

1. Introduction

This Project Paper will give a look on what has been done in this project so far. The observations, findings and conclusion will be showcased in a proper manner. The PC Games Sales have been properly analyzed using python and various visualizations have been formed as well. The python workout link is also shared at the end.

2. Planning and requirement specification

Tableau, PC games sales data set and knowledge in python programming was required in completing this project. The planning involved acquiring the data set and performing data analysis on the data set to find some information and presenting the information in the form of visualizations.

3. System Design

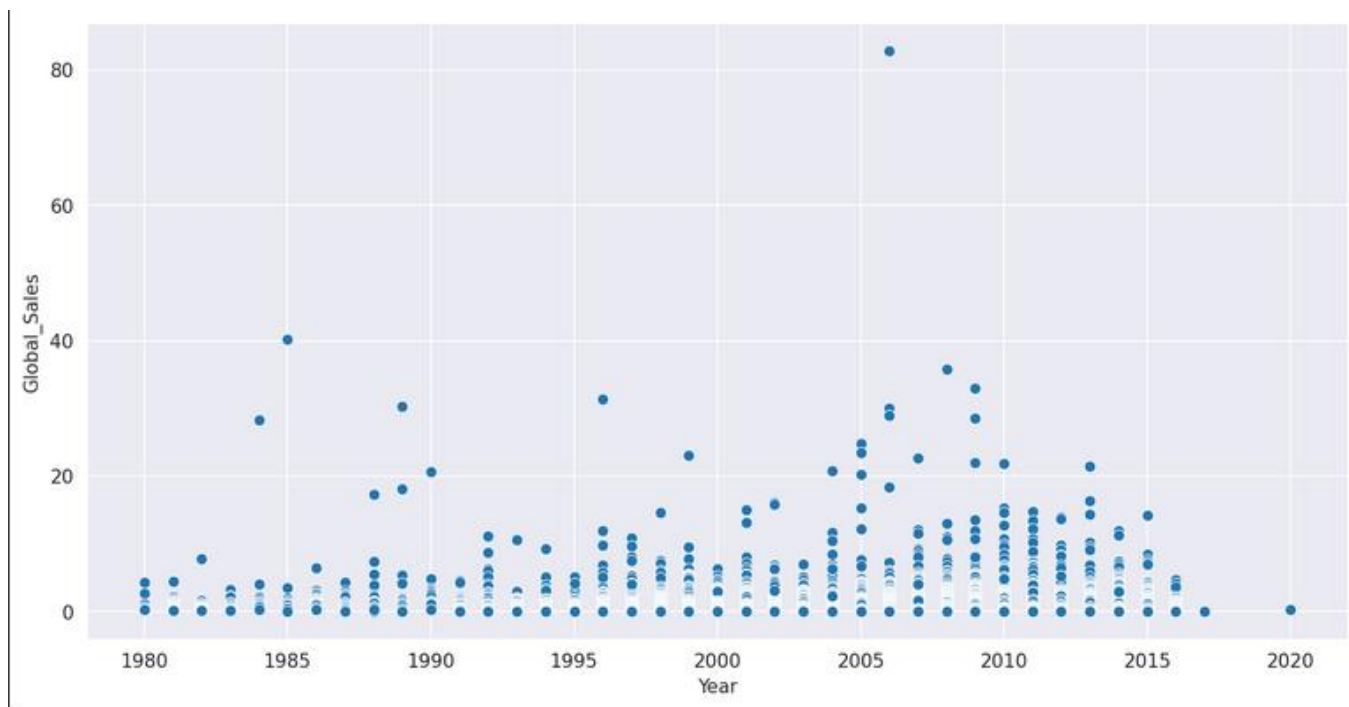
The dataset was first linked in python IDE, I used Google Collab for this purpose as the code. After linking the dataset, I started cleaning the data and removed all the null values from the dataset. After that I performed analysis using python and later linked the data in Tableau and made some meaningful visualizations.

4. Implementation of the system

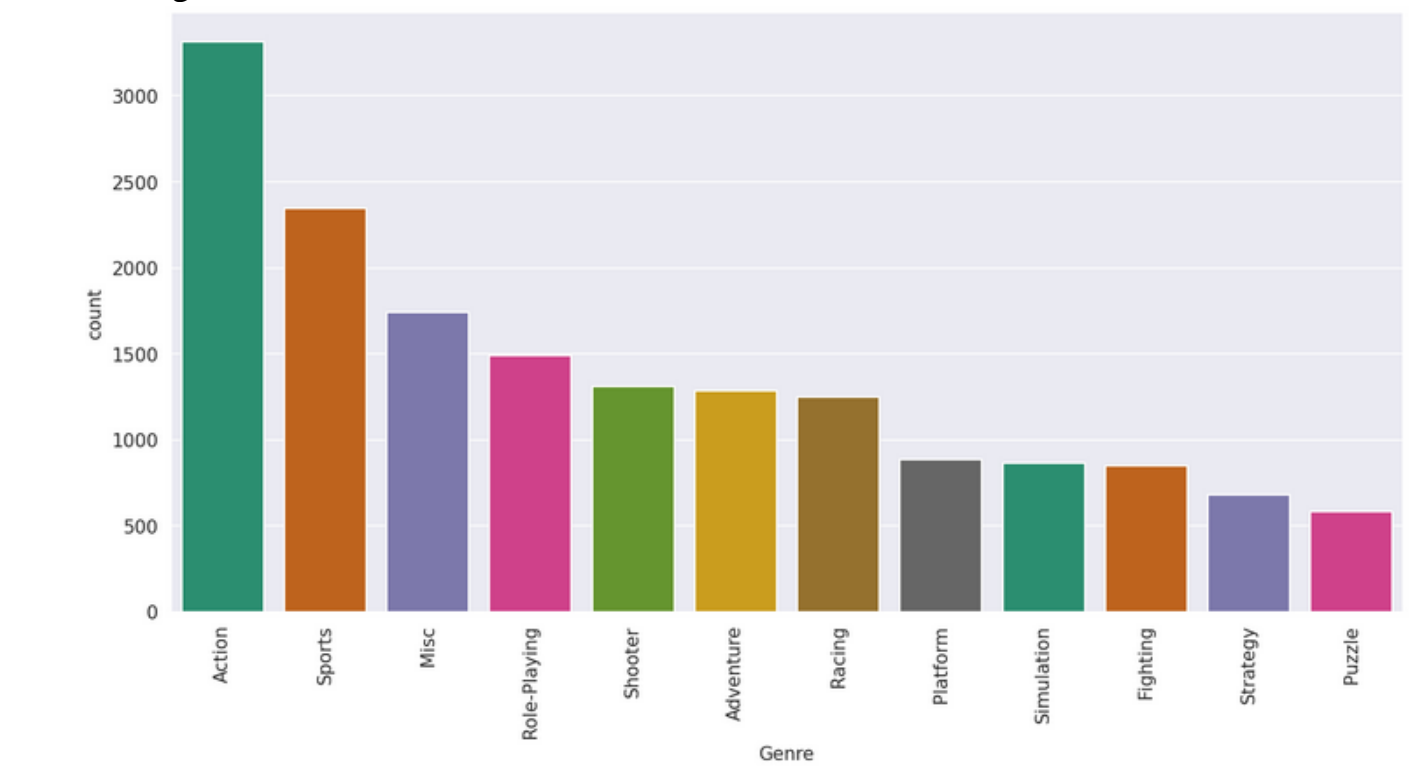
The system was implemented in python using google collab and then later Tableau. I found out the answer to various questions related to the data set like top 5 gaming genres to make highest sales, which game made most sales globally, which publishers made the most sales etc.

