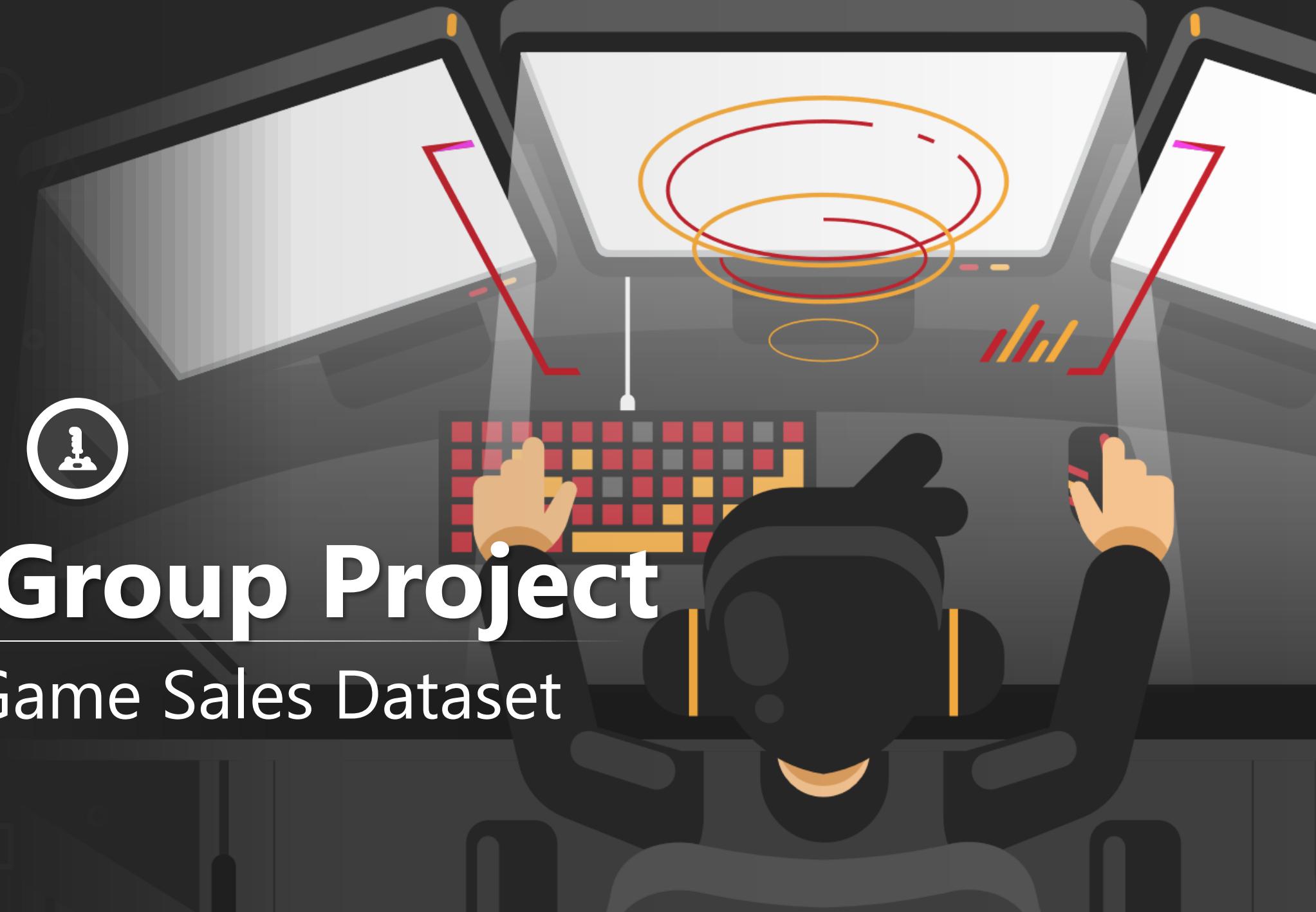




SQL Group Project

Video Game Sales Dataset

Presented by:
TEAM 5



Agenda

- Introduction
- Data cleaning process and challenges
- Data Visualizations: An Overview
- Strategic Value to the Stakeholders
- What would other data be useful to have?
- Appendix

Our Team

TEAM 5



Haoyu



Jagan



Marco

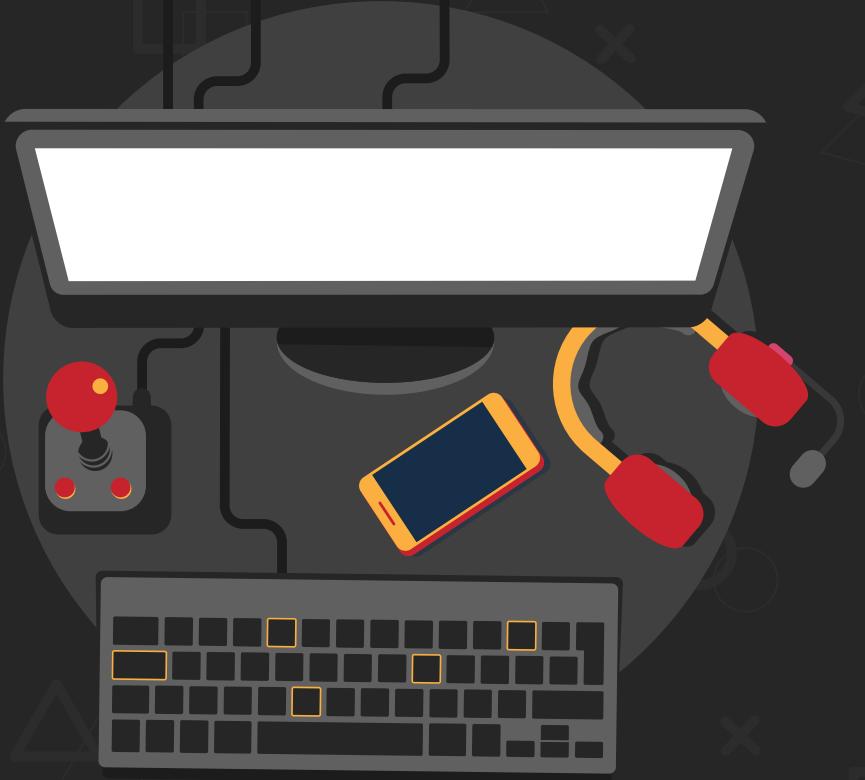


Selena



Tanima





Introducing the Dataset



Video Games Sales Dataset

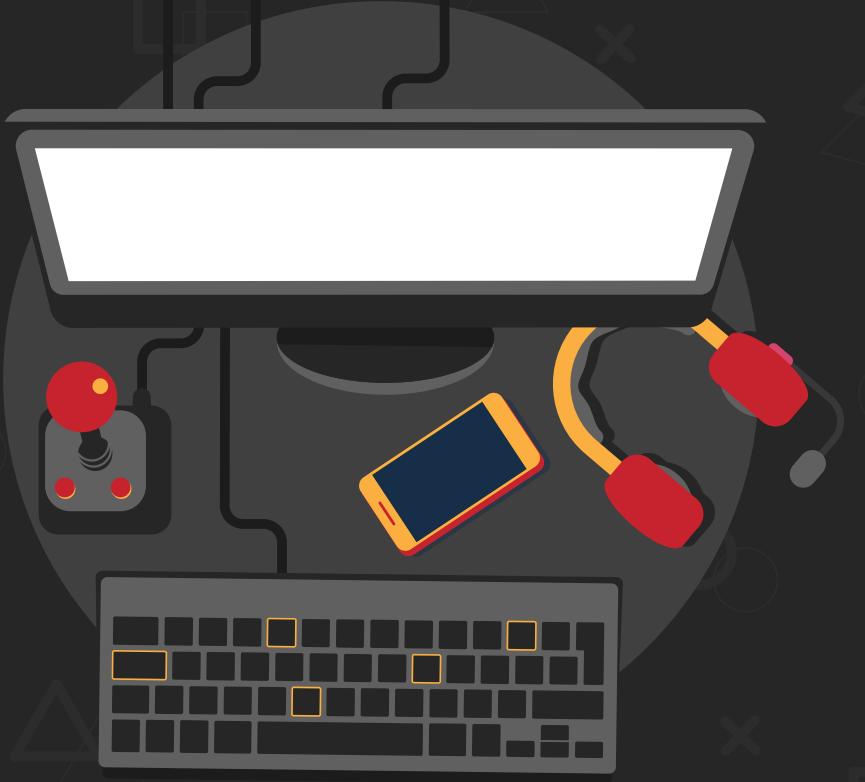
- **Description of the dataset**

The list consists of different games released between 1980 and 2020 across various platforms and different publishers with their sales in North America, Europe, and Japan. This data includes the year of each game's release, the title of the game, the original platform/console on which it was released, the genre of the game, etc.

Video Games Sales Dataset

Structure of the Dataset

Variable Name	Description	Sample Data
Name	Title of video games	Super Mario Bros.; Wii Sports; ...
Platform	The platform of video games released	3DO; 3DS; ...
Year_of_Release	Year of video games released	1980 ; 2020; ...
Genre	Genre of video games	Action; Adventure; ...
Publisher	Publisher of video games	Nintendo; Activision; ...
NA_Sales	Video game sales in North America (in millions)	41.36; 29.08; ...
EU_Sales	Video game sales in Europe (in millions)	28.96; 3.58; ...
JP_Sales	Video game sales in Japan (in millions)	3.77; 6.81; ...
Other_Sales	Video game sales in other countries (in millions)	8.45; 0.77; ...
Global_Sales	Total of worldwide sales	82.53; 40.24; ...
Critic_Score	Score given by the media	76; 82; ...
Critic_Count	Number of critics given by media	51; 73; ...
User_Score	Score given by the video games user	8; 8.3; ...
User_Count	Number of critics given by the user	322; 709; ...
Developer	Video games developer	Nintendo; Ubisoft; ...
Rating	Rating of video games based on ESRB ratings	AO; E10+; ...



Data Cleaning Process and Challenges



Data Cleaning

- Check for missing values
- Clean the data by removing rows that contain missing values
- Check for total unique values in each column
- Challenges:
 - Many N/A or Null or 0 or blanks
 - Manually changing the encoding of columns during imports

Data Cleaning: Null Value Stats

Dropping Columns due to high Null values percentages:

drop column Critic_Score,
 drop column Critic_Count,
 drop column User_Score,
 drop column User_count,
 drop column Developer,
 drop column Rating

Column Name	No. of Null Value	No. of Non Null Values	% of Null	Decision to remove
Name	0	16719	0%	No
Platform	0	16719	0%	No
Year_of_Release	269	16719	1.6%	No
Genre	0	16719	0%	No
Publisher	54	16719	0.3%	No
NA_Sales	0	16719	0%	No
EU_Sales	0	16719	0%	No
JP_Sales	0	16719	0%	No
Other_Sales	0	16719	0%	No
Global_Sales	0	16719	0%	No
Critic_Score	8582	8137	51%	Yes
Critic_Count	8582	8137	52%	Yes
User_Score	9134	7585	55%	Yes
User_Count	9129	7590	55%	Yes
Developer	6827	9892	41%	Yes
Rating	6687	5959	40%	Yes

