

JUNE 2021

PROCESS BOOK

Team SHL 



OUTLINE

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PROJECT OVERVIEW

Esports is growing rapidly over recent years. More and more brands are investigating in esports marketing for its potential to engage large number of viewers. The prize pools of esports tournaments are becoming larger and larger.

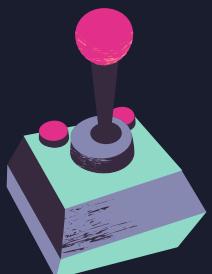
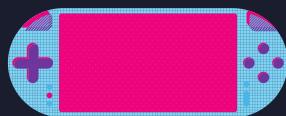
To visualize the data related to esports earnings, we build the website "Esport Earnings Visualization".

The website contains three main parts and each part visualize different aspect related to esports earnings by using different visual effects.

The earnings part includes an interactive scatter plot and a bar racing chart. You could find how prize pools of different game categories vary with their release year and also top 5 games racing over the last 20 years.

The Tournament part includes two interactive charts, which shows how different categories change in the tournaments , here we specifically want to show how tournament and earnings changes during Covid 19 period.

The players part includes an interactive bubble chart to help you find what kind of games have the biggest number of player earning money with tournament in a specific year.



INITIAL IDEAS



Inspiration

Two of us are esports audiences. Therefore, we are really interested about esports related topics. What's more, the esports industry keeps increasing at an incredible speed. According to a report in Statista, the value of the global esports market was estimated over 1.08 billion U.S. dollars, which represents an increase of almost 50 percent compared to the previous year. It would be exciting to gain some insights about esports related data through visualizations.



Problems

Release Year & Earnings

How total earnings of each category changes depending on release year?

How many games of each category were released between 1998-2021?

We assume that the games that were released earlier would earn more, but they may also can't survive longer. It would be interesting to see if different categories earnings depend on the release year or not.

Covid Effects on Tournaments

How the amount of tournaments and earnings are affected by Covid?

We would like to see how the number of tournaments and earnings in total varies between 1998-2021, especially during the covid period.

Earned Players

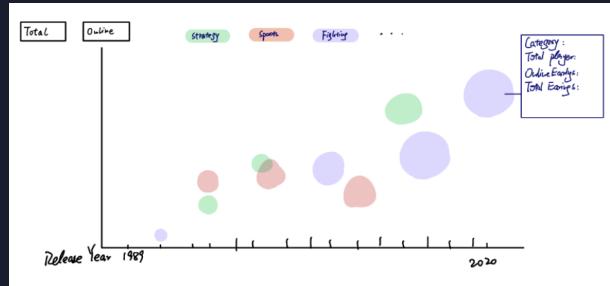
How many players can earn money from tournaments?

For people who want to play tournaments for a living, this problem should be also useful, so that they could know the popularity of games.