5. Results and Discussion:

I first compared Year and Global Sales using a scatterplot, the result was as follows:



We can see that the density of scatter plot has increased in the period of around 2005. Then I wished to count the number of games of each genre and which genre has the highest number of games. The result was as follows:



We can clearly see that Action genre has the greatest number of games, followed by Sports. Now let us find out what are the top 10 games making the most sales globally. I used a method in python to find that. The result was as follows:
(Note: The Sales are in Million Dollars)

Rank	Name	Year	Genre	Publisher	NA_Sales	EU_Sales	JP_Sales	Other_Sales	Global_Sales
1	The Sims 3	2009	Simulation	Electronic Arts	0.98	6.42	0	0.71	8.11
2	World of Warcraft	2004	Role-Play	Activision	0.07	6.21	0	0	6.28
3	Diablo III	2012	Role-Play	Activision	2.43	2.15	0	0.62	5.2
4	Microsoft Flight Simulator	1996	Simulation	Microsoft Game Studios	3.22	1.69	0	0.2	5.12
5	StarCraft II: Wings of Liberty	2010	Strategy	Activision	2.56	1.68	0	0.59	4.83
6	Warcraft II: Tides of Darkness	1995	Strategy	Activision	1.7	2.27	0	0.23	4.21
7	Half-Life	1997	Shooter	Vivendi Games	4.03	0	0.9	0	4.12
8	World of Warcraft: The Burning Crusade	2007	Role-Play	Activision	2.57	1.52	0	0	4.09
9	The Elder Scrolls V: Skyrim	2011	Role-Play	Bethesda Softworks	1.15	2.09	0	0.64	3.88
10	The Sims: Unleashed	2002	Simulation	Electronic Arts	2.03	1.56	0	0.17	3.76

What are the top 5 gaming genres that are making high sales? I used another method in python to find this and the result was as follows:

Rank	Genre	Global_Sales
1	Action	1750.33
2	Sports	1329.35
3	Shooter	1037.32
4	Role-Playing	927.31
5	Platform	830.87

Which game made the most sales per region and globally?

NA: Wii Sports

EU: Wii Sports

JP: Pokémon Red/Pokémon Blue

Other: Grand Theft Auto: San Andreas

Global: Wii Sports

Which publishers made the most sales?

Publisher	Global_Sales
Nintendo	1786.56
Electronic Arts	1110.32
Activision	727.46
Sony Computer Entertainment	607.50
Ubisoft	474.72

Which year has maximum number of Global sales?

Year	Sales
1980	11.38
1981	35.77
1982	28.86
1983	16.79
1984	50.36
1985	53.94
1986	37.07
1987	21.74
1988	47.22
1989	73.45
1990	49.39
1991	32.23
1992	76.16
1993	45.98
1994	79.17
1995	88.11
1996	199.15
1997	200.98

2009.0	667.30
2010.0	600.45
2011.0	515.99
2012.0	363.54
2013.0	368.11
2014.0	337.05
2015.0	264.44
2016.0	70.93
2017.0	0.05
2020.0	0.29
1998	256.47
1999	251.27
2000	201.56
2001	331.47
2002	395.52
2003	357.85
2004	414.01
2005	458.51
2006	521.04
2007	609.92
2008	678.90

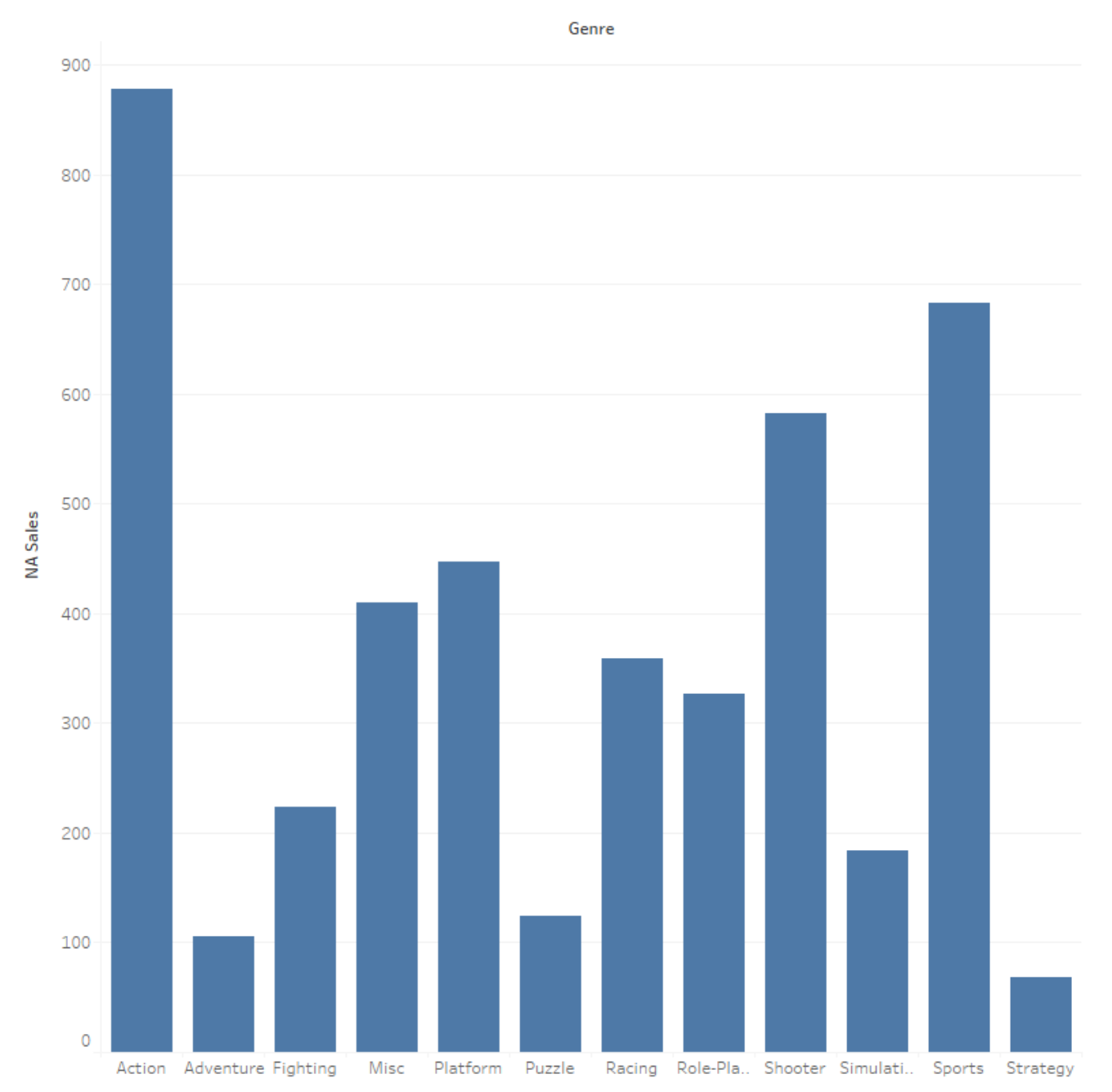
2008 has the max sales.

Now let's look at some Tableau Visualizations:

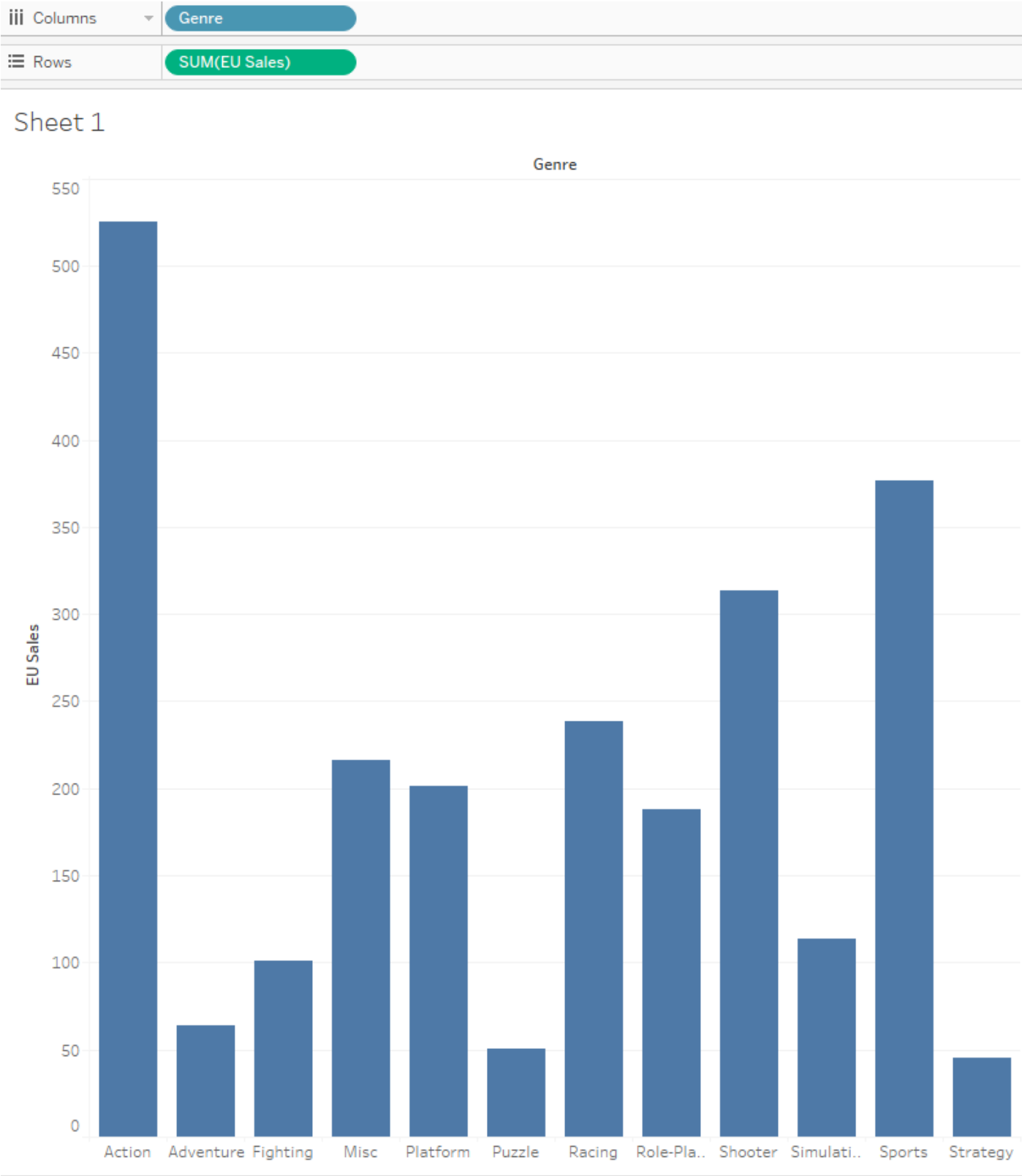
Genre vs NA Sales

Columns	Genre
Rows	SUM(NA Sales)