Before vs. After Data Cleaning

Before: many missing values

Name	Platform	Year_of_Release	Genre	Publisher	NA_Sales	EU_Sales	JP_Sales	Other_Sale	Global_Sal	Critic_Scor	Critic_Cou	User_Score	User_Coun	Developer	Rating
Wii Sports	Wii	2006	Sports	Nintendo	41.36	28.96	3.77	8.45	82.53	76	51	8	322	Nintendo	E
New Super Mario Bros.	DS	2006	Platform	Nintendo	11.28	9.14	6.5	2.88	29.8	89	65	8.5	431	Nintendo	E
Wii Play	Wii	2006	Misc	Nintendo	13.96	9.18	2.93	2.84	28.92	58	41	6.6	129	Nintendo	E
Pokemon Diamond/Pokemon PDS		2006	Role-Playing	Nintendo	6.38	4.46	6.04	1.36	18.25						
The Legend of Zelda: Twilight F	Wii	2006	Action	Nintendo	3.74	2.14	0.6	0.68	7.15	95	73	9	1658	Nintendo	T
Clubhouse Games	DS	2006	Misc	Nintendo	0.59	1.79	0.73	0.34	3.45	83	30	8.4	28	Agenda	E
English Training: Have Fun Imp	DS	2006	Misc	Nintendo	0	0.99	2.32	0.02	3.33						
Personal Trainer: Cooking	DS	2006	Misc	Nintendo	0.9	1	1.03	0.17	3.11	81	12	7.8	10	Indies Zero	E
WarioWare: Smooth Moves	Wii	2006	Puzzle	Nintendo	0.86	1.04	0.73	0.26	2.89	83	61	7.4	179	Intelligent	E10+
Yoshi's Island DS	DS	2006	Platform	Nintendo	1.45	0.07	1.1	0.15	2.76	81	42	7.4	67	Artoon	E
Pokemon Ranger	DS	2006	Role-Playing	Nintendo	1.28	0.03	0.73	0.12	2.15	69	21	7.6	50	HAL Labs	E
Tetris DS	DS	2006	Puzzle	Nintendo	0.63	0.05	1.35	0.08	2.1	84	56	8.7	44	Nintendo	E
Kirby Squeak Squad	DS	2006	Platform	Nintendo	0.78	0.02	1.05	0.08	1.94	71	29	8.1	41	Flagship, H	E
Kanshuu Nippon Joushikiryoku	DS	2006	Misc	Nintendo	0	0	1.71	0	1.71						
Mario Hoops 3 on 3	DS	2006	Sports	Nintendo	0.98	0.04	0.49	0.09	1.6	69	40	8	37	Square Eni	E
The Legend of Zelda: Twilight F	GC	2006	Action	Nintendo	1.15	0.36	0.04	0.04	1.59	96	16	9.2	568	Nintendo	T
Pokemon Battle Revolution	Wii	2006	Role-Playing	Nintendo	0.78	0.37	0.3	0.13	1.58	53	34	6.7	106	Genius Sol	E
Mario vs. Donkey Kong 2: Marc	DS	2006	Puzzle	Nintendo	0.73	0.03	0.36	0.07	1.19	76	32	7.9	17	Nintendo,	E
Metroid Prime Hunters	DS	2006	Shooter	Nintendo	0.57	0.04	0.11	0.06	0.76	85	54	8	188	Nintendo	T
Jump Ultimate Stars	DS	2006	Fighting	Nintendo	0	0	0.74	0	0.74						
Excite Truck	Wii	2006	Racing	Nintendo	0.39	0.03	0.08	0.04	0.53	72	57	8.4	83	Monster G	E
Star Fox Command	DS	2006	Shooter	Nintendo	0.38	0.01	0.1	0.04	0.53	76	56	7.3	56	Q-Games	E10+
Kenkou Ouen Recipe 1000: DS	DS	2006	Misc	Nintendo	0	0	0.52	0	0.52						
Children of Mana	DS	2006	Role-Playing	Nintendo	0.16	0.01	0.29	0.01	0.48	65	34	6	21	Nex Entert	E10+

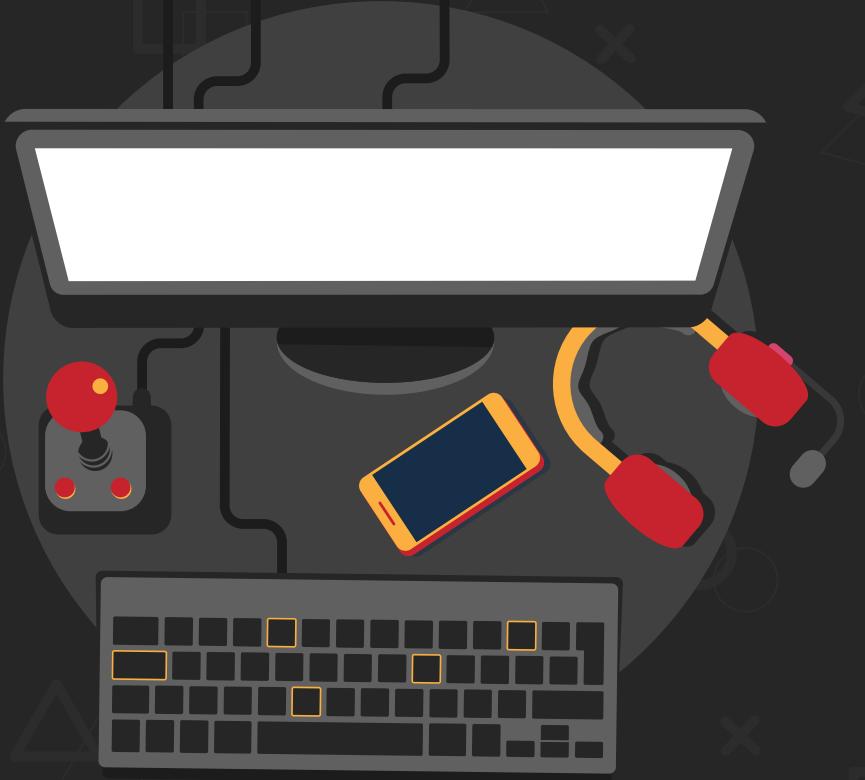
Before vs. After Data Cleaning

After: nice and cleaned!

Name	Platform	Year	Genre	Publisher	NA_Sales	EU_Sales	JP_Sales	Other_Sales	Global_Sales
Wii Sports	Wii	2006	Sports	Nintendo	41.49	29.02	3.77	8.46	82.74
New Super Mario Bros. DS		2006	Platform	Nintendo	11.38	9.23	6.5	2.9	30.01
Wii Play	Wii	2006	Misc	Nintendo	14.03	9.2	2.93	2.85	29.02
Pokemon Diamond/Po DS		2006	Role-Playing	Nintendo	6.42	4.52	6.04	1.37	18.36
The Legend of Zelda: T:Wii		2006	Action	Nintendo	3.83	2.19	0.6	0.7	7.31
Gears of War	X360	2006	Shooter	Microsoft Game St	3.54	1.9	0.07	0.6	6.11
Final Fantasy XII	PS2	2006	Role-Playing	Square Enix	1.88	0	2.33	1.74	5.95
Cooking Mama	DS	2006	Simulation	505 Games	3.13	1.94	0.07	0.58	5.72
Guitar Hero II	PS2	2006	Misc	RedOctane	3.81	0.63	0	0.68	5.12
Grand Theft Auto: Vice PSP	PSP	2006	Action	Take-Two Interacti	1.7	2.02	0.16	1.21	5.08
Madden NFL 07	PS2	2006	Sports	Electronic Arts	3.63	0.24	0.01	0.61	4.49
Winning Eleven: Pro Ev PS2		2006	Sports	Konami Digital Ent	0.1	2.39	1.05	0.86	4.39
The Elder Scrolls IV: Ok X360		2006	Role-Playing	Take-Two Interacti	2.82	1.05	0.13	0.4	4.39
Resistance: Fall of Man PS3		2006	Shooter	Sony Computer En	1.73	1.73	0.14	0.75	4.35
Daxter	PSP	2006	Platform	Sony Computer En	2.45	1.02	0	0.75	4.22
FIFA Soccer 07	PS2	2006	Sports	Electronic Arts	0.71	2.48	0.03	0.89	4.11
MotorStorm	PS3	2006	Racing	Sony Computer En	1.53	1.61	0.06	0.67	3.88
Grand Theft Auto: Libe PS2		2006	Action	Take-Two Interacti	1.56	1.4	0.07	0.5	3.54
Clubhouse Games	DS	2006	Misc	Nintendo	0.59	1.83	0.73	0.35	3.5
English Training: Have I DS		2006	Misc	Nintendo	0	0.99	2.32	0.02	3.33
Personal Trainer: Cook DS		2006	Misc	Nintendo	0.91	1	1.03	0.17	3.12
WarioWare: Smooth M Wii		2006	Puzzle	Nintendo	0.87	1.06	0.73	0.26	2.92
Yoshi's Island DS	DS	2006	Platform	Nintendo	1.47	0.07	1.1	0.15	2.8
Call of Duty 3	X360	2006	Shooter	Activision	1.49	0.93	0.02	0.27	2.71

“It is estimated that data scientists spend about 80% of their time cleaning data. This means only 20% of the time will be used to analyze and create insights from the data science process.”

*Nduati, E (July 29, 2021) Retrieved from <https://medium.com/analytics-vidhya/a-data-cleaning-journey-2b0146407e44#:~:text=It%20is%20estimated%20that%20data,Data%20cleaning%20enhances%20data%20quality>.