FROM SKETCHES TO VISUALIZATION

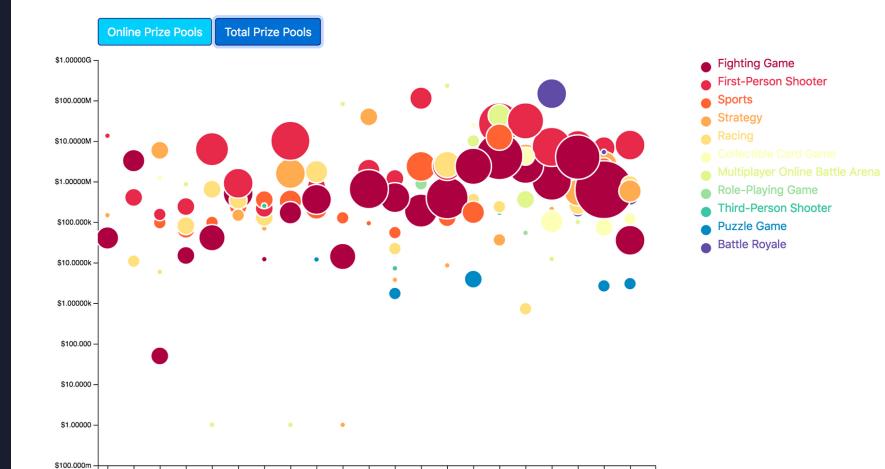
Release Year & Earnings



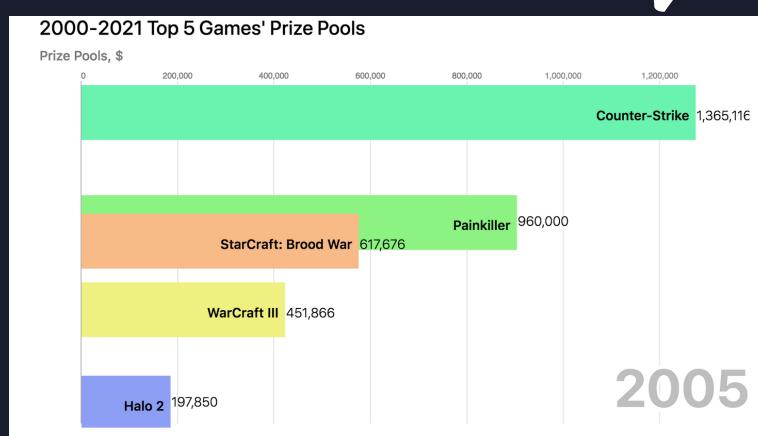
The initial sketch is shown in the left. The final visualization is almost same as below. After we finished the initial scatter plot, we found that the ranges of y-axis values (earnings) are high from 0 to more than 200 million dollars. Then those bubbles with small earnings are overlapped with each other. So we decided to use d3.scaleLog() to scale y-axis. The overlap problem still can not be handled very well. To further solve this problem, we used d3.zoom() to enable zooming.

If the user has a specific interest in an area of the scatter plot, he/she could zoom in that area.

Besides, a hover text will show the detailed information about the bubble when mouse moves to that bubble. The y-axis could be changed between online earnings and total earnings. The x axis is the release year of the games. The visualization is against our assumption, the release year of the game does not relate to the earnings. Fighting and shooting games are very competitive.

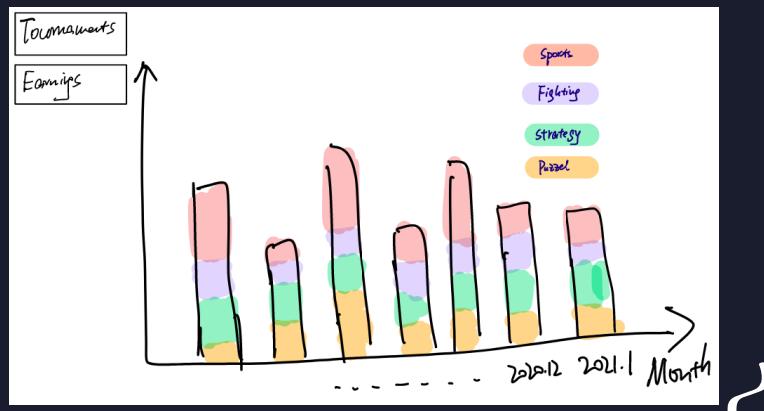


After the scatter plot has been done, we realised that the user may also be interested in the ranking of specific games by earnings for each year. But a simple bar chart for ranking for each year would be boring. Considering that esports is a form of competition. we came up with the idea of making a bar racing chart. This visualization will show the top 5 games by allocated prize pools (i.e. earnings) from 2000 to 2021. The user could watch the racing between different games on this ranking board vividly.



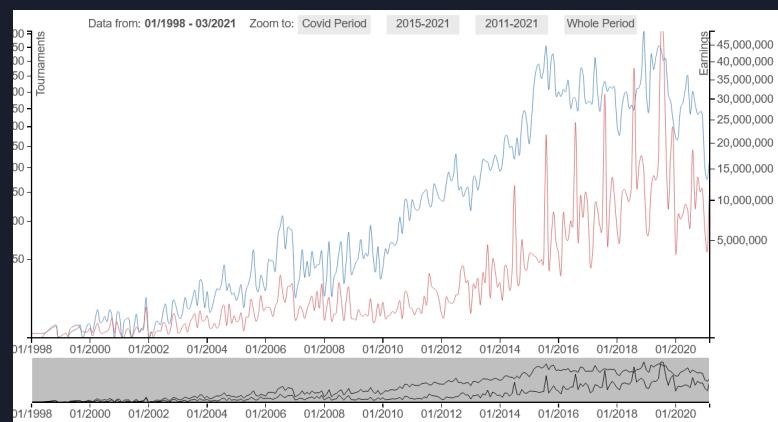
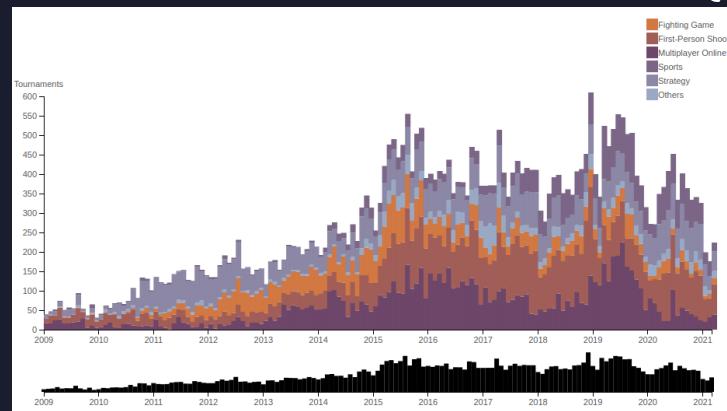
FROM SKETCHES TO VISUALIZATION

Covid Effects on Tournaments



Initial Idea

Since we are still in 2021, Covid is an unavoidable topic, it influences our lives almost everywhere. We would then like to take a look at how the amount of Esport Tournaments and Earnings changes during Covid 19, and we define the beginning date as 2020/01/01. But instead of one year, the overall comparison from last decades would also bring us insights.