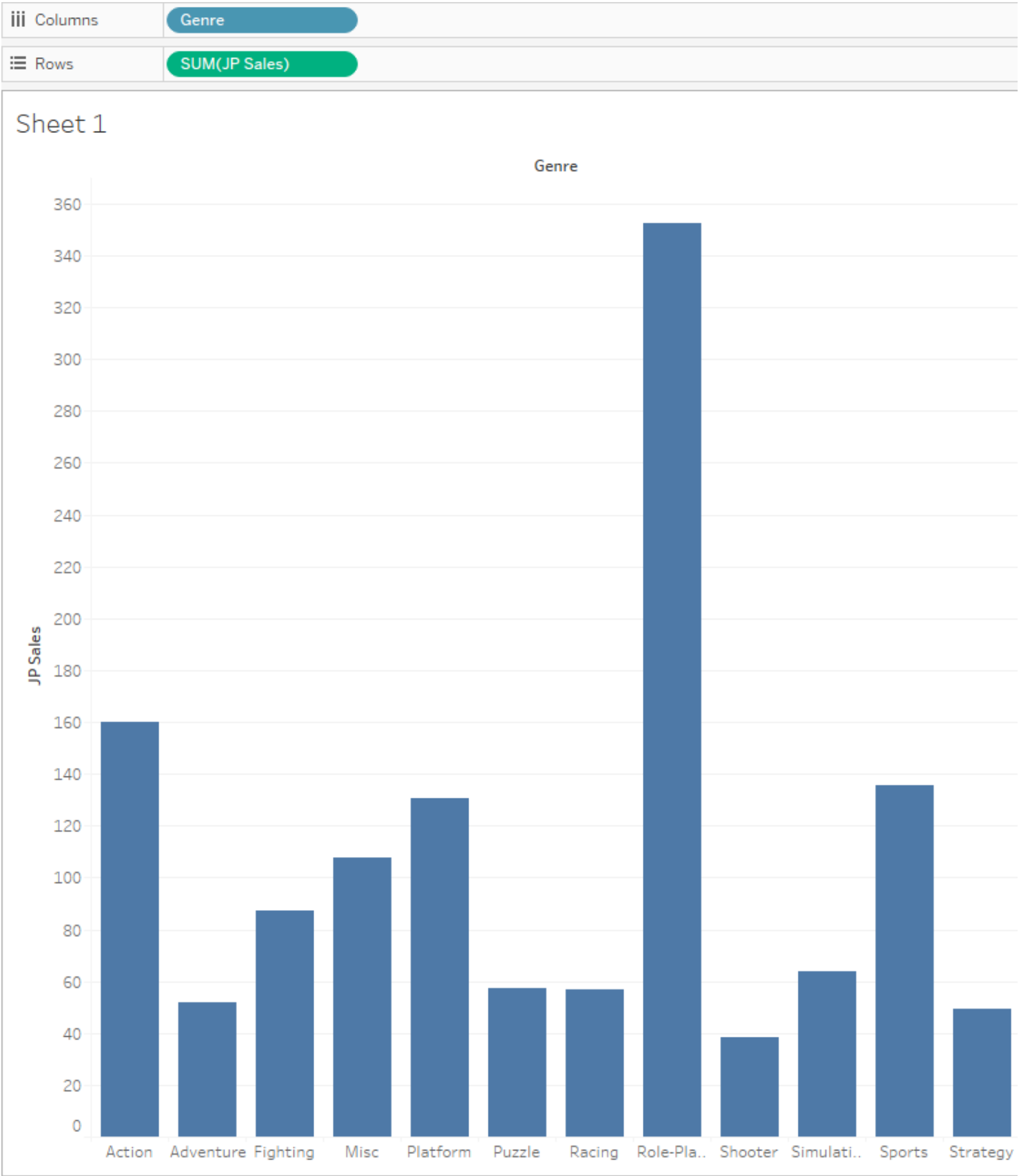
Sheet 1



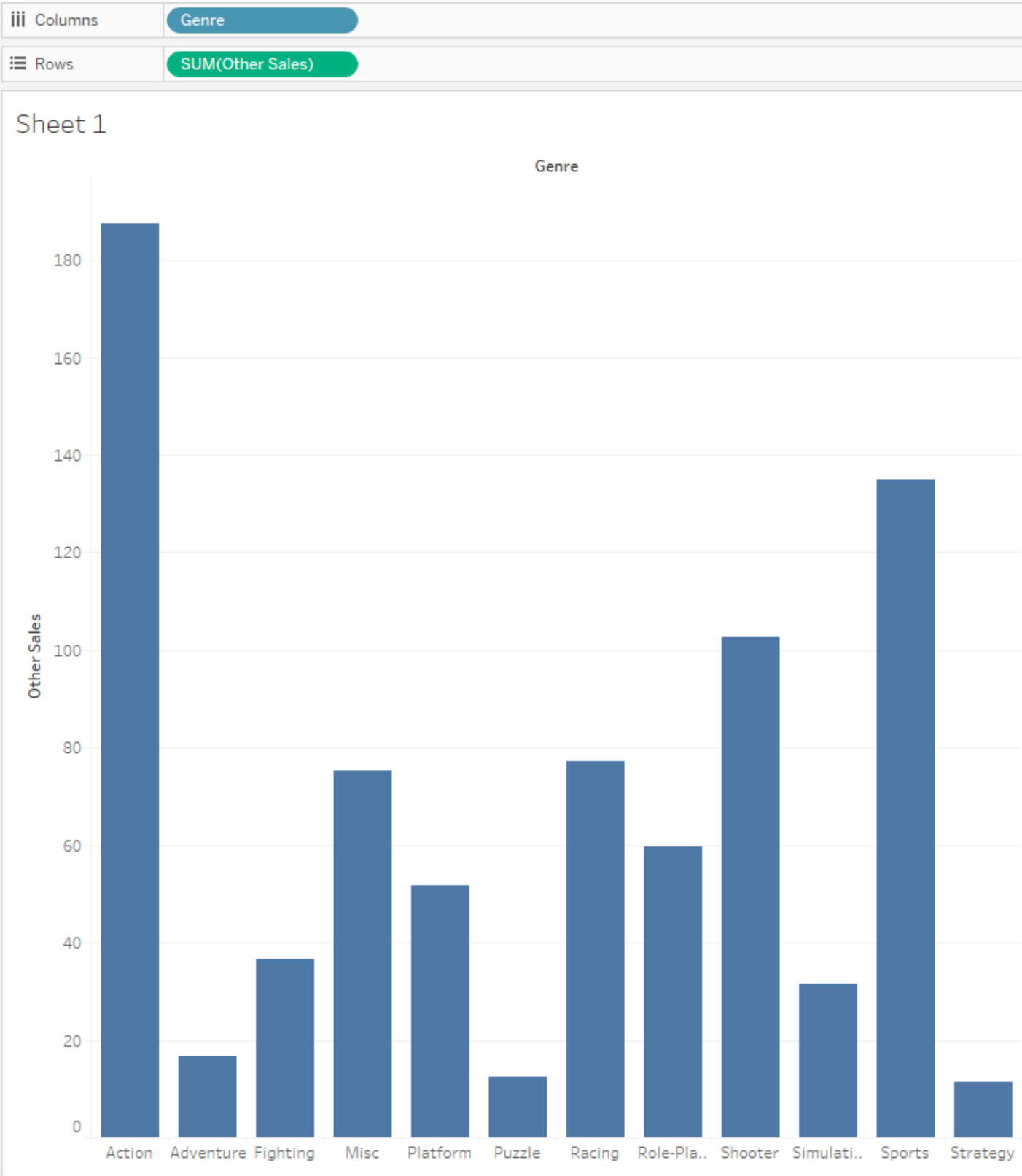
Genre vs EU Sales



☐ **Genre vs JP Sales**



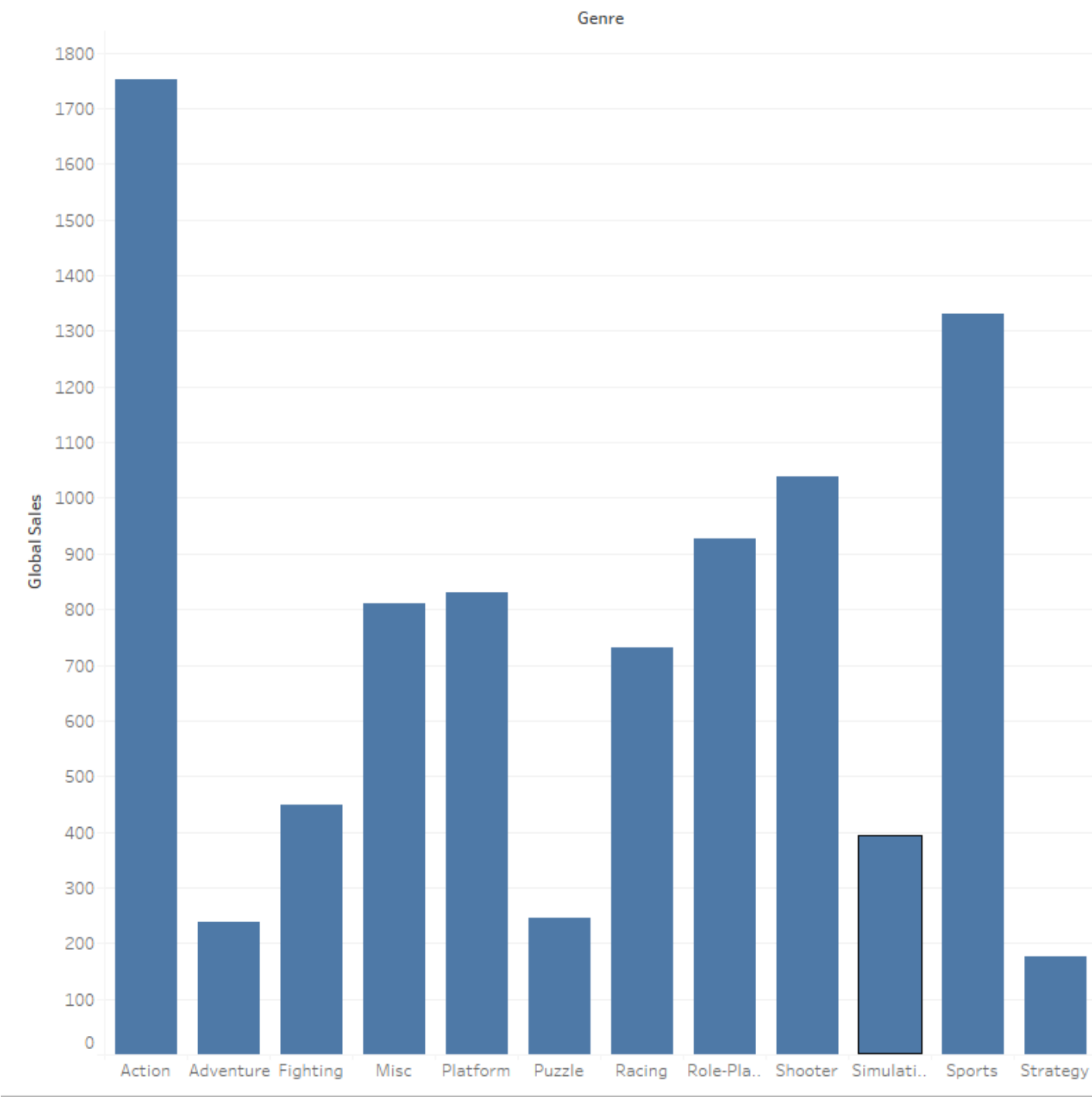
☐ Genre vs Other Sales



☐ Genre vs Global Sales

Columns	Genre
Rows	SUM(Global Sales)