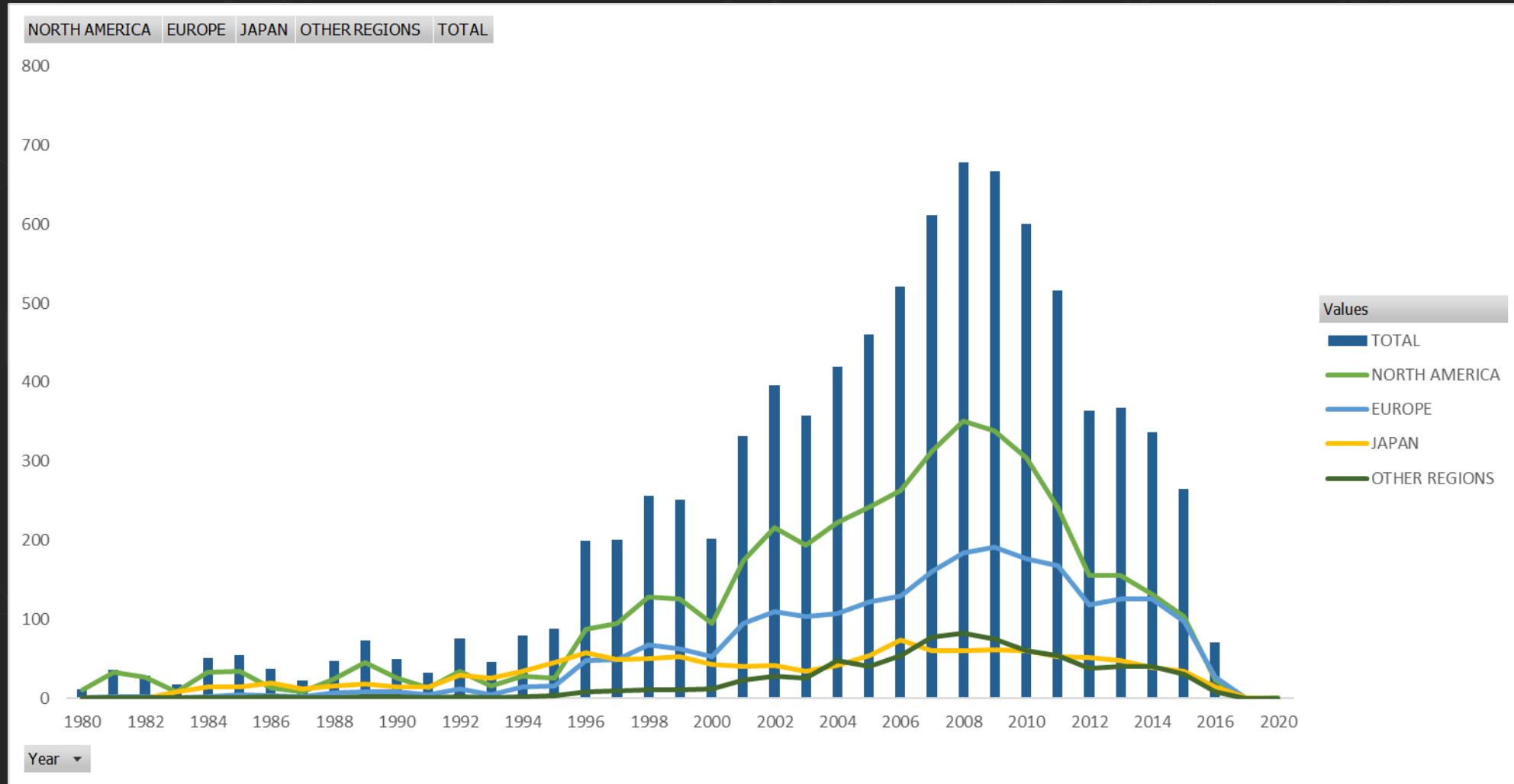
Data Visualizations

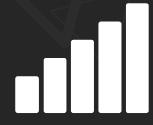




Data Visualizations: Overview

1980 - 2020 Game Sales Revenue Comparison by Region

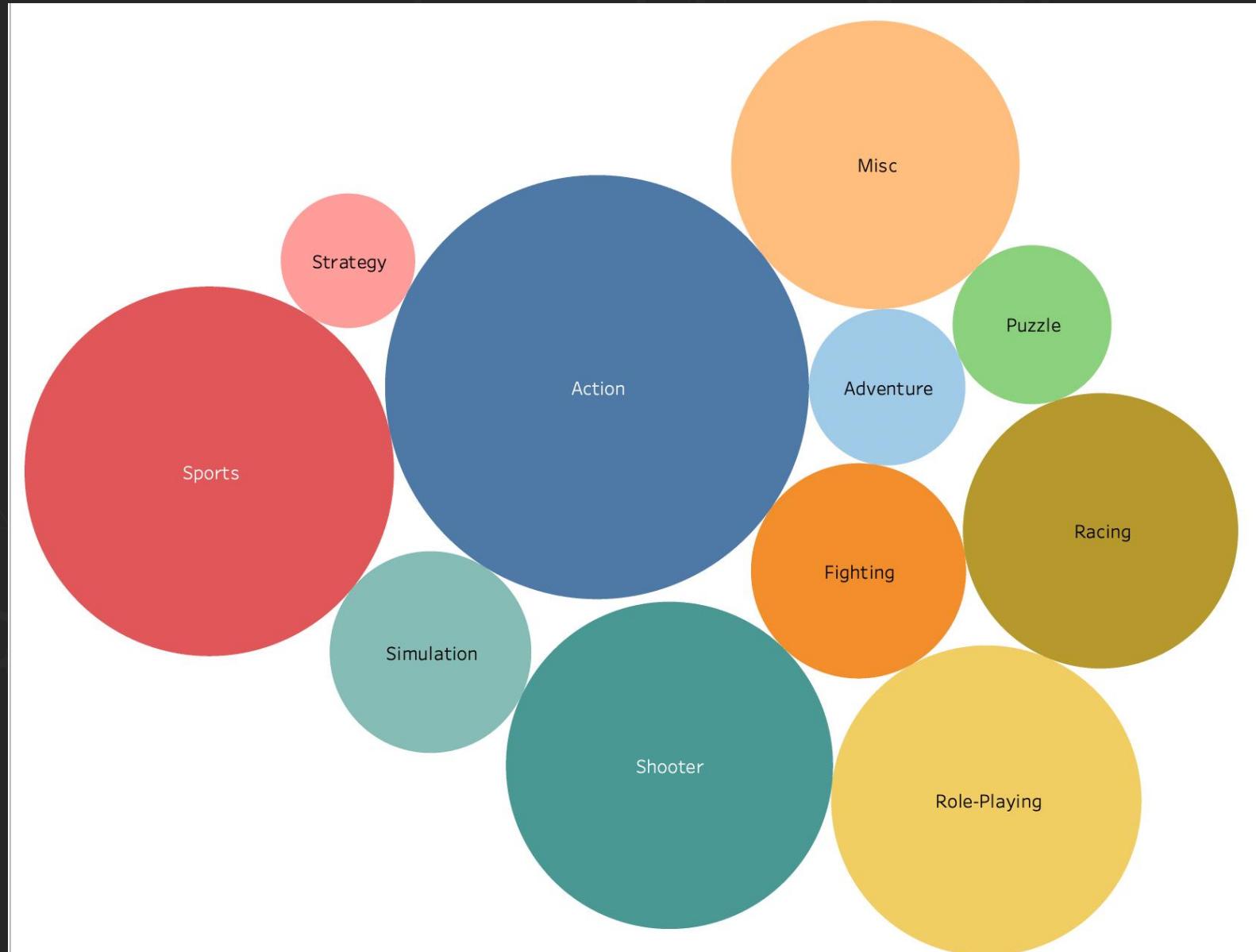


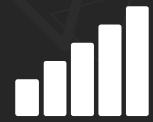


Data Visualization

Overview

- Most Popular Genre:
 - Action
- Least Popular Genre:
 - Strategy

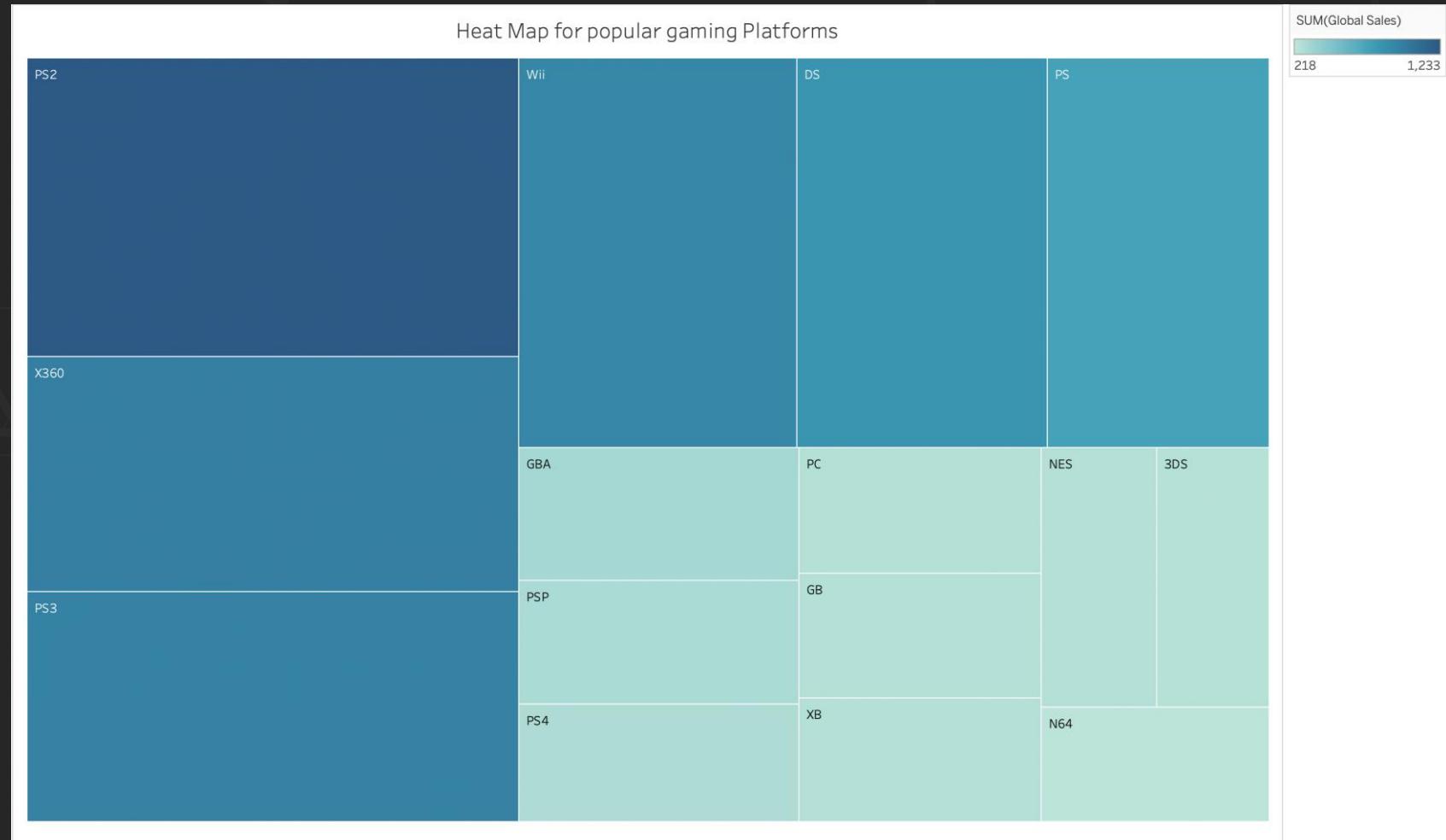


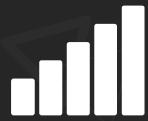


Data Visualization

Overview

- Most Popular Gaming Platform:
 - PS2
- Least Popular Gaming Platform:
 - PCFX

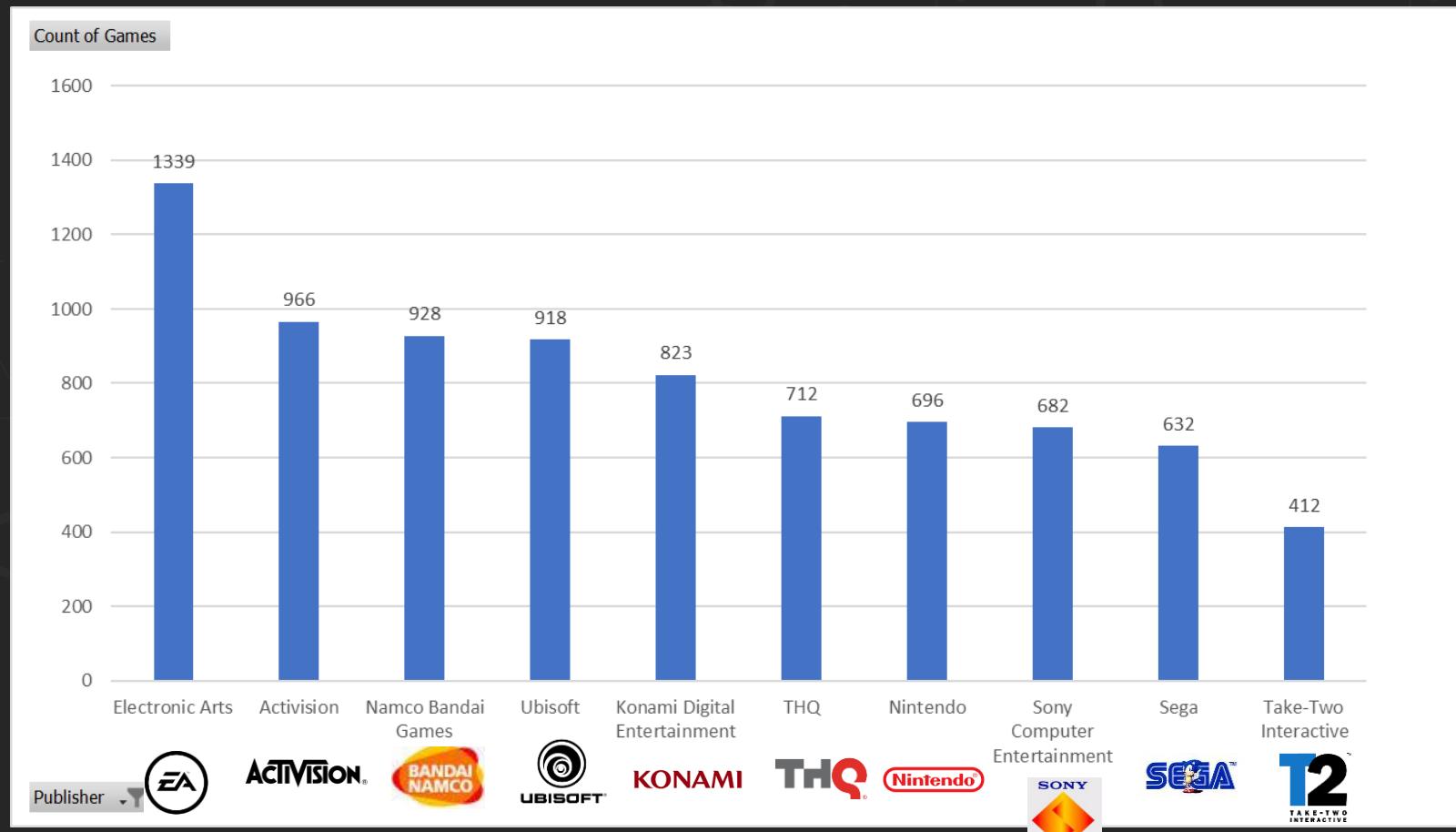




Data Visualization

Overview

- Top 10 Publishers with Most Games Published:
 - Electronic Arts
 - Activision
 - Namco Bandai Games
 - Ubisoft
 - Konami Digital Entertainment
 - THQ
 - Nintendo
 - Sony
 - Sega
 - Take-Two Interactive

