

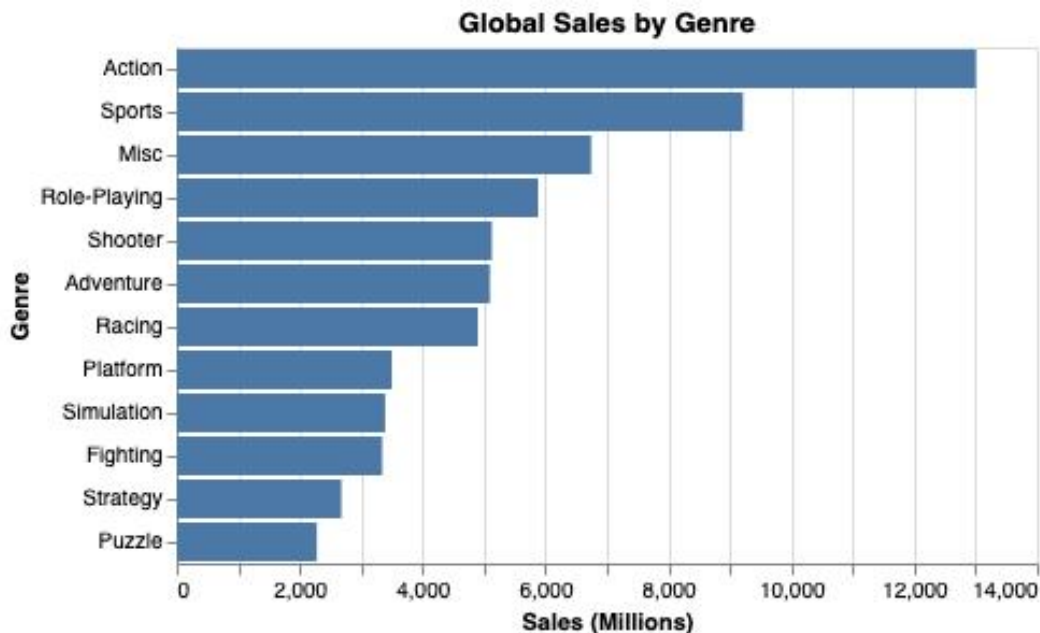
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Assignment 3 - Intro To Vega-Lite

Link to Website: <https://theresewng.github.io/>

A Look At the Data

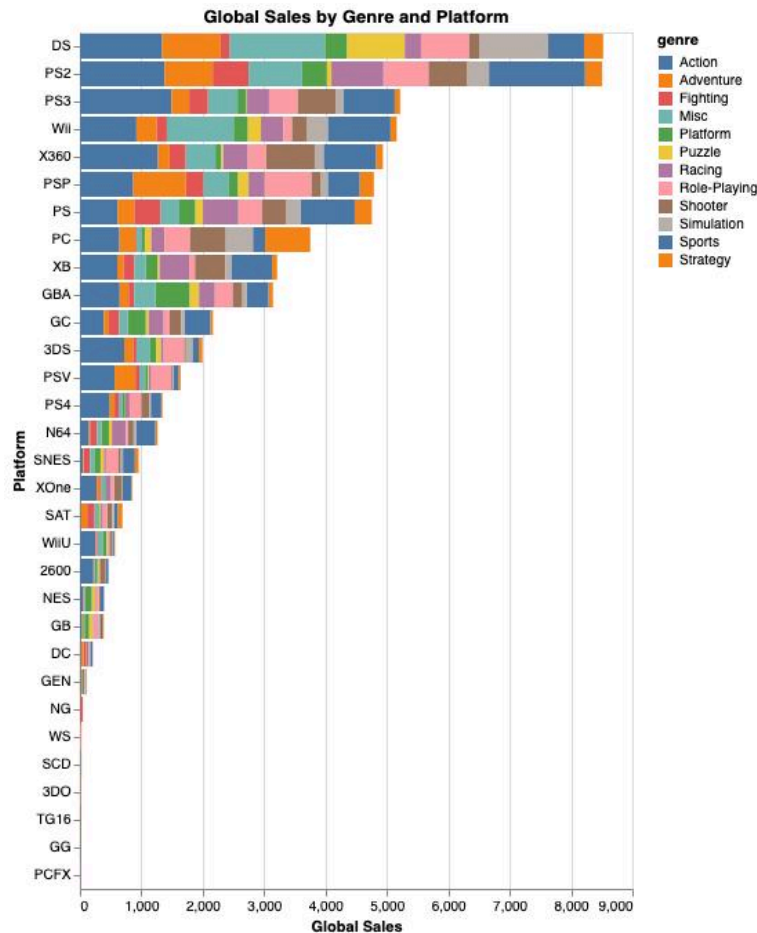


Action is the most popular genre, with 13,004 games available and Puzzle being the least popular with 2,280 available games. This gives us a very large range of 10,724, a median of 4,998, and a mean of 5,430.33.