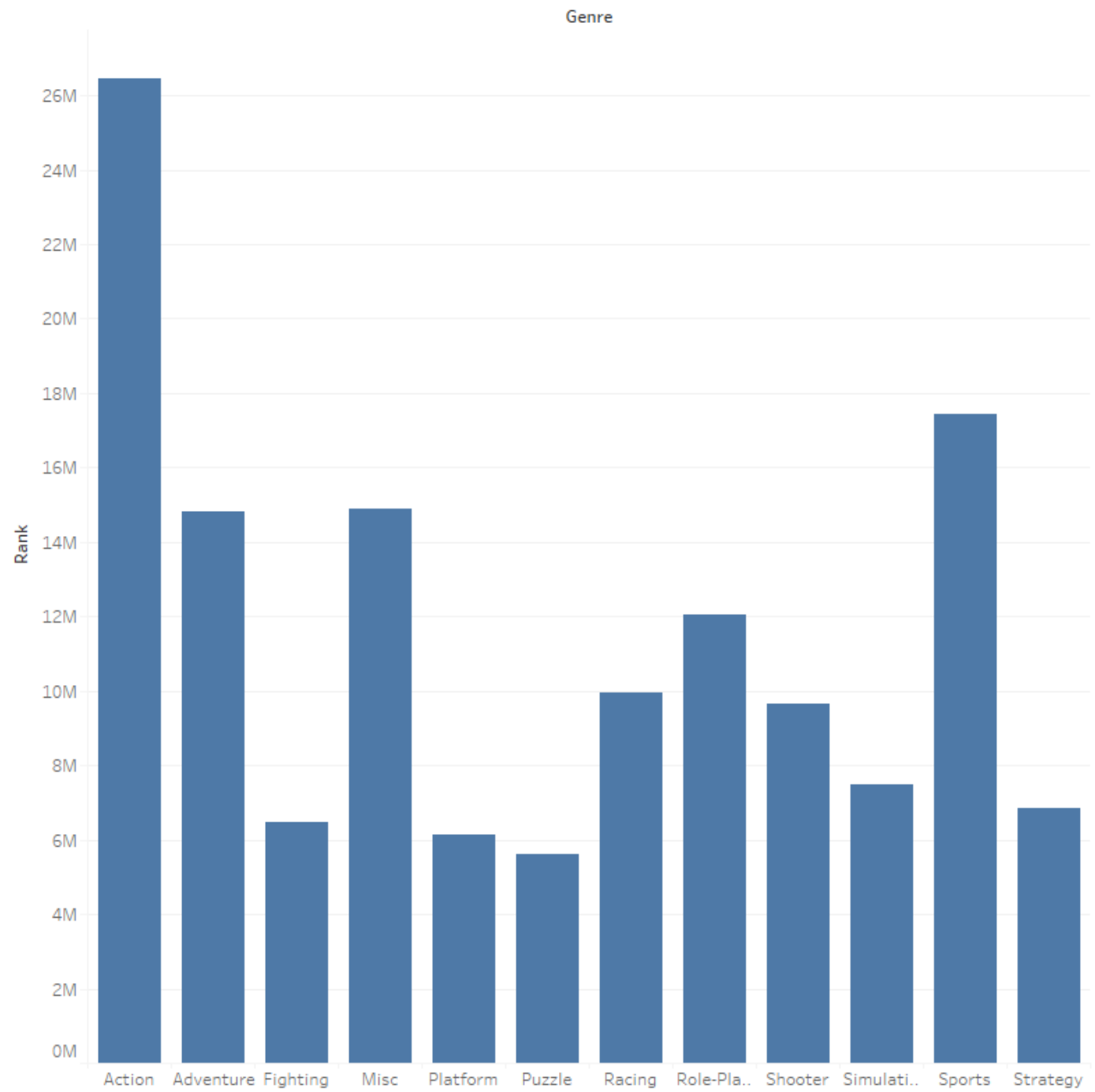
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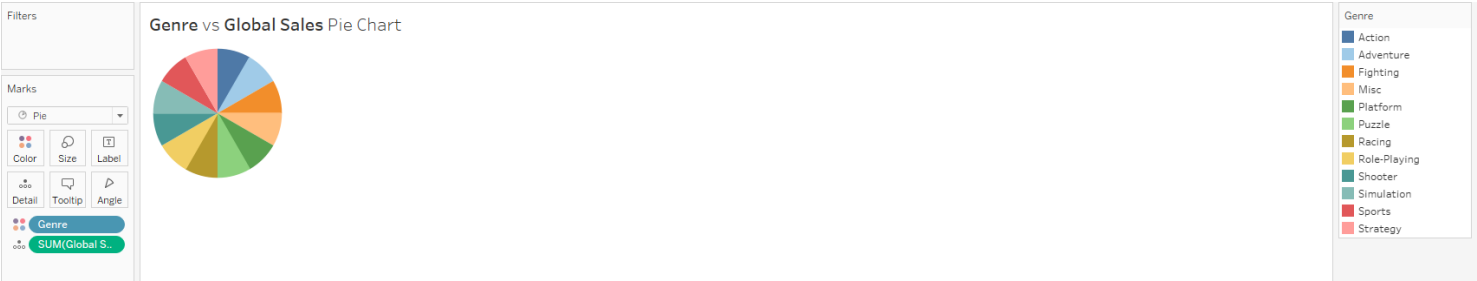
☐ Genre vs Rank

Columns	Genre
Rows	SUM(Rank)