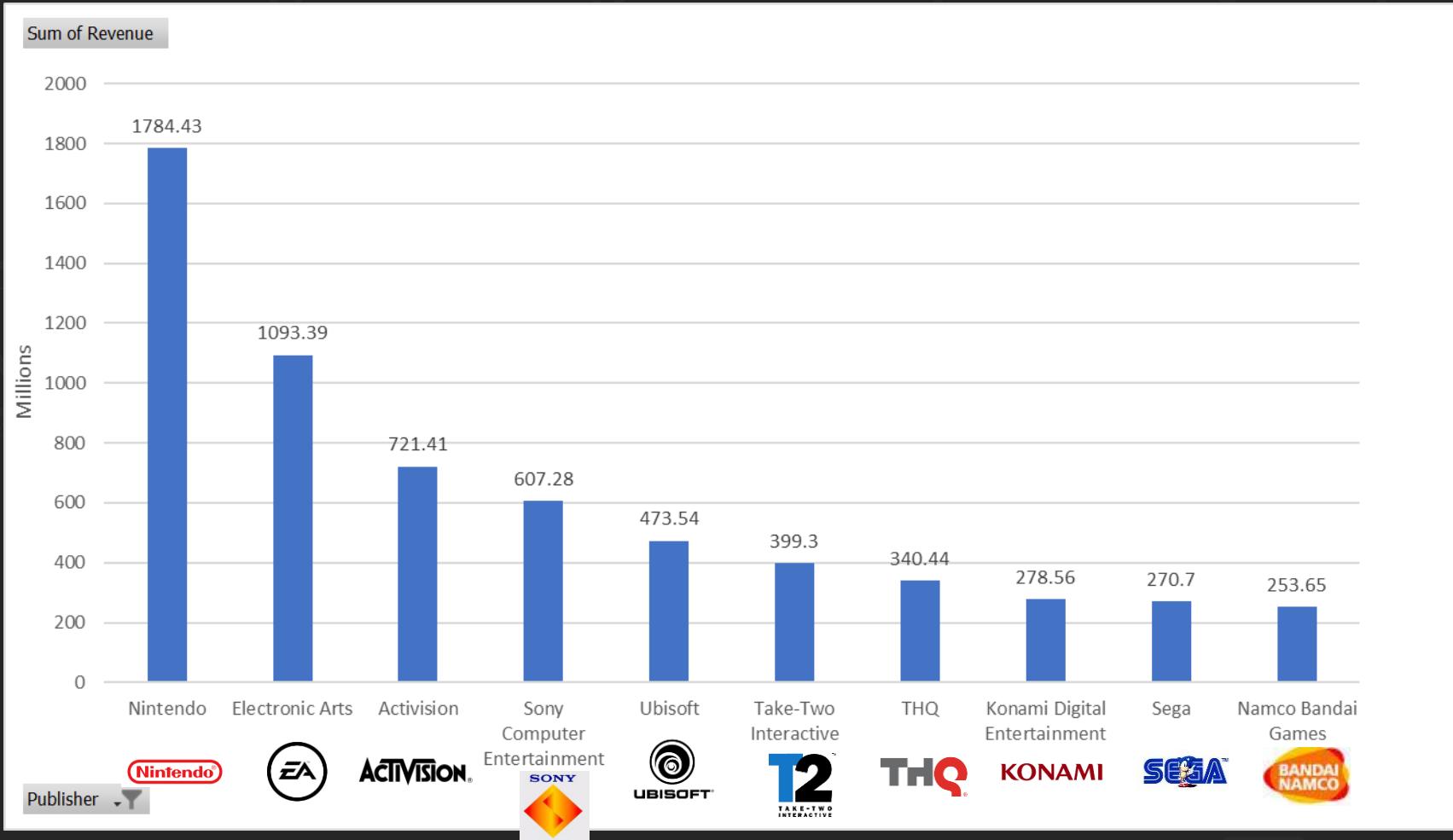


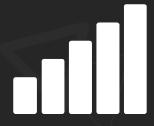


Data Visualization

Overview

- Top 10 Publishers by Global Revenue:
 - Nintendo
 - Electronic Arts
 - Activision
 - Sony
 - Ubisoft
 - Take-Two Interactive
 - THQ
 - Konami Digital Entertainment
 - Sega
 - Namco Bandai Games

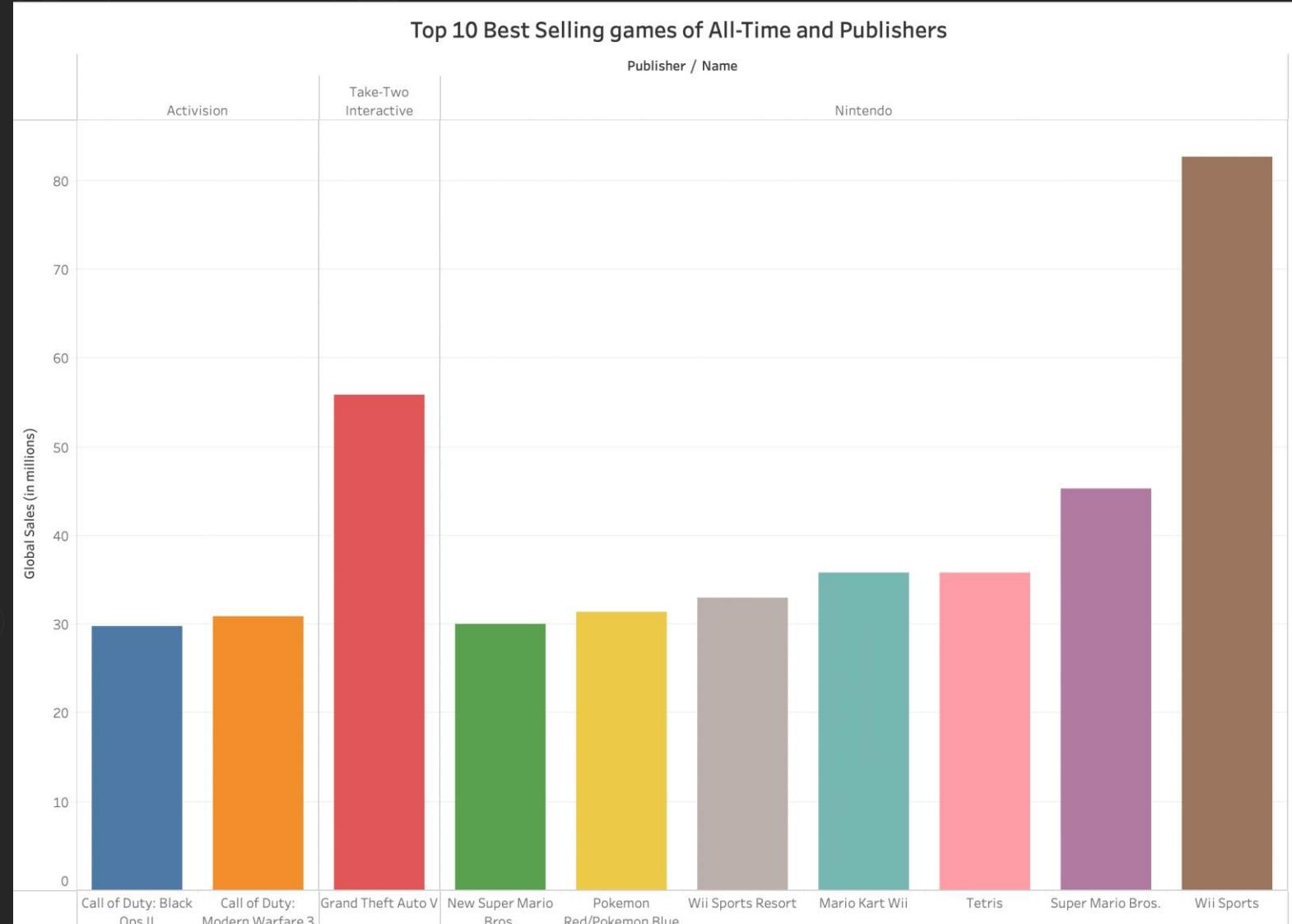




Data Visualization

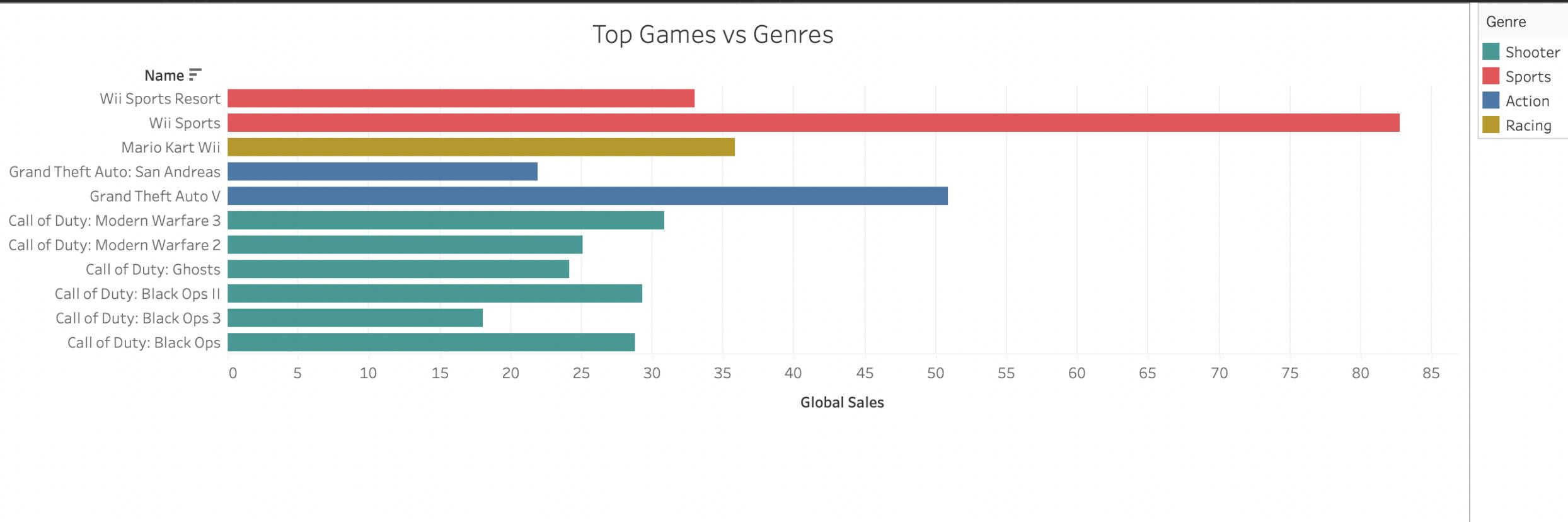
Overview

- Top 10 Best Selling Games between 1980 to 2020:
 - Wii Sports
 - Grand Theft Auto V
 - Super Mario Bros.
 - Tetris
 - Mario Kart Wii
 - Wii Sports Report
 - Pokemon Red/Pokemon Blue
 - Call of Duty: Modern Warfare 3
 - New Super Mario Bros.
 - Call of Duty: Black Ops II