I am not surprised that Puzzle is the least popular genre. I feel like the last puzzle game I ever played was Unblock Me on the iPad 2 (2011)! I personally don't like playing action games (I wasn't allowed to play violent games growing up), but I am not surprised by its popularity, especially when you have memes such as *We got XYZ before GTA 6!*

I was surprised by the popularity of the Sports games genre. However, I believe that within the next few years, other genres, especially role playing and simulation games, will surpass the Sports genre. It seems unsustainable how every year there is a new NBA or Madden NFL game that costs \$60, with roughly the same gameplay, just different music.

Visualisation 1: Global Sales by Genre and Platform



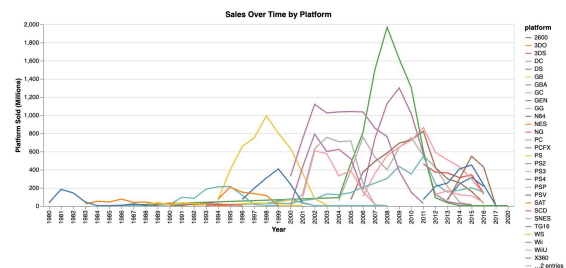
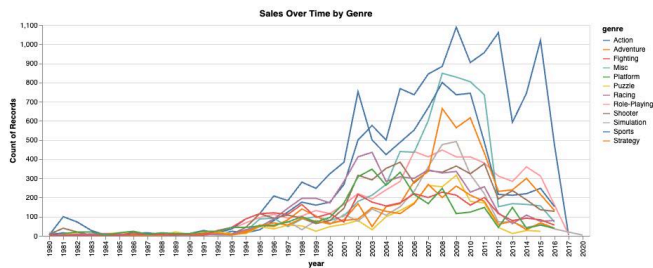
To create this visualisation, I used a bar graph to quickly compare and effectively communicate the data between platforms easily.

According to the data, DS is the most popular platform with 8.524 million sales, with the PS2 coming in just under at 8.508 million, a mere difference of 0.016 million or 0.1% in sales. Given that data is from 2020, I wonder how this graph would look with the inclusion of the Nintendo Switch, which ultimately took over for the DS.

Looking at it from merely a genre perspective, action games are quite prominent across the board. Sports is the second a popular genre for platforms such as PlayStation, Wii, and Xbox360.

One thing I noticed was that within the DS sales, simulation games were the third most popular and part of me believes it has to do with the fact that DS were handheld, portable devices allowing people to disconnect into a different world more easily than say if they were in the family's living room.

Visualisation 2: Sales Over Time by Platform and Genre



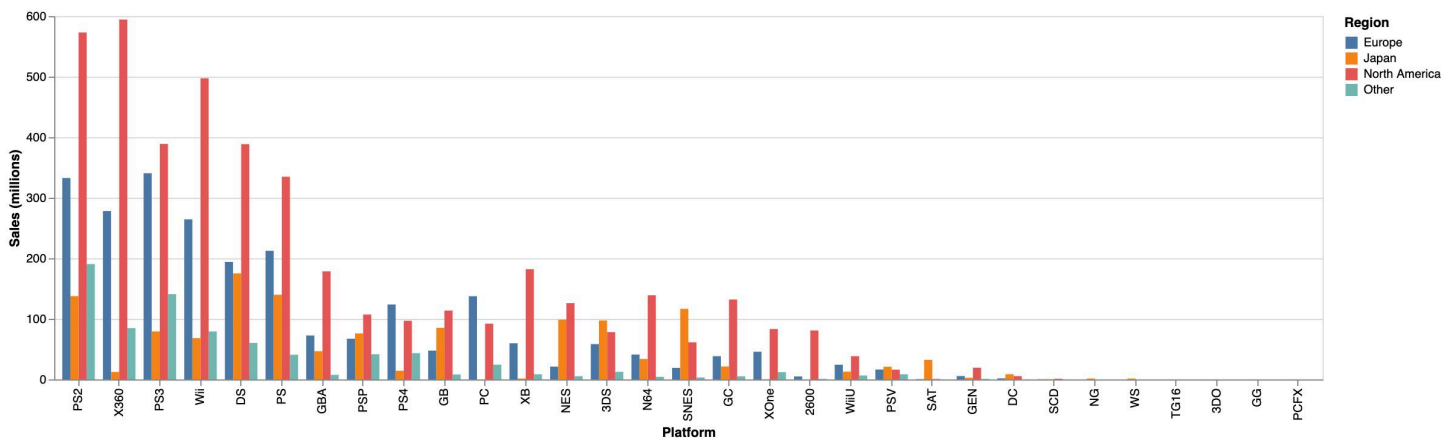
I split the data into two separate line graphs to show the genre sales over time to understand the continuous ups and downs of sales in a continuous sales over the years, and compare that to the platform sales.