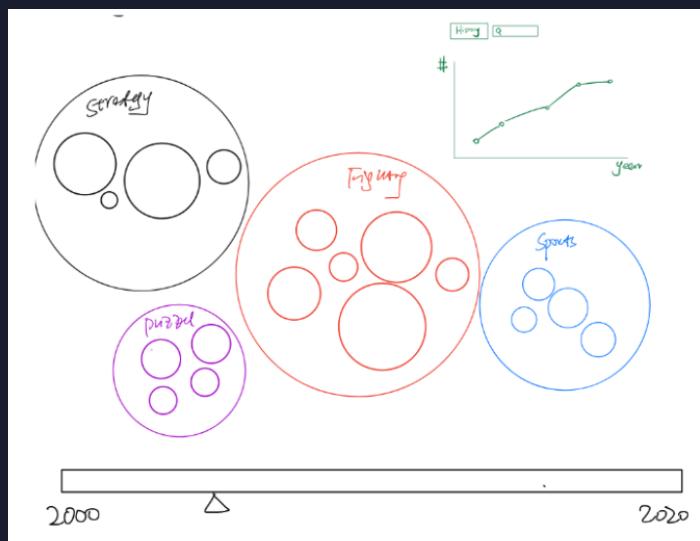
Final Format

To achieve our initial idea, a stacked bar with a slide window was chosen in the first place. While implementing we found that there are in total 11 categories of games in our dataset, but lots of categories have neither Tournament nor Earnings, so we keep the top 5 categories which contain the most of Tournament, the rest we regard them as Others. Sometimes a simple graph can tell us a clear story. We implemented a line chart to see the changing of Tournaments and Earnings. With the specific button of the slides window, users can easily locate the covid time as well as other periods: last 5 years, last 10 years, last 20 years (whole period).