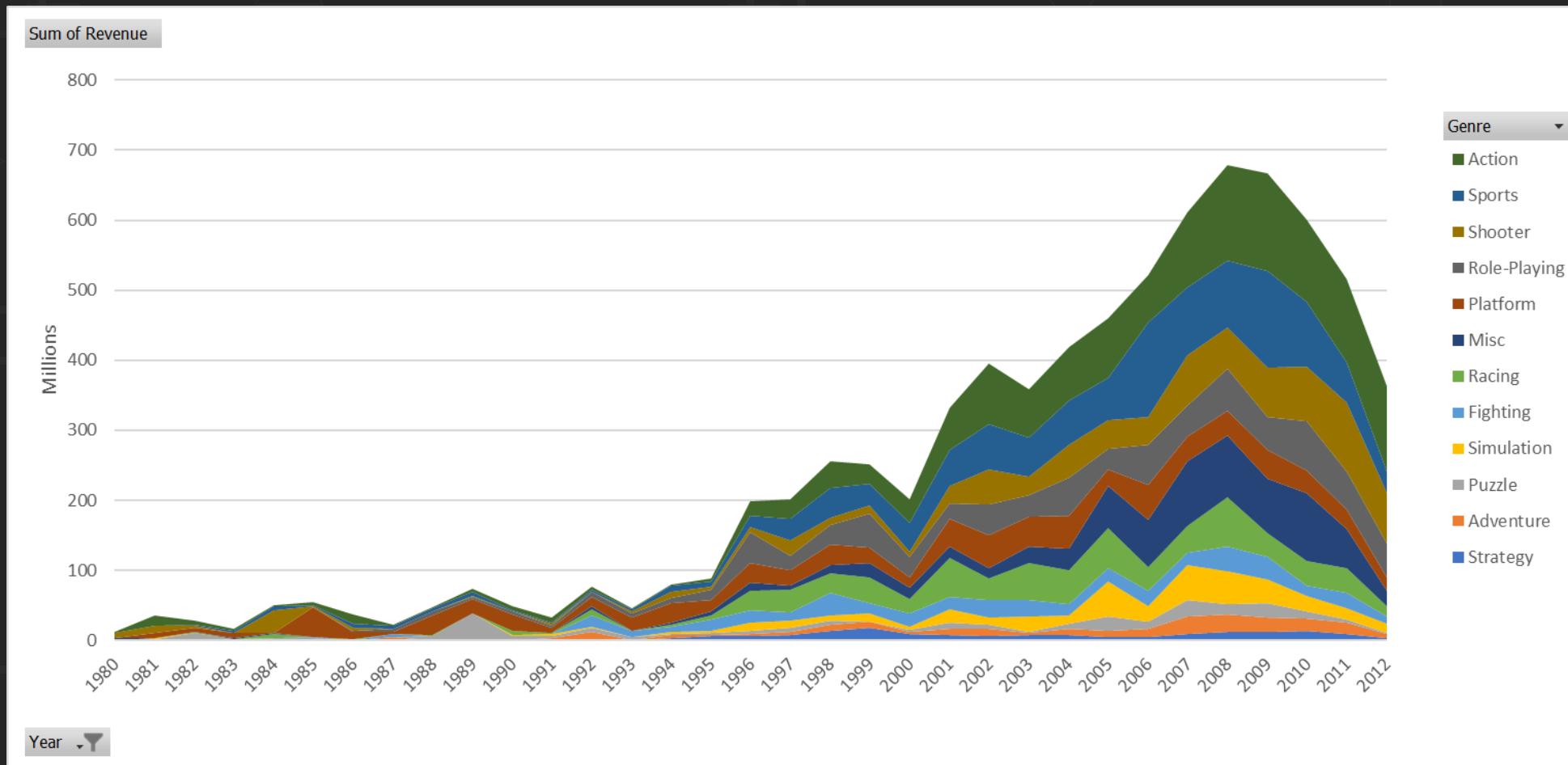
Data Visualizations: Overview

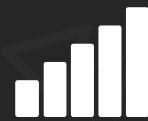
Best Selling Games vs. Genres



Data Visualizations: Overview

Best Selling Video Game Genre by Year: 1980 - 2012

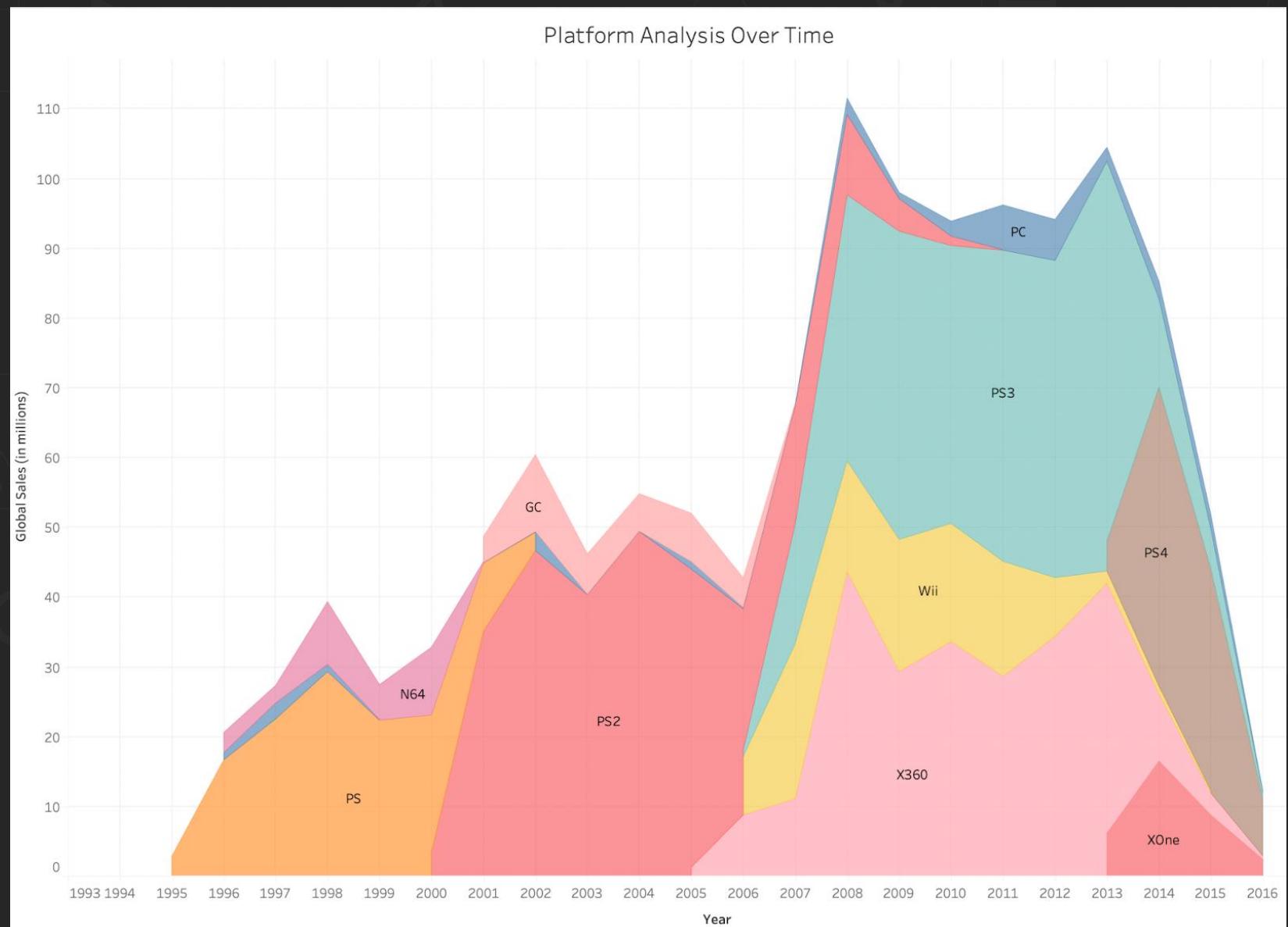


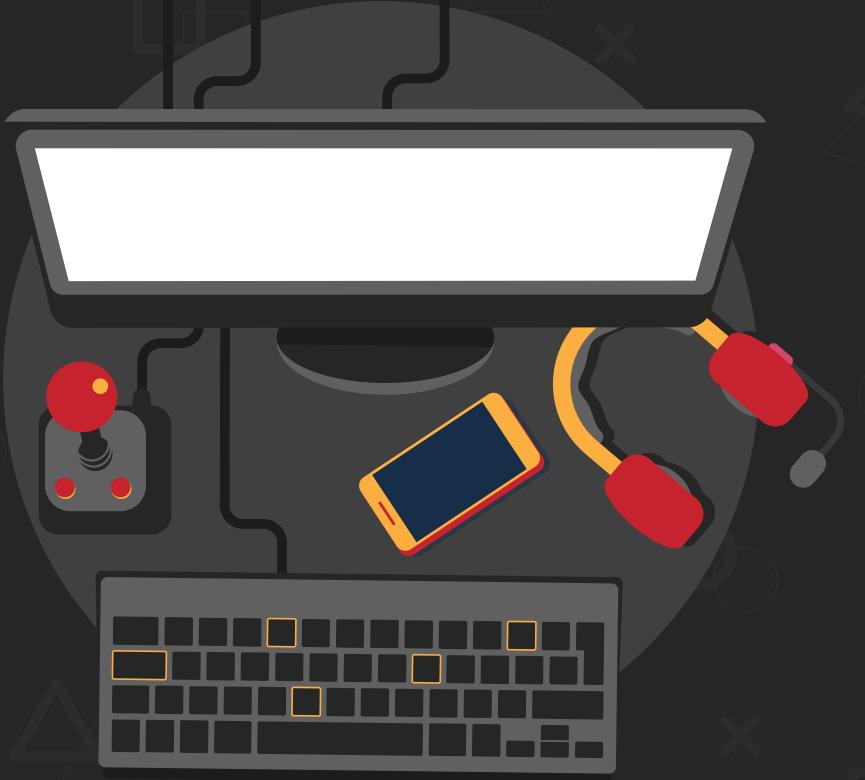


Data Visualization

Overview

- Platform Analysis Over Time





Strategic Value to the Stakeholders





Major Stakeholders in Gaming Industry



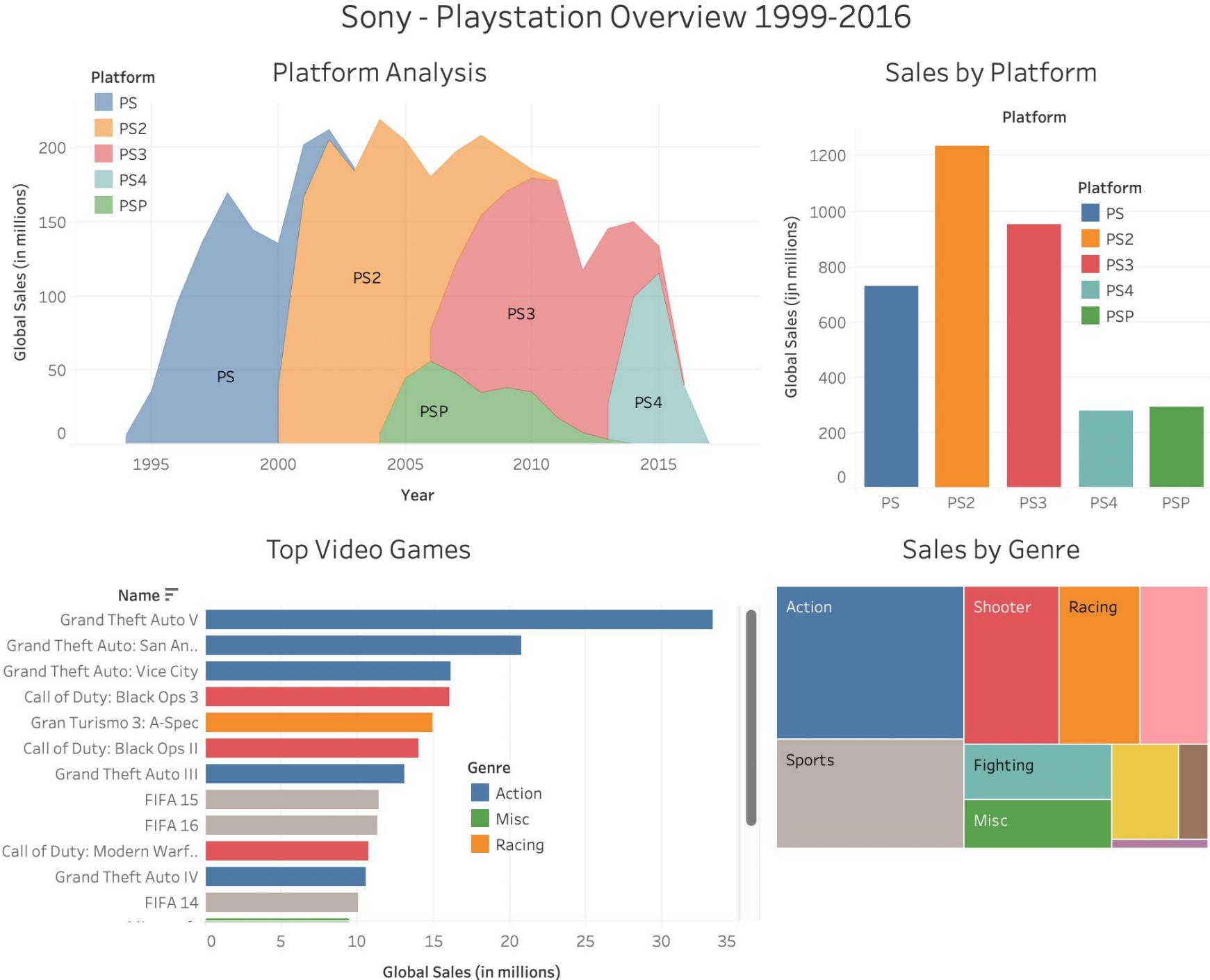
PUBLISHERS



DEVELOPERS

Sony / PlayStation

Overview 1999-2016

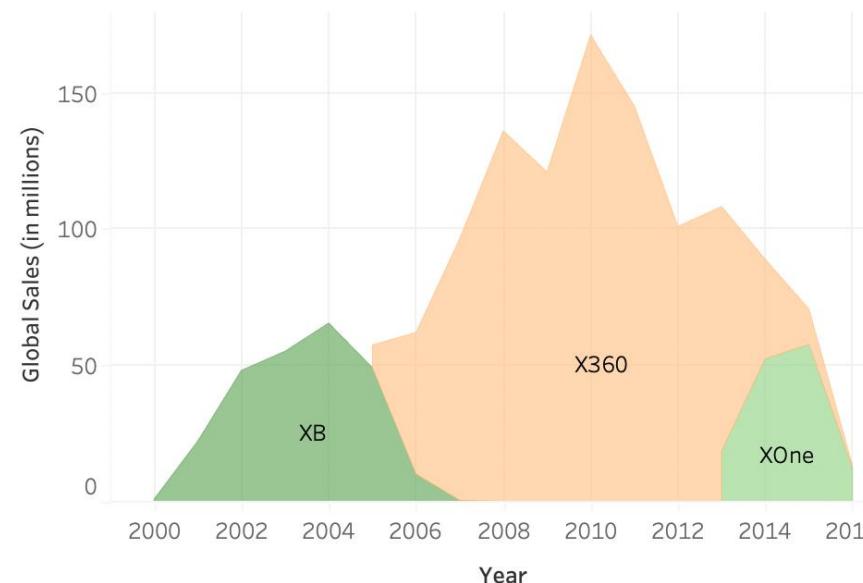


Microsoft / Xbox

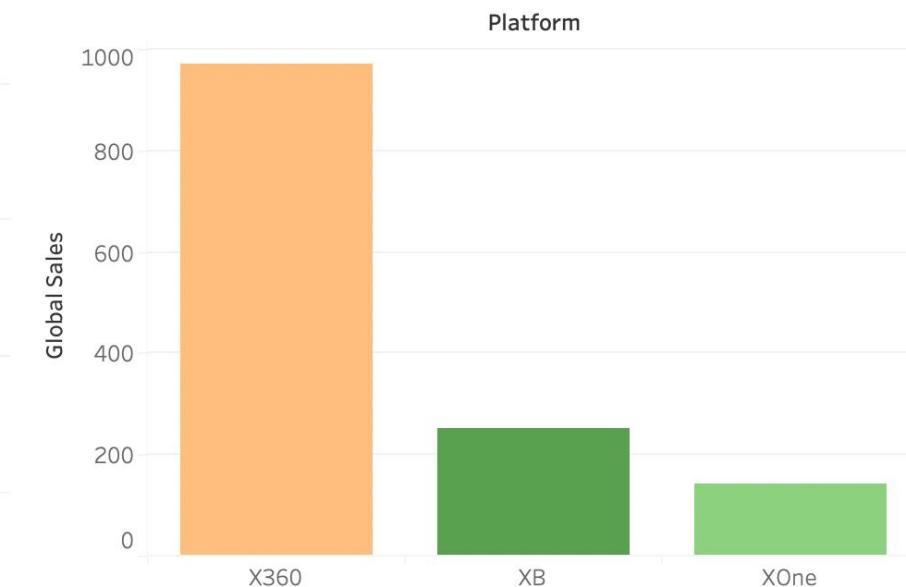
Overview 1999-2016