In 2008, the most platforms were sold, with DS being the most popular platform, selling 1.968 million devices, with DC being the least popular selling platform at just 4 million.

Yet 2009 was a popular year for action game sales, with 1.088 million games sold. On the other hand, platform games were the least popular with 116 million platform games sold.

The PC overall has been the most continuous platform to have sales, which makes sense as we need PCs to do work and technology has gotten better that we can now game on them too! Meanwhile, other platforms have a lifespan of sorts, where they will have sales when they are released for for years following, albeit it will rise and then fall in sales, which sometimes is quite abrupt as the next generation of platforms arrive.

Visualisation 3: Regional Sales vs. Platform



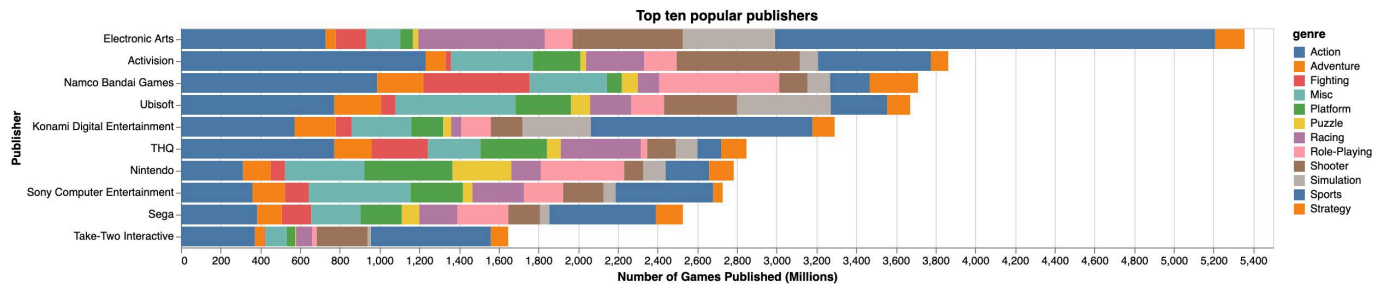
For this visualisation, I created a group bar chart as I wanted to easily compare sales across regions per platform instead of creating separate graphs.

However, in my opinion, this graph is a bit more biased against Japanese people as they are roughly a fifth the size of North America's population and a seventh of Europe, resulting in them having "the least sales" compared to other regions. I wonder how visualisation would look if we included more of the Asian population. That being said, their support for Nintendo products is relatively strong.

I think another thing that is interesting is that Europe's population is technically bigger than North America's, but they have less sales than North America, potentially highlighting the consumeristic culture of North America.

The challenge that came with creating this visualisation was having to create a for loop where it went through all the regions and counted all the games and sales to easily split the region's data. Originally when making the graph, I thought that it was going to be a simple bar graph to create but I quickly realised that the number of sales were all the same across the board. I struggle with coding for loops and so this was truly a challenge to overcome.

Visualisation 4.1: Who Are the Top Ten Publishers? How Many Games Did They Sell?