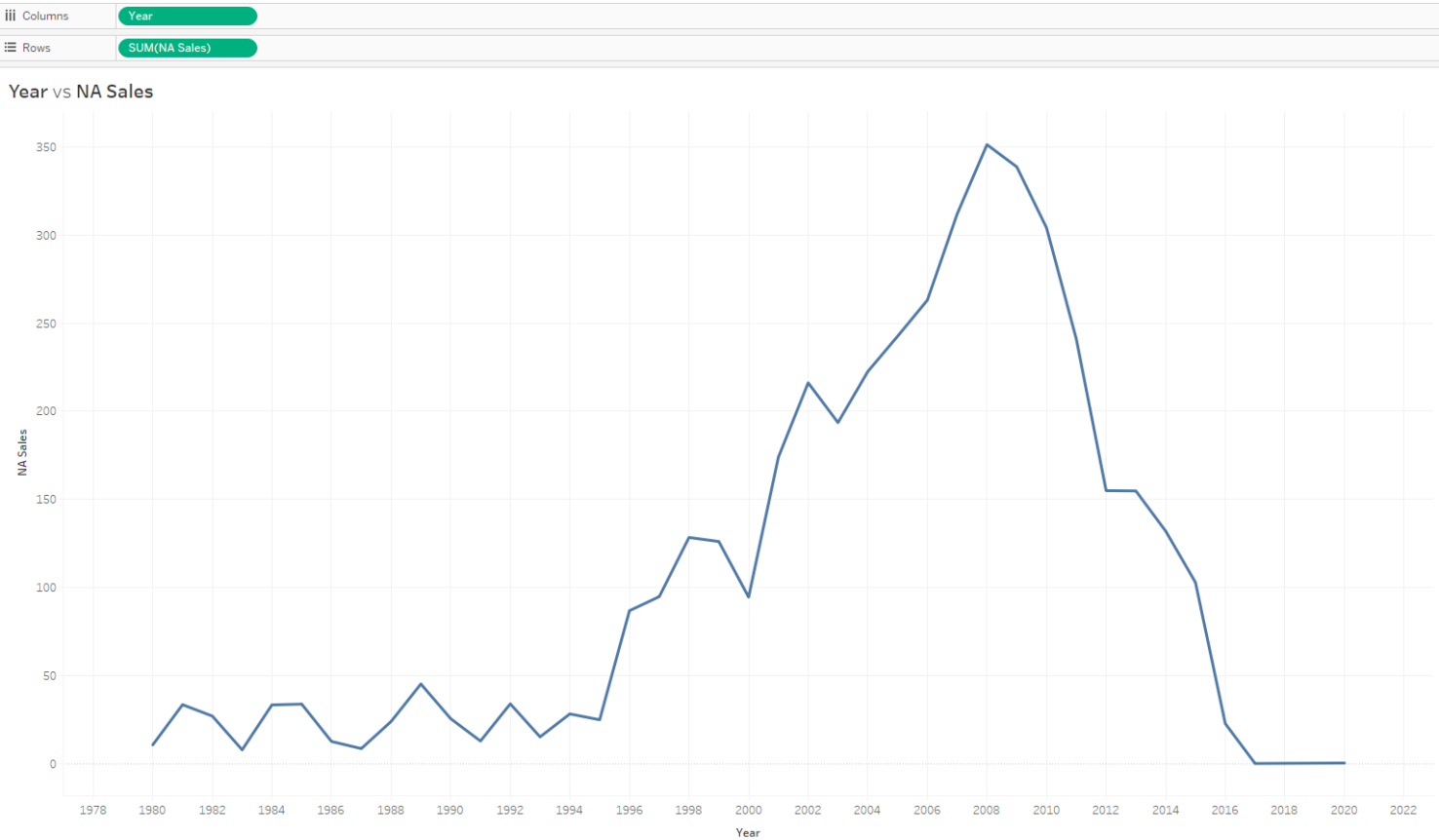
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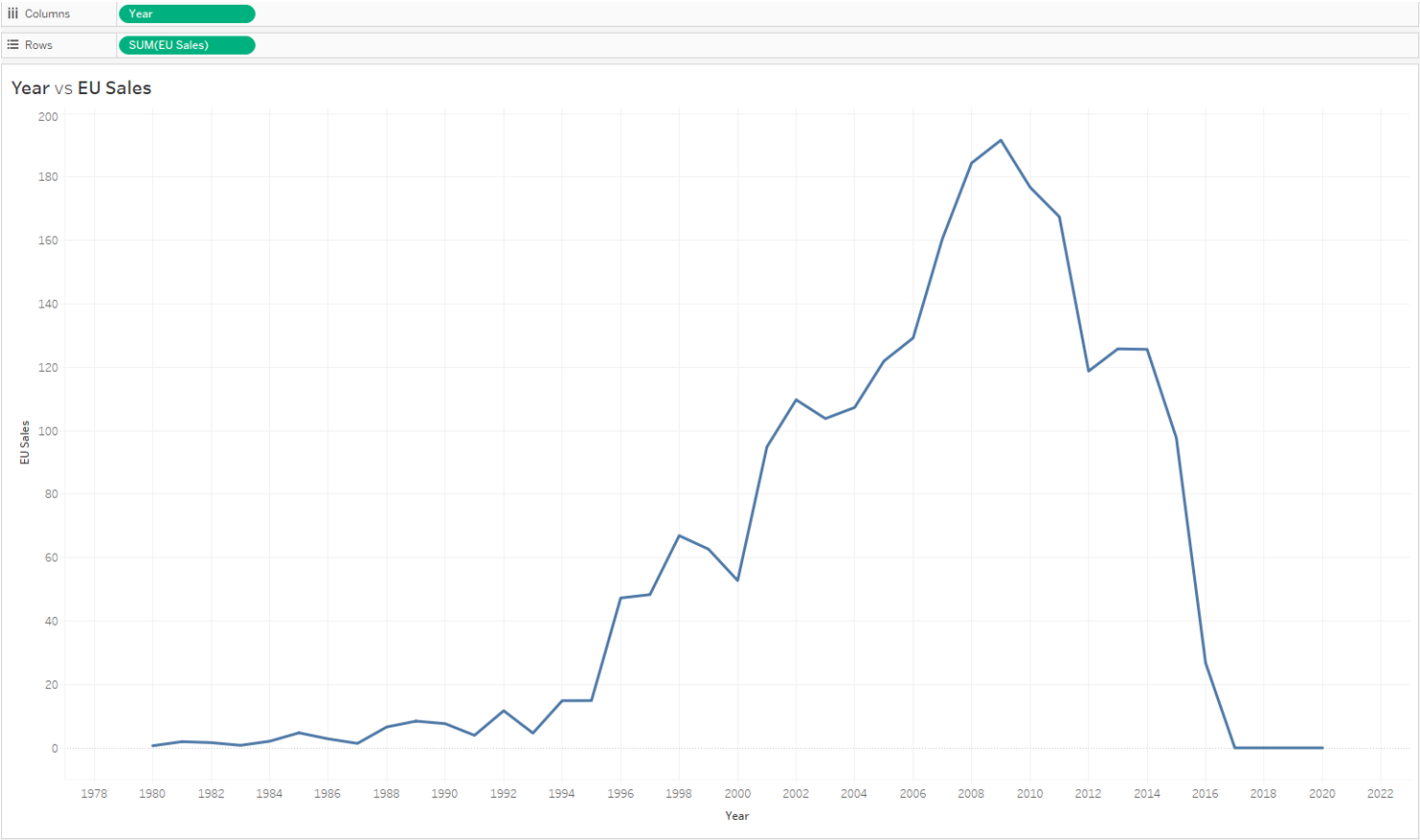
□ Genre vs Global Sales Pie Chart



