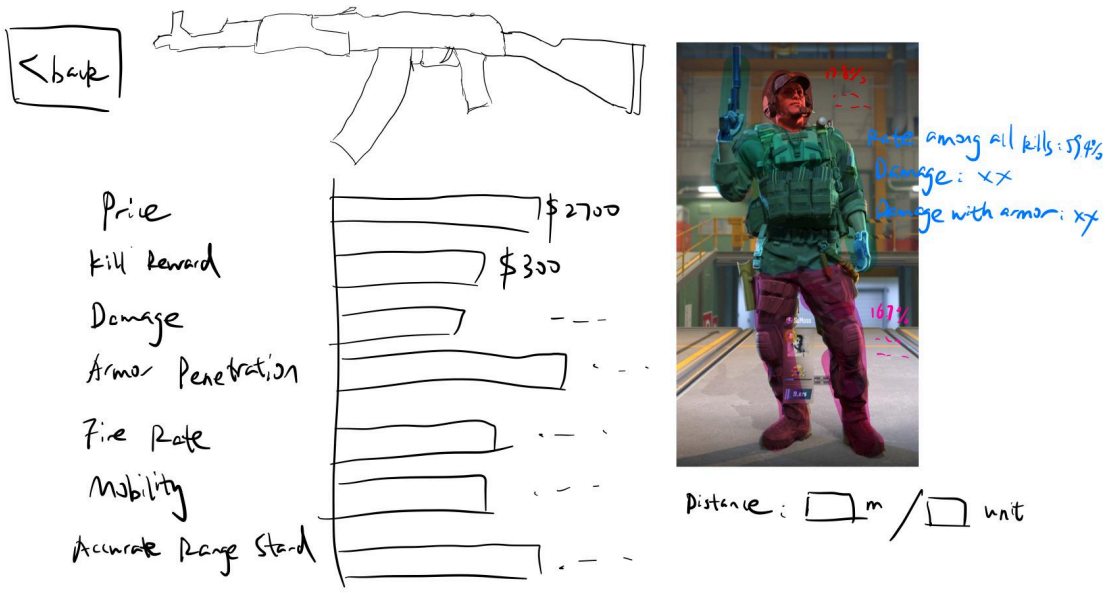
Tools:

We will use D3.js and Chart.js to create the radar chart and the Sankey diagram. We will also use various functions introduced in Lecture 4_2 of D3.js.
Reference links:
Sankey plot | the D3 Graph Gallery (d3-graph-gallery.com)
Spider Chart | the D3 Graph Gallery (d3-graph-gallery.com)

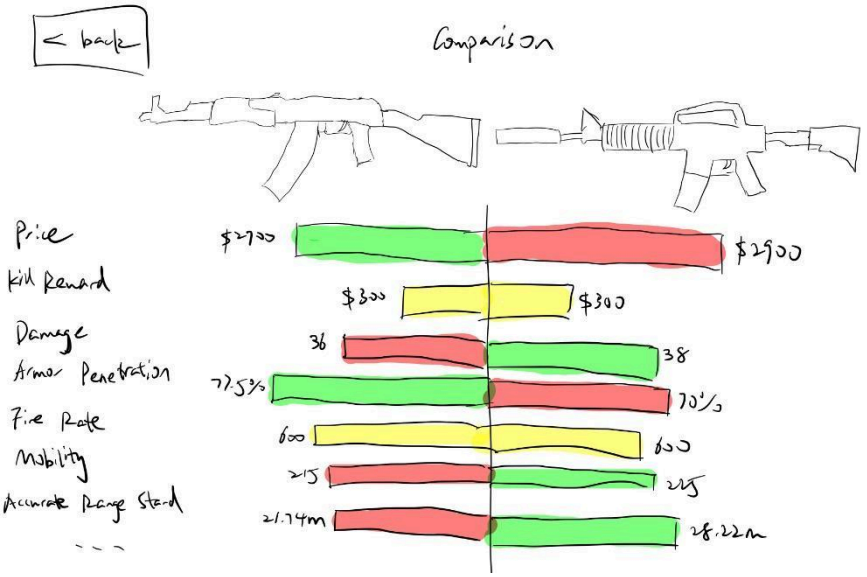
Visualization 2: Weapons



The second visualization is about weapons in counter-strike 2. In the menu we list 20 weapons' image with name, by clicking on one of the weapons, we go to the below visualization.