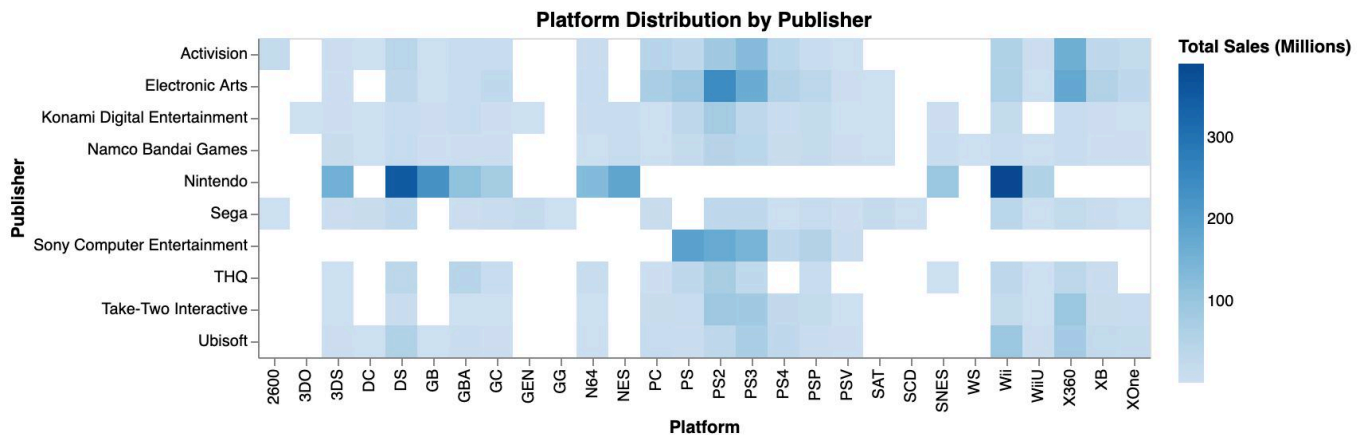


I wanted to see which publishers were leading the gaming industry and creating a bar graph was a quick way to see the data all at once. Electronic Arts dominates the market with 5.356 million games. Take-Two Interactive has the least number of sales with 1.648 million games. That is a range of 3.708 million games. This gives us an average of 3.243 million games per publisher and a median of 3.070 million.

Of the games Electronic Arts creates mostly sports games, at 2.216 million total games, which make sense because they are the ones behind Madden NFL, NHL Games, and FIFA. Konami created the second most amount of sports games at 1.116 million games. Puzzle was the least popular genre with 796 million games sold, with Nintendo producing the most puzzle games out of the ten, which I can understand since their platforms such as Wii is made with co-op playing in mind.

My biggest challenge when creating these visualisations was creating the filter for the top ten publishers, which involved counting all the publishers and putting them into a new array and then sorting and slicing it.

Visualisation 4.2: What Platform Are Their Customers Mainly Using?

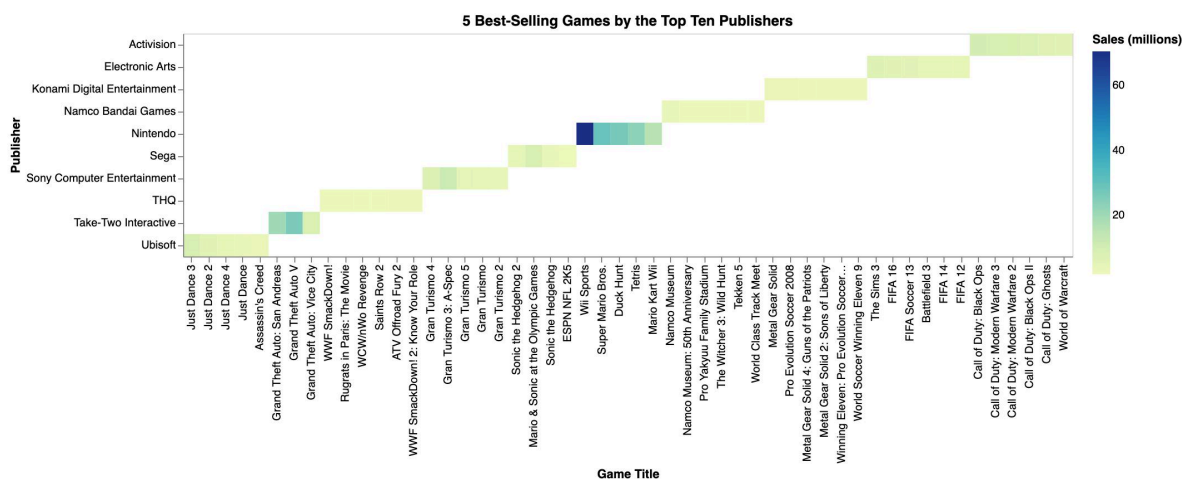


With the hard part over, I was able to access other information about these big publishers. I wanted to see the distribution of platform sales across the big 10. To do so, I created a cell chart that used a colour gradient to show popularity across the platforms.

I was kind of shocked that Sony only caters to their own platforms. I don't know why but I assumed that they made games for other platforms (besides the XBox), which would actually explain why they are the 8th popular game publisher. That being said, their game and platform sales are one of the strongest in the industry.

I think what makes this interesting to look at, is that 4 of the top ten largest publishers are Japanese-based companies. A country is a fifth of the North American population is creating roughly 40% of all the games that everyday people are playing, showing the impressive reach and influence they have on other consumers.

Visualisation 4.3: What Were Their Top Five Selling Games?



The final question I wanted to know was, what were each company's top 5 selling games? The main reason for this prompt was because most of the time, I am unaware of the game publisher, I would have a better knowledge of the game's name itself. I wanted to create a heat map as I found a bar chart, though it would show the sales in order, forced me to constantly check the legend to see which company was which colour. Here, everything was grouped by company, and it is easier to parse through the information at a quick glance to understand sales figures.

The fact that Nintendo has the most total sales even though they overall did not produce that many games is wild to me, especially when we put it up against the games created by Electronic Arts.

Overall, each company has quite average sales across the board and it isn't surprising to me that the more popular games are sequels or part of a larger game series.