Microsoft - Xbox Overview 1999 - 2016

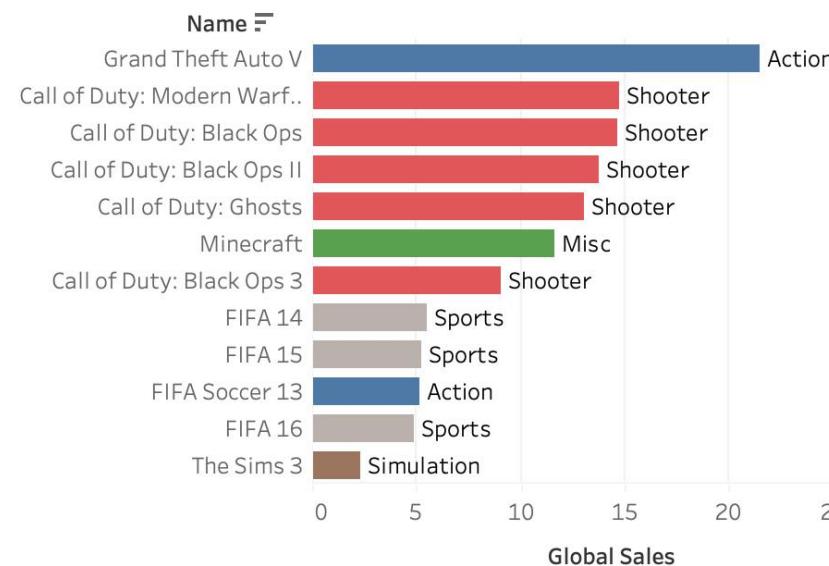
Platform Analysis for Xbox



Sales by Platform (Xbox)



Top Games Xbox

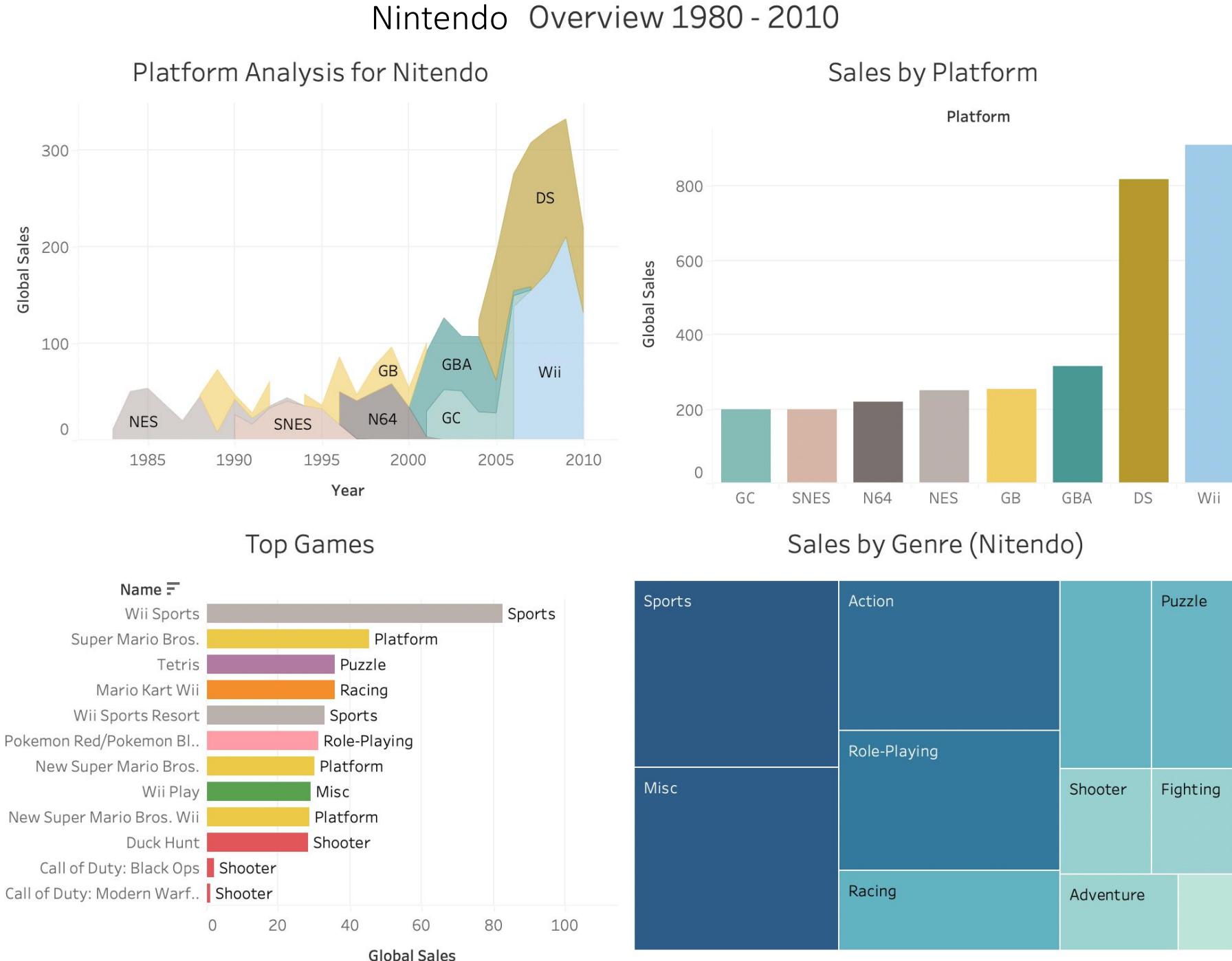


Sales by Genre (Xbox)



Nintendo

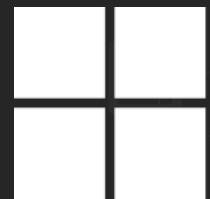
Overview 1999-2016





Main Stakeholders

SONY

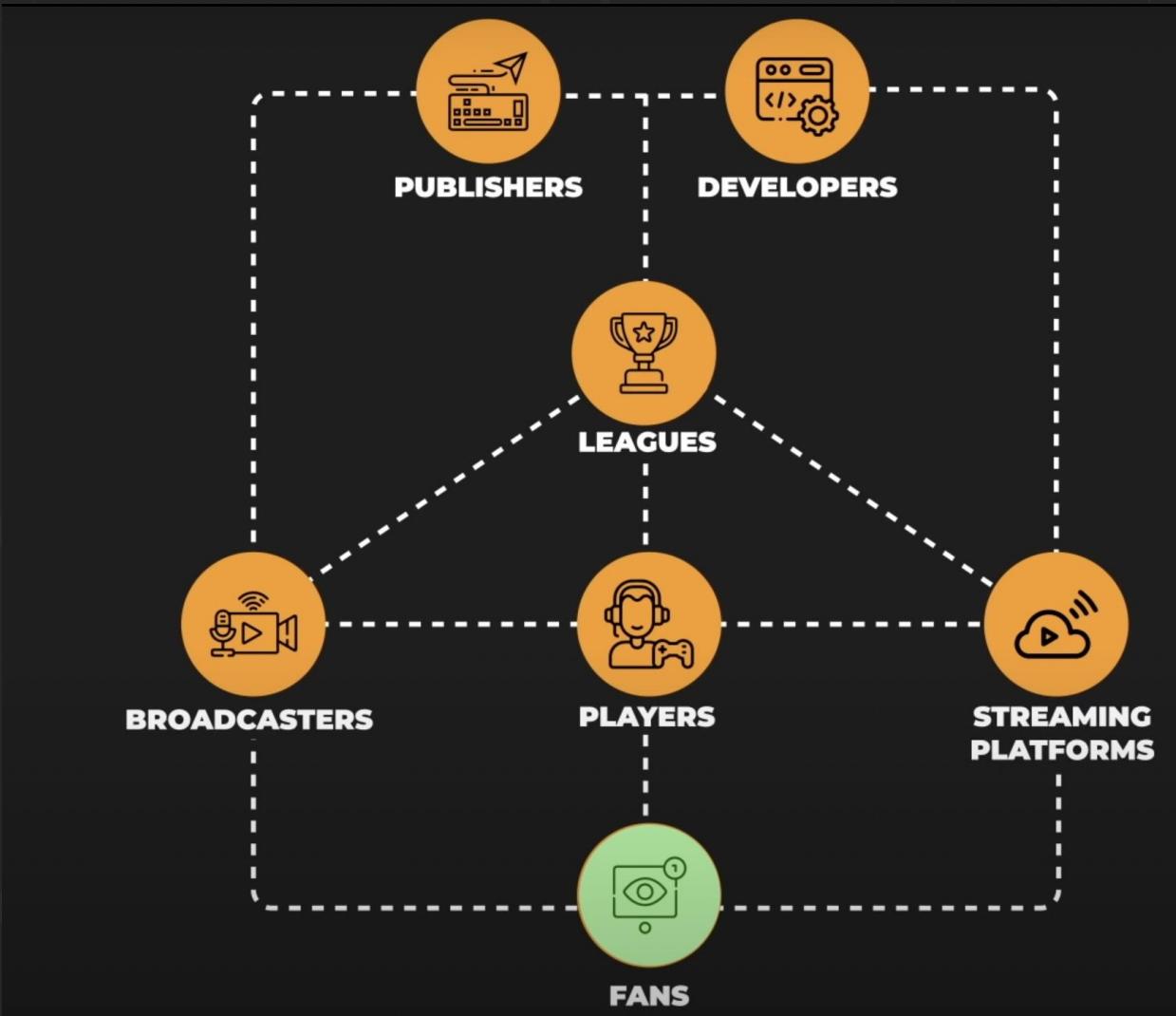


Microsoft

Nintendo®

- Who can benefit from this data?
 - Players, parents, developers, publishers/distributors, investors
 - The Big 3 in gaming industry
- How would the data help them to make better decisions?
 - Know your competitors
 - Play to your strengths
 - Understand your market/region
 - Adapt to changing demand