The information of this weapon is shown in a bar chart. On the right side, an agent (character) in CS is shown (2D is basic version, if have time the extra version could be 3D). When you put your mouse on each body part of the agent, the corresponding information will be shown next to your mouse. For example if you put your mouse in the red region (head), the percentage of headshot kills out of all kills taken by this weapon will be shown (17.8% for example). What's more, the damage taken by this weapon with and without armor will also be calculated based on that. By clicking "<back" on the left top corner, you can go back to the menu.



In the menu, you can also choose to compare two weapons and the above figure will be shown. Green indicates better quality or performance. Yellow means the same and red is worse.

Extra Implementation:

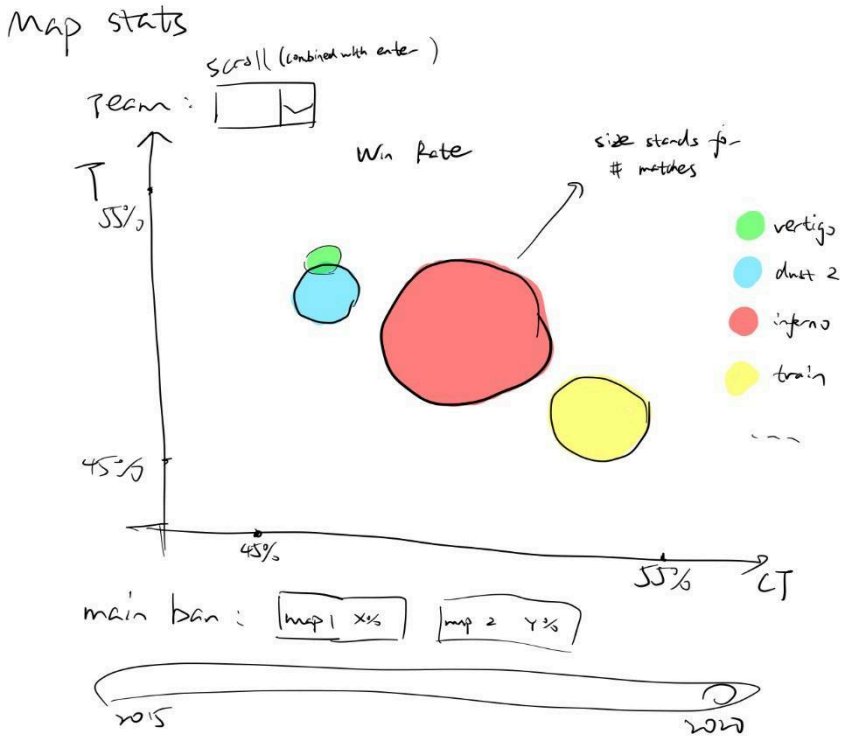
We may add the following features if time permits and relevant data is available:

- When selecting different regions of the model, the ranking of damage dealt by different weapons to that specific body part will be displayed.
- Selecting any weapon will result in a heatmap being generated based on the damage inflicted by that weapon to different parts of the character. The hotter the color (red), the higher the damage to a particular body part, while cooler colors (blue) indicate lower damage.

Tools:

To display game data such as weapon damage on different parts of a character's body, we will use d3.js. If we have enough time, we will also integrate three.js to incorporate 3D character models for this functionality.
We will use d3.js to create horizontal bar charts for visualizing weapon data.
Reference Link:
[Barplot | the D3 Graph Gallery (d3-graph-gallery.com)]

Visualization 3: Map Stats



The third visualization is each team's performance on each map in each year. By selecting or entering a team and scrolling the timeline at the bottom, the Win Rate graph will be shown and updated. The x-axis stands for the win rate when the team plays as CT and the y-axis stands for the win rate when the team plays as T. The dots with different colors stand for

different maps. The size of the dots indicates the number of matches player by the team within the year. What's more, the most disliked maps of the team within the year will also be shown with ban rate.

Tools:

We are going to use D3.js Bubble plot to realize this part.
Reference link:
Bubble plot | the D3 Graph Gallery (d3-graph-gallery.com)