FROM SKETCHES TO VISUALIZATION

Earned Player

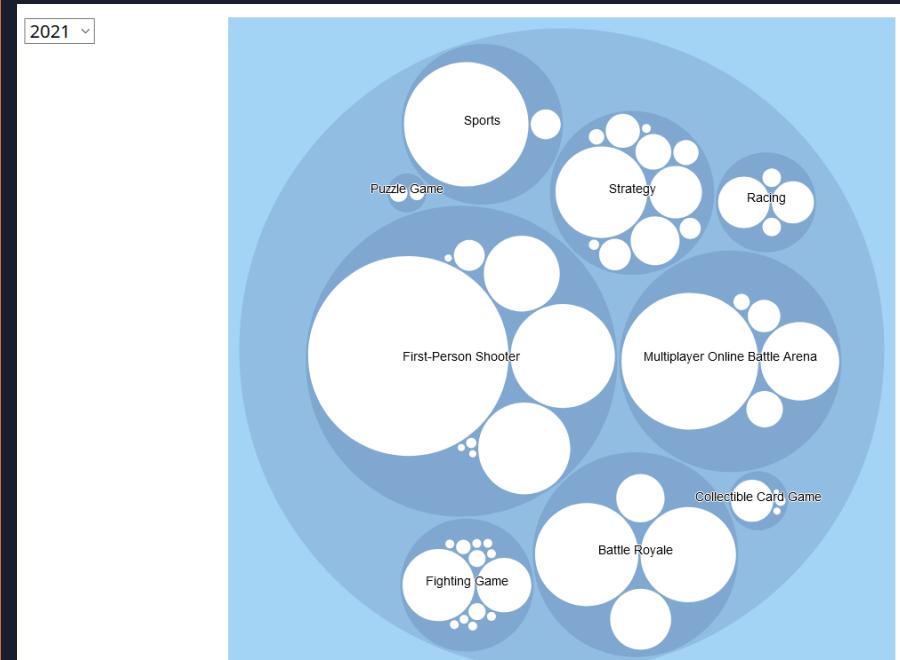


Initial Sketch

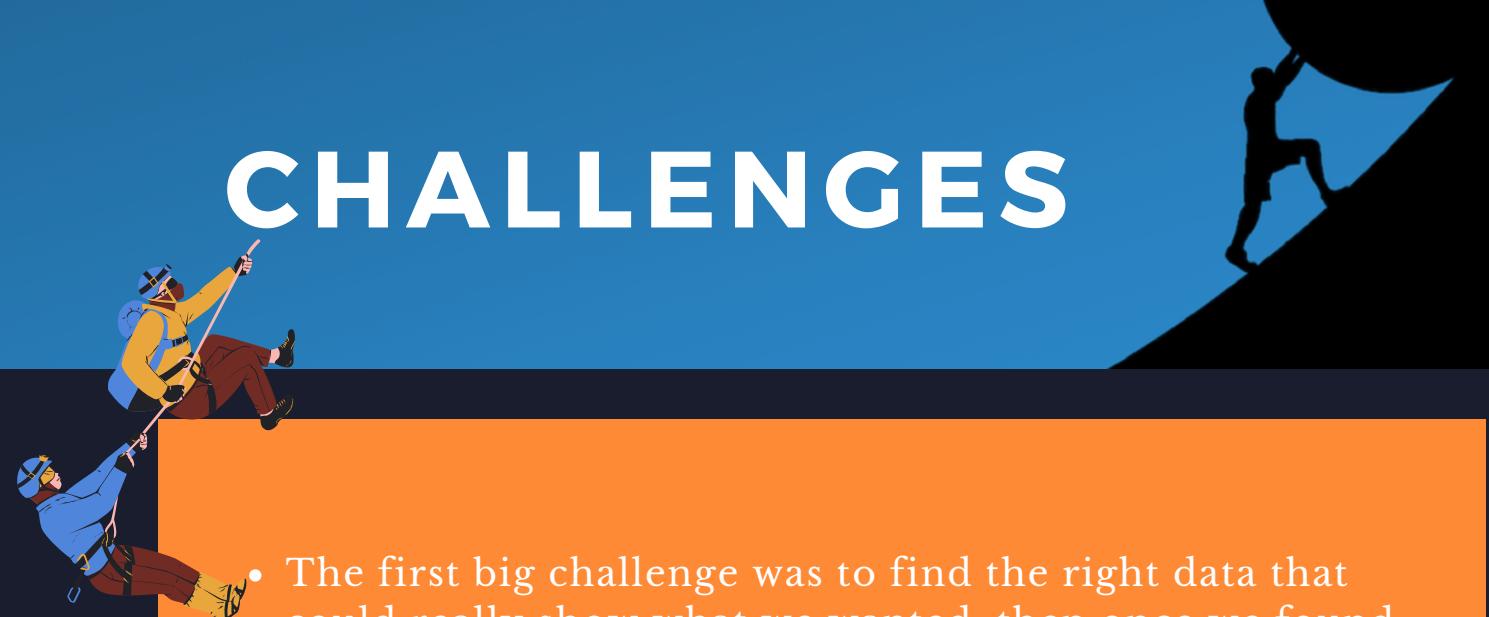
We wanted to show what kind of video game had the most player earning money in tournament each year. A nice way to show that would be with a bubble chart, each bubble would represent a genre and its size corresponds to how many player earned money in that category. Then the user will be able to zoom in to see the same but for the games in that category. We wanted to show the evolution of it with a bar that the user can use to choose the year. An additional idea was to add a line plot showing the number of players over the year for one game when you click on its bubble.

Final Form

On the bottom right you can see the final visualization for it. You can choose which year you want to show with the select button on the left and then you will get the bubble chart corresponding to the year selected on the right. You can zoom in each circle by clicking on it to see the name of the games. Unfortunately we did not got enough time to implement the line plot of the evolution of number of players by year for each game. It is overall a nice tool to see what are the most popular genres and games all through the years.



CHALLENGES



- The first big challenge was to find the right data that could really show what we wanted, then once we found it we could start thinking about ways to represent the data in nice visualizations.
- Once we had a clear idea of what we wanted to do, the next challenge was processing the data in order for it to be used in the visualization we wanted to do. We realized that it was a much harder and tedious task than anticipated.
- Then what was left was to create our website, starting first with a skeleton of it, to see the overall layout and how we would introduce the visualizations. Once the website was done we just needed to add the visualizations done with the tool d3.js.
- Another special challenge was time management and working together as a group during this pandemic, as we couldn't meet and were limited to virtual interaction.



PEER ASSESSMENT



Haoyu Sheng

MileStone 1:
EDA of data

MileStone 2:
Report

MileStone 3:

(a) Implemented **prize pool part** which includes an interactive scatter plot and a bar racing chart.

(b) Process book design and writing

(c) Screencasts making



Shasha Jiang

MileStone 1:
Report

MileStone 2:
Report

MileStone 3:

(a) Implemented **tournament part** which includes an interactive line chart and stacked bar chart.

(b) Process book writing

(c) Screencasts making



Loïc Signer

MileStone 1:
Report

MileStone 2:
Website Frame

MileStone 3:

(a) Implemented **player part** which includes an interactive bubble chart.

(b) Process book writing