Other Stakeholders





**MORE
FANS**



**MORE
VISIBILITY**



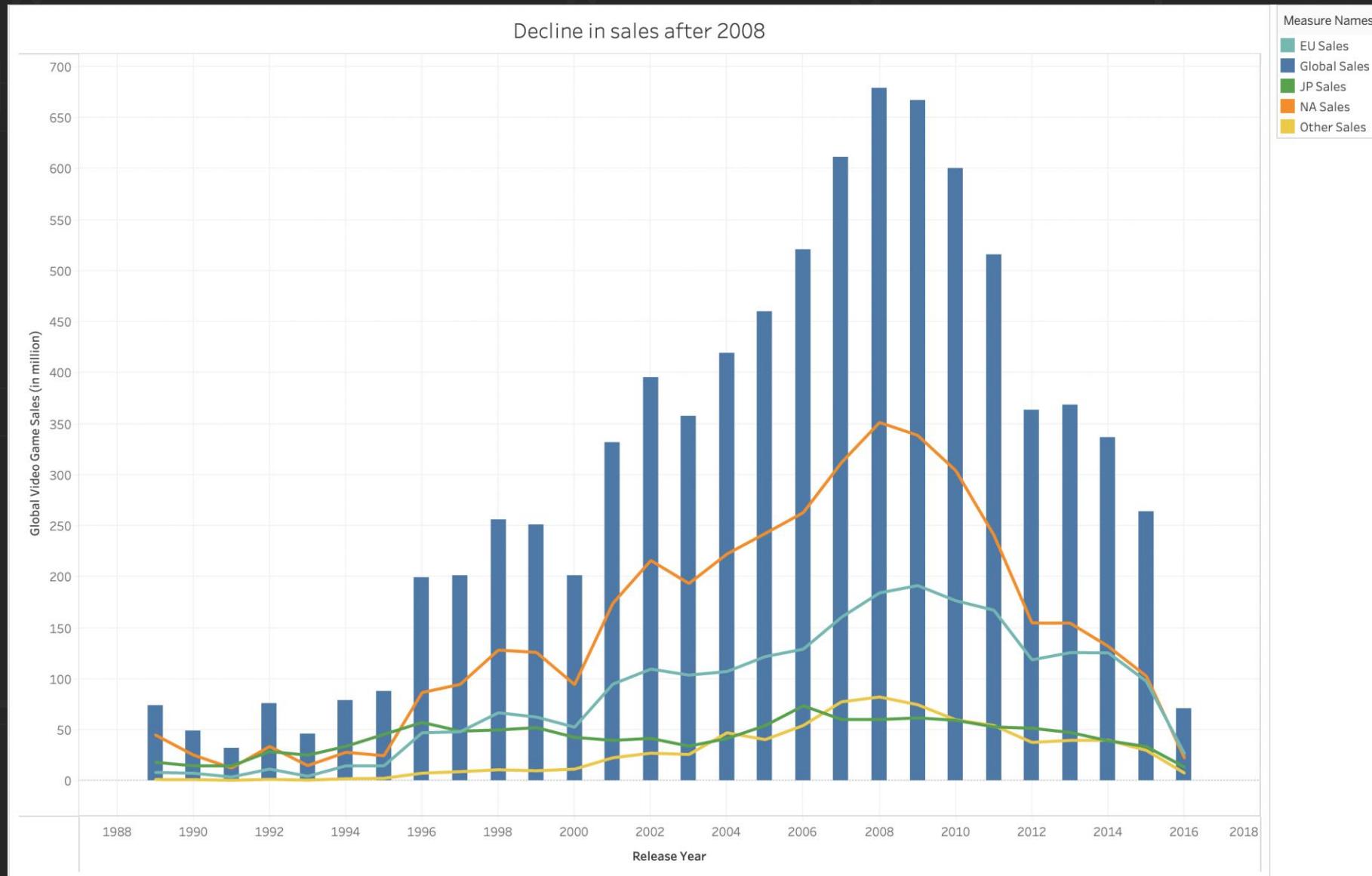
**MORE
SPONSORS**



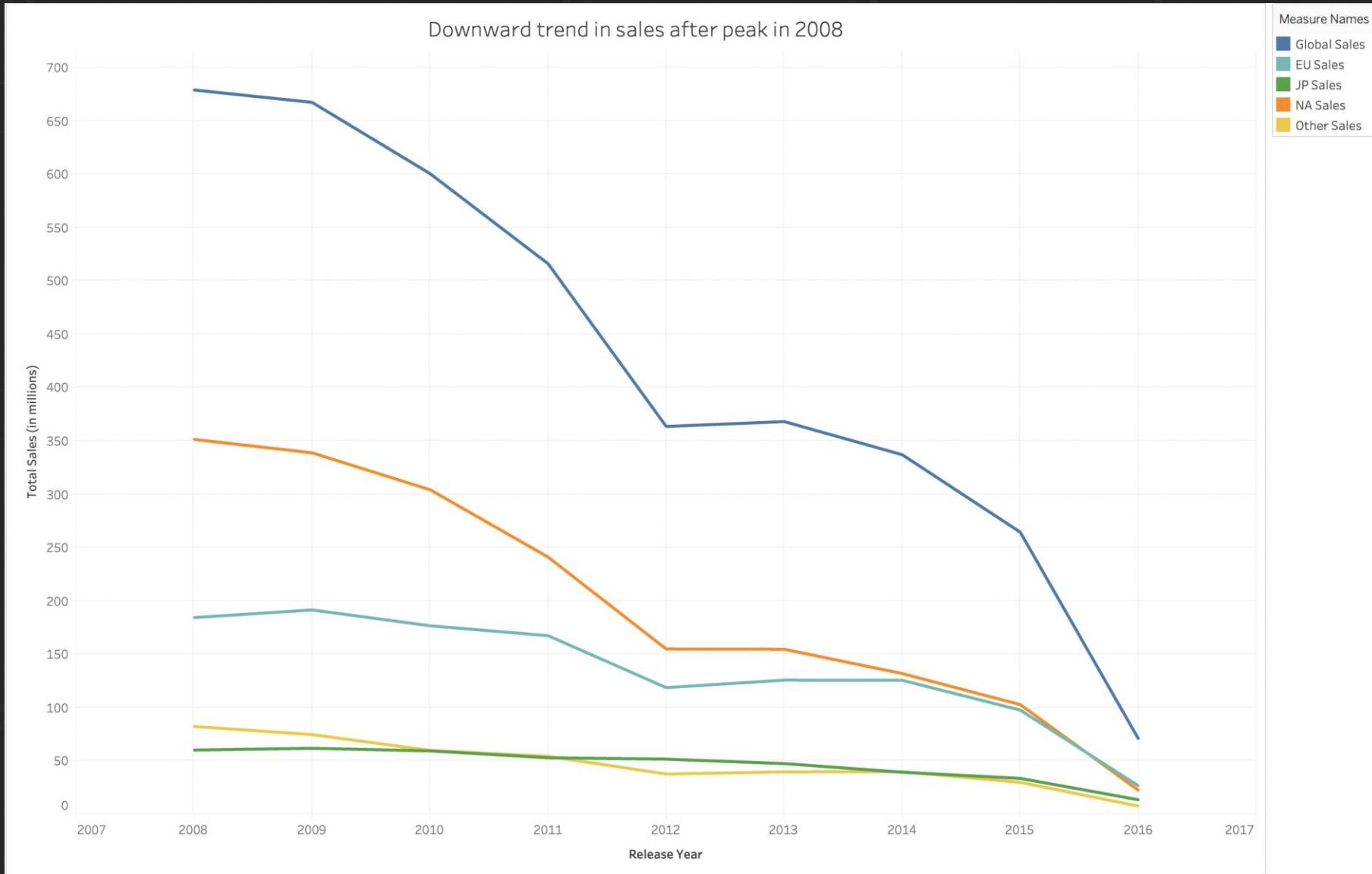
**MORE
MONEY**



Decline in Sales



Fall of Console Games



Reasons for Decline in Console Games Sales

Gaming Industry is on a Paradigm Shift

A paradigm shift is occurring in how gamers are now consuming games

- Many are related to cost:
 - Of gaming media, both physical and digital
 - Of high-end Consoles, PCs, etc.



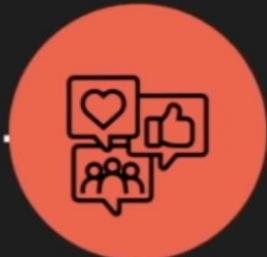
**MORE
BARRIERS**



**LESS
PLAYERS**



**LESS
VIEWERS**



**LESS
ENGAGEMENT**



**LESS
MONEY**

The Rise of Mobile Gaming

Smartphones and Mobile Gaming

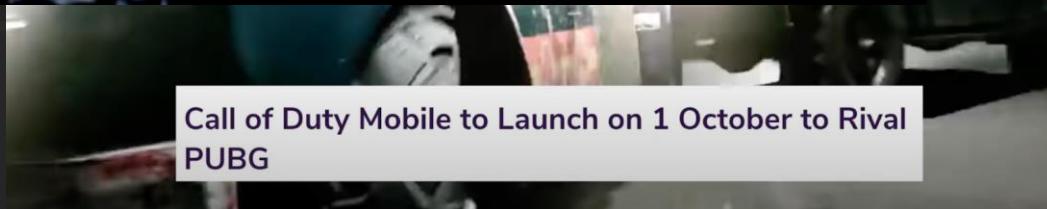
- The mobile game market has been growing significantly over the past decade.
- According to [WePC](#), the mobile game market took over 51% of global gaming revenue in 2020 while PC games and console games evenly split the rest.
- What is the appeal to gamers?
 - Lower cost or free
 - Simple
 - Already own the device
 - Convenience



Freemium model

Monetizing “free” games

- ‘Freemium’ games that are free to play but require money to unlock certain features. These features can include anything from customization options to large amounts of in-game currency.

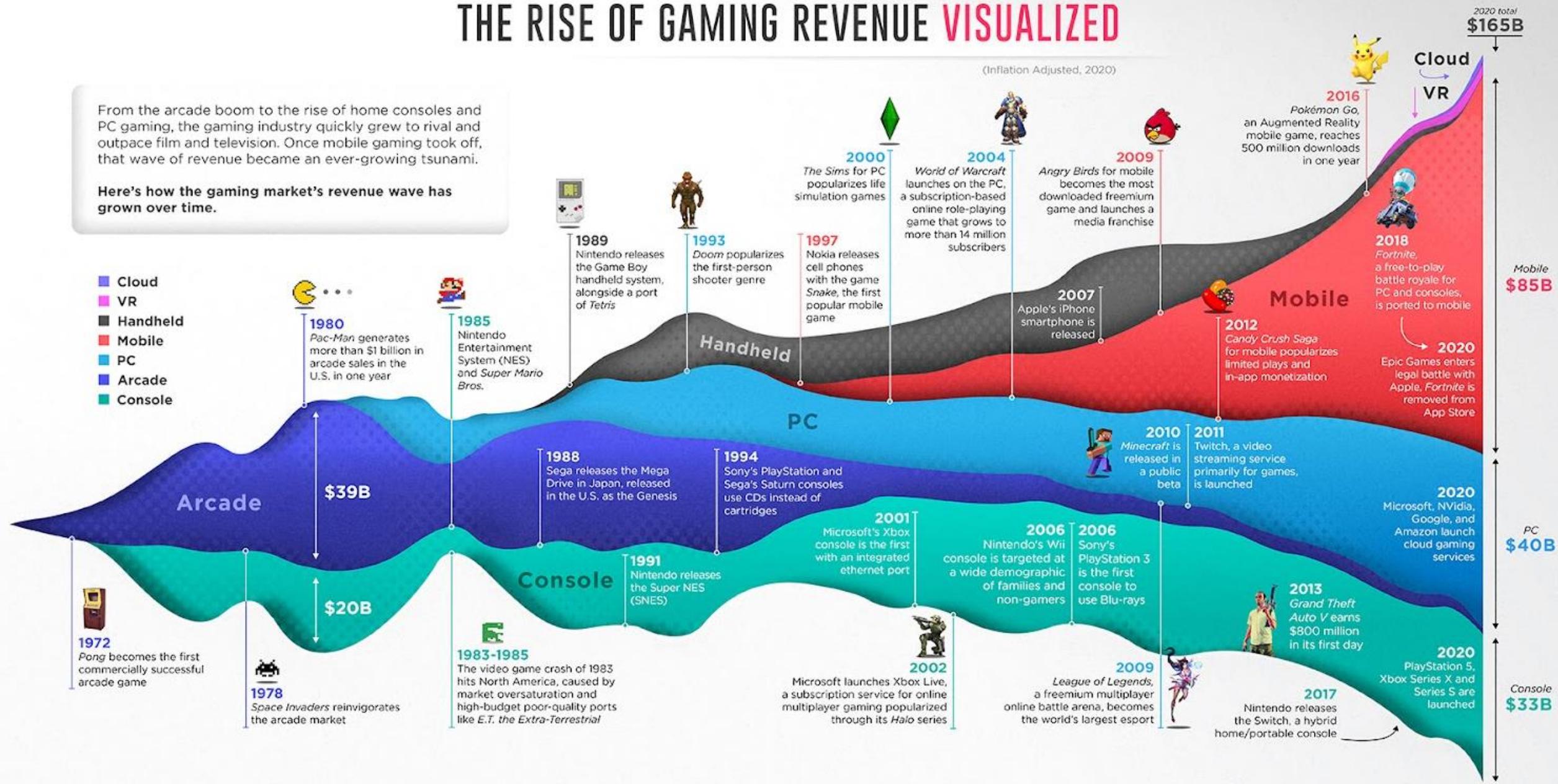


THE RISE OF GAMING REVENUE VISUALIZED

From the arcade boom to the rise of home consoles and PC gaming, the gaming industry quickly grew to rival and outpace film and television. Once mobile gaming took off, that wave of revenue became an ever-growing tsunami.