☐ Year vs NA Sales

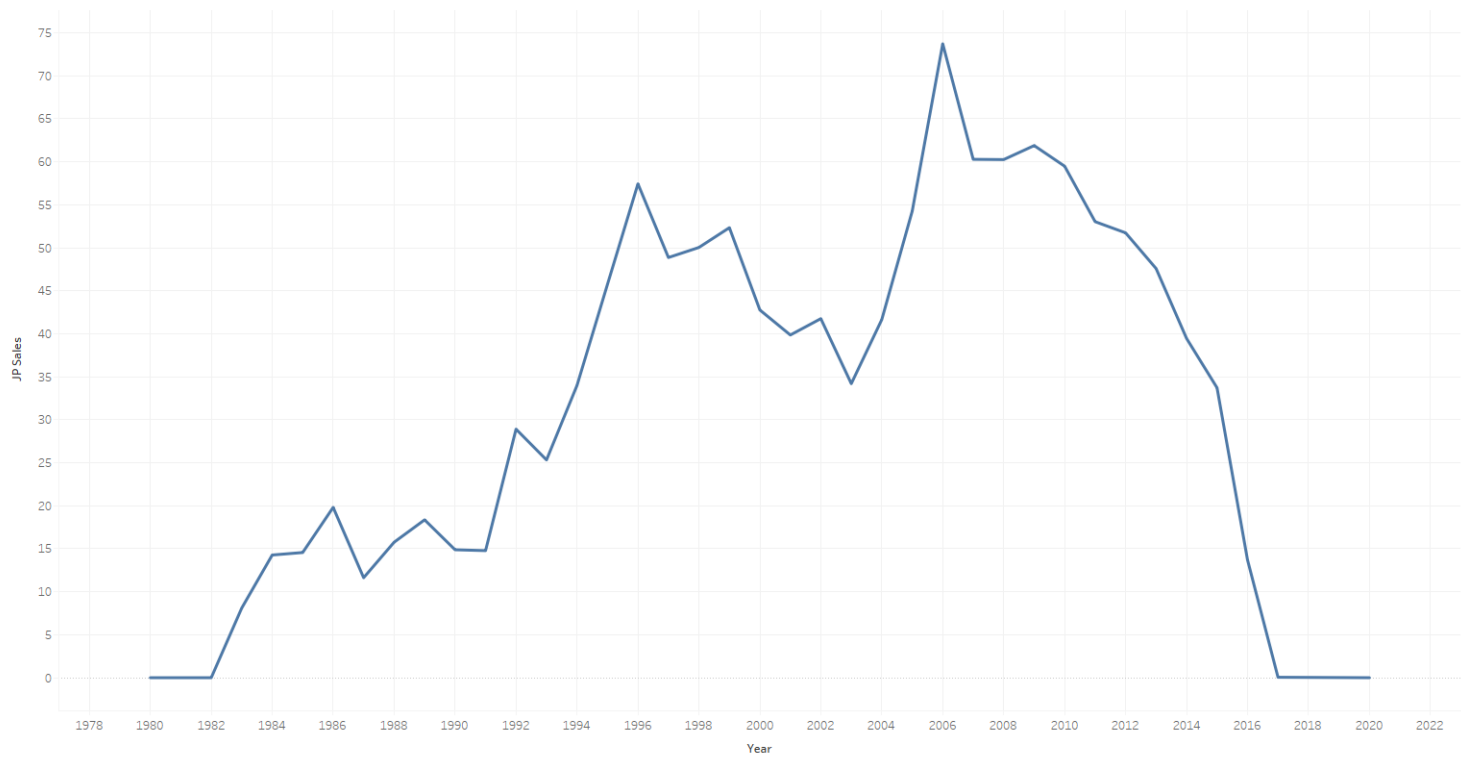


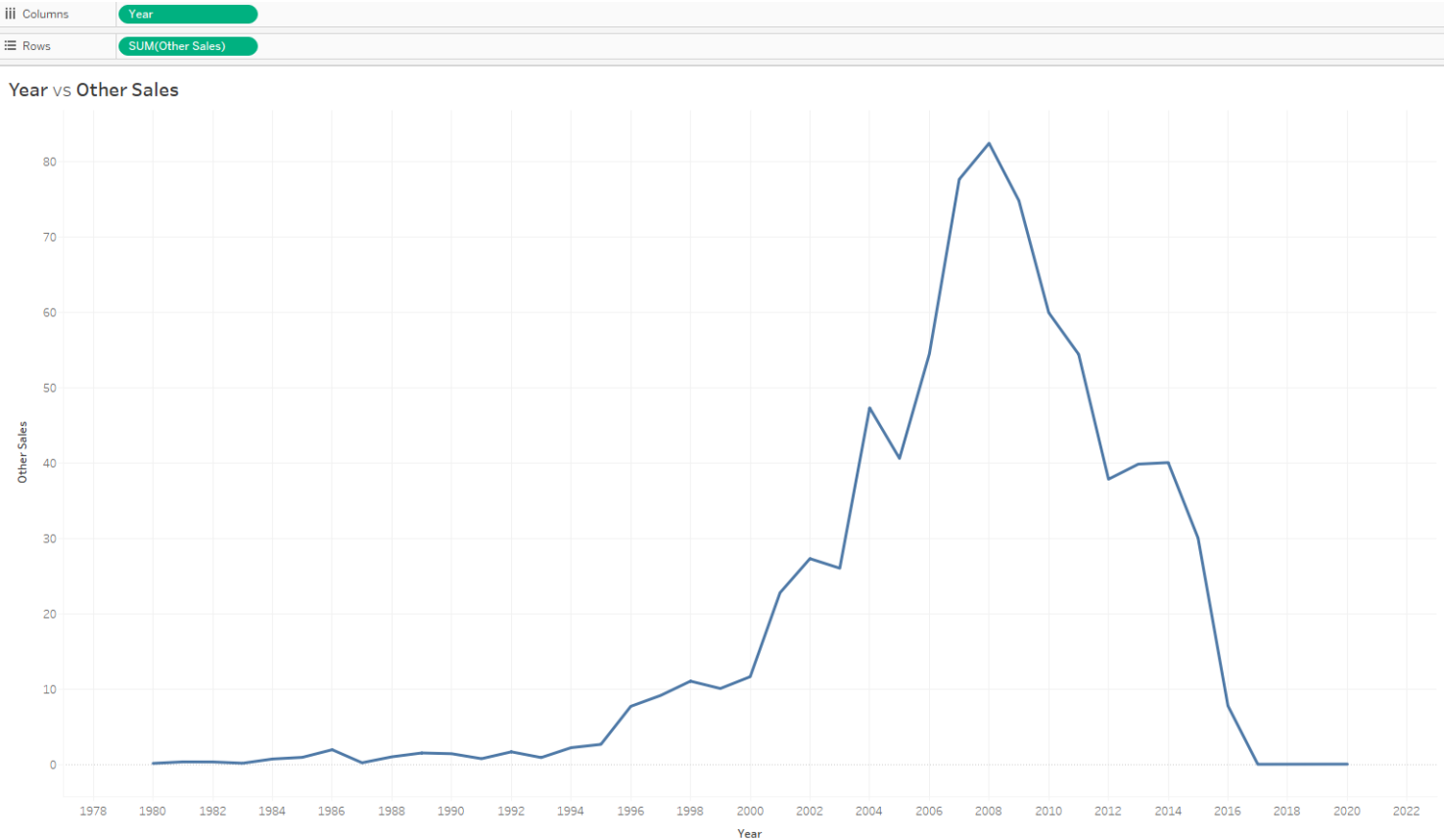
☐ Year vs EU Sales



☐ Year vs JP Sales

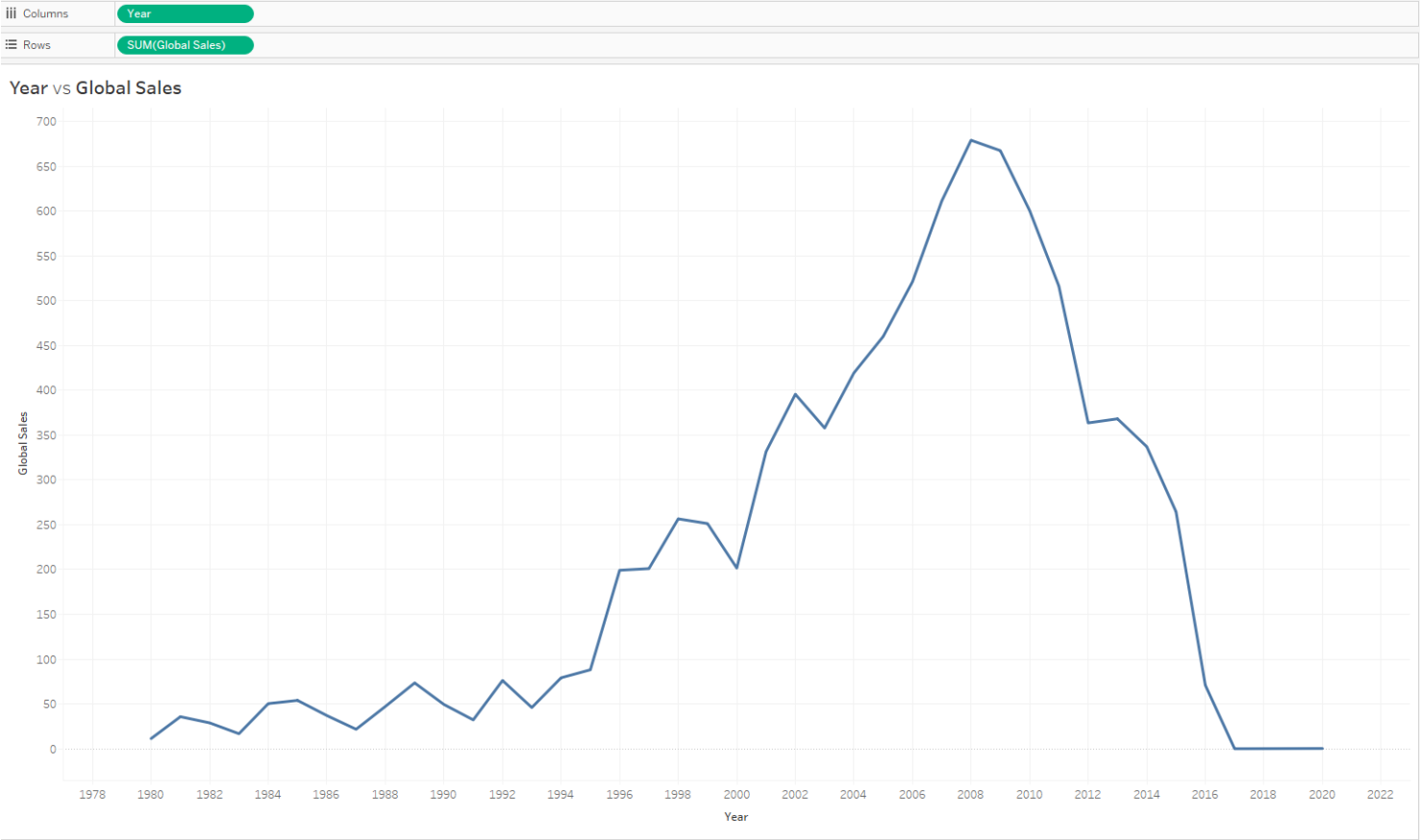
Year vs JP Sales





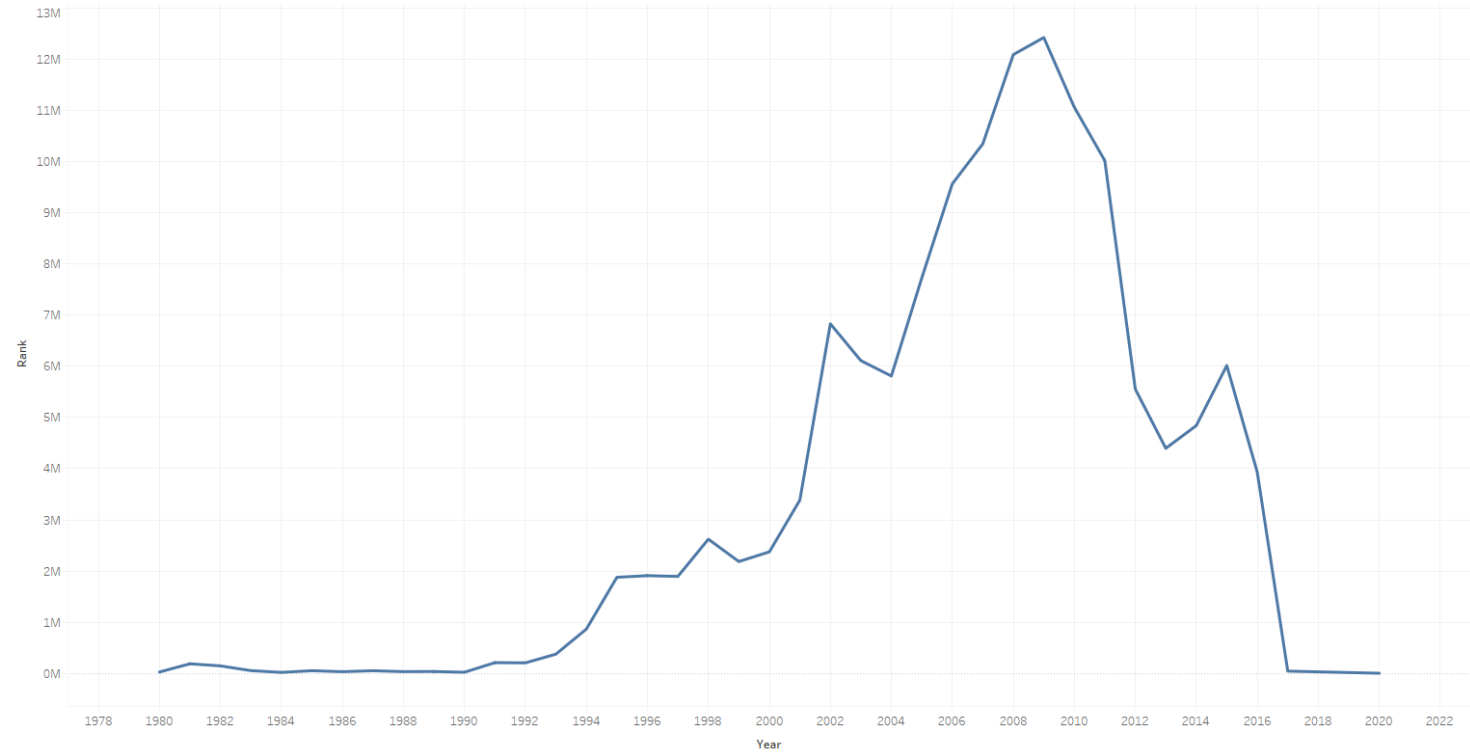
☐ Year vs Other Sales

☐ Year vs Global Sales

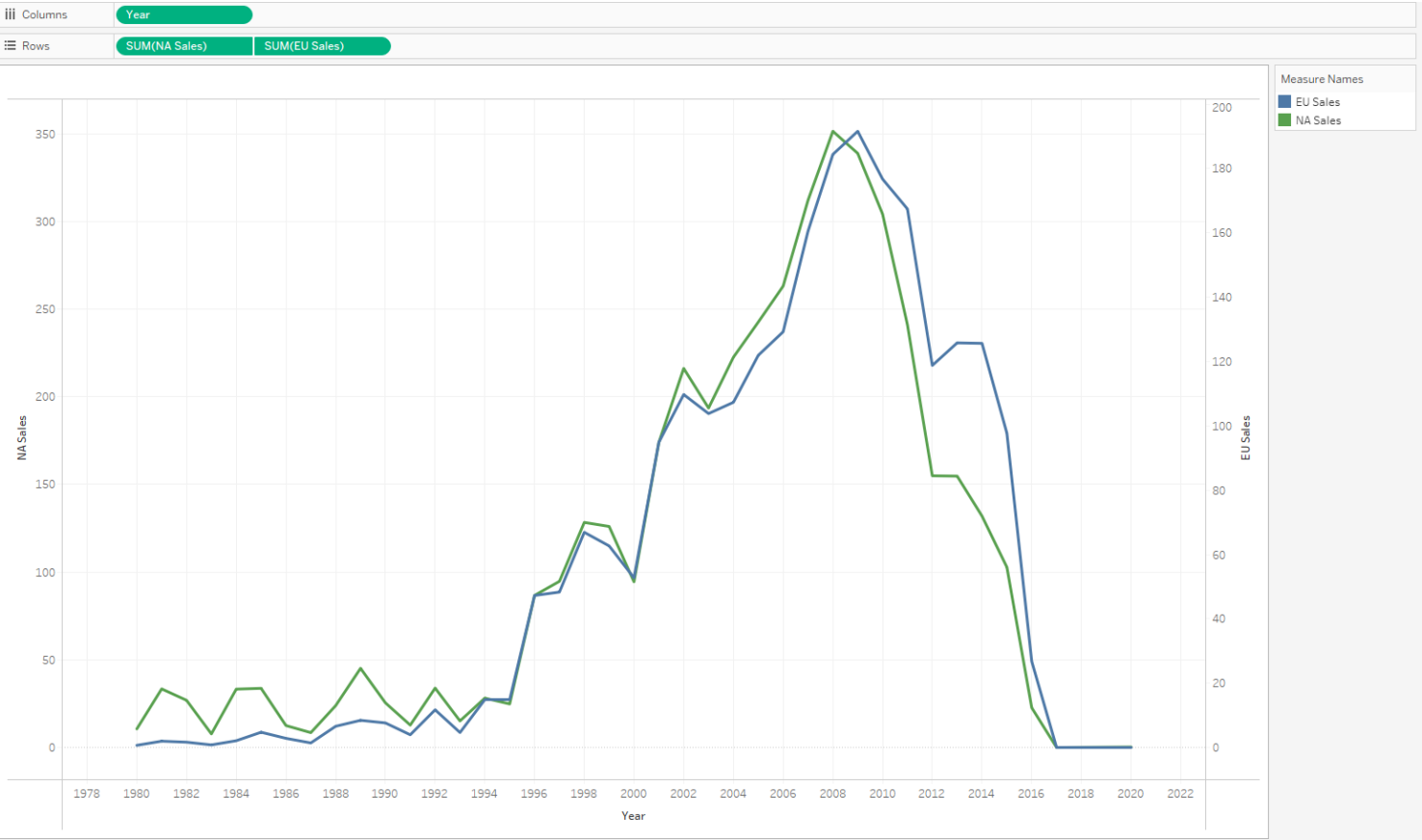
☐ **Year vs Rank**

Columns	Year
Rows	SUM(Rank)

Year vs Rank



☐ Year wise NA vs EU Sales



6. Conclusion and Future Work

Action, Sports and Shooter are the most popular genres with high game titles as well as high global sales made. The best choice for publisher turned out to be Electronic Arts.

The year 2008 brought in the largest number of sales globally for any given year.

Pokémon Red/Pokémon Blue dominating in Japan and **Grand Theft Auto: San Andreas** everywhere else. Video games sales started increasing around 2005, we can call that period the boom of video games.

Action genre has the highest number of games.

The Sims 3, released in 2009 by publisher Electronic Arts is the most popular PC video game with a global sale of 8.11 million Dollars.

Nintendo and Electronic Arts has made the most global sales.

There are about 960 PC games released between different years from 1980 to 2020

from different publishers and of various genres.

We find that approximately 50 percent of the total sales of the action genre were sold in North America.

The genre 'Role-Playing' has made more number sales in Japan.

Whereas in North America and Europe, most sales were made by the genres 'Shooter' and 'Platform'.

In other regions and countries, the genres 'Shooter' and 'Racing' dominate the sales.

'Electronic Arts' has made the highest sales in North America and the lowest in Japan.

The companies with higher total sales and average sales are Electronic Arts, Activision, Ubisoft and Sony.

Overall, when we look at the genres of games, we see that sales percentages in North

America is in the range of 44-56 percent, excluding role playing and strategy. In Japan, mostly role-playing genre is sold and the shooter games were sold less than

the other regions. In Europe these genres are racing and Puzzle. In other regions, we can say that these genres of games are racing, action and sports. We also see the

most sold genres are shooter and platform game types in North America.

Pokémon Red/Pokémon Blue is the top game in Japan. **Super Mario Bros.** released

in **1985** is the top old game still making global sales of **\$40.24 million**. This is followed by Tetris (1989) and more.

There is no region that has out-performed the global average sales. This report summarizes the top games, publishers, genres and more attributes for different

regions. The results will be beneficial in improving both sales and customer satisfaction.