Here's how the gaming market's revenue wave has grown over time.

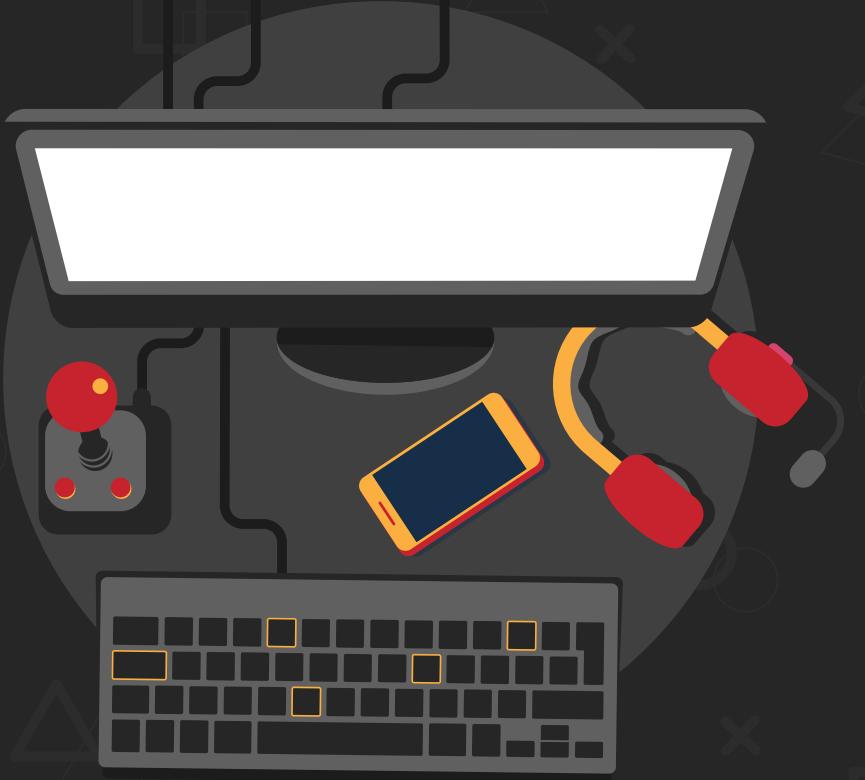
- Cloud
- VR
- Handheld
- Mobile
- PC
- Arcade
- Console





Thank You





Appendix



SQL Queries: Null Value & Dirty Data Analysis

Total Rows in the table

```
SELECT COUNT(*) from video_games_sales
```

Result : 16719

Finding Count of Null values for Name column:

```
select count(*) from video_games_sales  
where Name is null
```

Result: 0

Count of null or N/A or 0 values

```
select count(*) from video_games_sales  
where Year_of_Release is null or Year_of_Release = 'N/A' or Year_of_Release = 0
```

Result: 271

SQL Queries: Null Value & Dirty Data Analysis

Total Null Values and Non Null in for each column

```
SELECT SUM(CASE WHEN Name is null THEN 1 ELSE 0 END) AS Number_Of_Null_Values,  
COUNT(Name) AS Number_Of_Non_Null_Values  
FROM video_games_sales
```

Result:

```
Number_Of_Null_Values, Number_Of_Non_Null_Values  
0, 16719
```

```
SELECT SUM(CASE WHEN Critic_Score = 0 THEN 1 ELSE 0 END) AS Number_Of_Null_Values,  
SUM(CASE WHEN Critic_Score !=0 THEN 1 ELSE 0 END) AS Number_Of_Non_Null_Values,  
FROM video_games_sales
```

Result:

```
Number_Of_Null_Values, Number_Of_Non_Null_Values  
8582,8137
```

Finding all Null value in other columns using previous queries:

We get Insights that...

- There is no null value on NA_Sales column. However, for minimum value, there are "0" values on column.
- There is no null value on EU_Sales column but for minimum value, there are "0" values on column.
- There is no null value on JP_Sales column.
- There is no null value on Other_Sales column but for minimum value, there are "0" values on column
- There is no null or "0" values on Global_Sales column. The max sales is 82.53 and min sales is 0.01.
- The result shows that the Critic_Score column has 8582 null values.
- The result shows that the Critic_Count column has 8582 null values.
- The result shows that the User_Score column has 9134 null values.
- The result shows that the User_Count column has 9129 null values.
- The result shows that the Developer column has 6827 null values.
- The result shows that the Rating column has 6687 null values.

Dropping Columns due to high Null values percentages

```
alter table video_games_sales  
drop column User_count,  
drop column User_Score,  
drop column Critic_Score,  
drop column Critic_Count,  
drop column Rating,  
drop column Developer
```

Deleting Rows with Year N/A

Total Count of rows:

```
SELECT * FROM video_games.vgsales;  
SELECT year FROM video_games.vgsales  
where year = 'N/A'
```

Result: 271

Delete these 271 Rows:

```
delete from vgsales  
where year = 0
```

SQL Queries to Understand the Data

1. Most Popular Publisher: *Electronic Arts*

```
select publisher as Popular_Publisher  
from video_games_sales  
group by Publisher  
order by count(*) desc  
limit 1;
```

2. Most Popular Platform: *PS2*

```
select Platform as Most_Popular_Platform  
from video_games_sales  
group by Platform  
order by count(*) desc  
limit 1;
```

3. Most Popular Genre: *Action*

```
select Genre  
from video_games_sales  
group by Genre  
order by count(*) desc  
limit 1;
```

4. Top-selling Action Game: *Grand Theft Auto V*

```
select Genre,Name  
from video_games_sales  
where Genre = 'Action'  
group by Genre, Name  
having max(Global_Sales);
```

5. Top 10 Best Selling Video Games

```
SELECT Name  
FROM video_games_sales  
GROUP BY Name  
ORDER BY sum(Global_Sales) DESC  
limit 10;
```

Name
Wii Sports
Grand Theft Auto V
Super Mario Bros.
Tetris
Mario Kart Wii
Wii Sports Resort
Pokemon Red/Pokemon Blue
Call of Duty: Modern Warfare 3
New Super Mario Bros.
Call of Duty: Black Ops II

SQL Queries to Understand the Data

6. Details of the Bestselling Game ever: *Wii sports*

```
SELECT *  
FROM video_games_sales  
order by Global_Sales desc  
limit 1;
```

7. Game published on the most platforms: *Need for Speed: Most Wanted*

```
SELECT Name, count(Platform)  
FROM video_games_sales  
GROUP BY Name  
ORDER BY count(Platform) DESC  
Limit 1;
```

8. Best selling genre between year 2006 - 2016: *Action*

```
SELECT Genre, sum(Global_Sales)  
FROM video_games_sales  
WHERE Year>=2006 and Year<=2016  
GROUP BY Genre  
ORDER BY sum(Global_Sales) DESC  
Limit 1;
```

SQL Queries to Understand the Data

9. Between 2006 - 2016, which year has the greatest number of games published? *2009 (1,431 games)*
which year has the highest game sales revenue (global)? *2008 (\$ 678.89 M)*

```
SELECT year, count(*)  
FROM video_games_sales  
GROUP BY Year  
ORDER BY count(*) DESC  
Limit 1;
```

```
SELECT year, sum(Global_Sales)  
from video_games_sales  
GROUP BY Year  
Order BY sum(Global_Sales) DESC  
Limit 1;
```

SQL Queries to Understand the Data

10. Number of total unique platforms: 31

```
SELECT count(distinct(Platform))
FROM video_games_sales
order by Platform;
```

11. Top 5 years with greatest number of games released: 2009, 2008, 2010, 2007, 2011

```
SELECT Year, count(*)
FROM video_games_sales
GROUP BY Year
ORDER BY count(*) DESC
Limit 5;
```

12. Best selling genre in Japan on and before 2016: *Role-Playing (\$ 350.25 M)*

```
SELECT Genre, sum(JP_Sales)
FROM video_games_sales
WHERE Year<=2016
GROUP BY Genre
ORDER BY sum(JP_Sales) DESC
Limit 1;
```

SQL Queries to Understand the Data

13. Best selling genre in N. America on and before 2016: Action (\$ 861.8 M)

```
SELECT Genre, sum(NA_Sales)
FROM video_games_sales
WHERE Year<=2016
GROUP BY Genre
ORDER BY sum(NA_Sales) DESC
Limit 1;
```

14. Top 10 game publishers by revenue

```
SELECT Publisher, sum(Global_Sales)
FROM video_games_sales
GROUP BY Publisher
ORDER BY sum(Global_Sales) DESC
Limit 10;
```

Publisher	sum(Global_Sales)
Nintendo	1784.429999999982
Electronic Arts	1093.389999999996
Activision	721.409999999981
Sony Computer Entertai...	607.279999999988
Ubisoft	473.5399999999934
Take-Two Interactive	399.299999999996
THQ	340.4399999999943
Konami Digital Entertain...	278.559999999998
Sega	270.6999999999925
Namco Bandai Games	253.65000000000083

15. Top 10 game publishers by number of games published

```
SELECT Publisher, count(Name)
FROM video_games_sales
GROUP BY Publisher
ORDER BY count(Name) DESC
Limit 10;
```

Publisher	count(Name)
Electronic Arts	1339
Activision	966
Namco Bandai Games	928
Ubisoft	918
Konami Digital Entertain...	823
THQ	712
Nintendo	696
Sony Computer Entertai...	682
Sega	632
Take-Two Interactive	412

SQL Queries to Understand the Data

16. Sales comparison by genre

```
SELECT Genre, sum(Global_Sales)  
FROM video_games_sales  
GROUP BY Genre  
ORDER BY sum(Global_Sales) DESC;
```

Genre	sum(Global_Sales)
Action	1722.879999999971
Sports	1309.239999999988
Shooter	1026.199999999957
Role-Playing	923.839999999941
Platform	829.149999999976
Misc	797.619999999935
Racing	726.769999999954
Fighting	444.049999999994
Simulation	390.159999999979
Puzzle	242.220000000005
Adventure	234.8000000000135
Strategy	173.4300000000032

17. Nintendo's sales comparison between N. America and Japan market

```
SELECT Publisher, sum(JP_Sales), sum(NA_Sales), (sum(NA_Sales) - sum(JP_Sales)) as  
Diff_of_NA_JP_Market  
FROM video_games_sales  
WHERE Publisher = 'Nintendo';
```

	Publisher	sum(JP_Sales)	sum(NA_Sales)	Diff_of_NA_JP_Market
▶	Nintendo	454.9899999999955	815.7500000000001	360.7600000000056

18. How many Final Fantasy games are there in total over the years? 77

```
SELECT count(Name)  
FROM video_games_sales  
WHERE Name LIKE 'Final Fantasy%';
```

SQL Queries to Understand the Data

19. Which are the Top 5 best selling Final Fantasy Games?

```
SELECT Name, sum(Global_Sales)
FROM video_games_sales
WHERE Name LIKE 'Final Fantasy%'
GROUP BY Name
ORDER BY sum(Global_Sales) DESC
LIMIT 5;
```

Name	sum(Global_Sales)
Final Fantasy VII	9.72
Final Fantasy X	8.05
Final Fantasy VIII	7.86
Final Fantasy XIII	7.53
Final Fantasy III	7.05

20. List Top 10 oldest game and display how old are the games by adding an 'age' column

```
SELECT *, (Year(Now()) - Year) as age
FROM video_games_sales
ORDER BY Year
LIMIT 10;
```

Name	Platform	Year	Genre	Publisher	NA_Sales	EU_Sales	JP_Sales	Other_Sales	Global_Sales	age
Checkers	2600	1980	Misc	Atari	0.22	0.01	0	0	0.24	42
Bridge	2600	1980	Misc	Activision	0.25	0.02	0	0	0.27	42
Freeway	2600	1980	Action	Activision	0.32	0.02	0	0	0.34	42
Missle Command	2600	1980	Shooter	Atari	2.56	0.17	0	0.03	2.76	42
Kaboom!	2600	1980	Misc	Activision	1.07	0.07	0	0.01	1.15	42
Asteroids	2600	1980	Shooter	Atari	4	0.26	0	0.05	4.31	42
Defender	2600	1980	Misc	Atari	0.99	0.05	0	0.01	1.05	42
Ice Hockey	2600	1980	Sports	Activision	0.46	0.03	0	0.01	0.49	42
Boxing	2600	1980	Fighting	Activision	0.72	0.04	0	0.01	0.77	42
Grand Prix	2600	1981	Racing	Activision	0.45	0.03	0	0	0.48	41