

# Video Games

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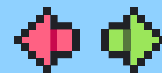
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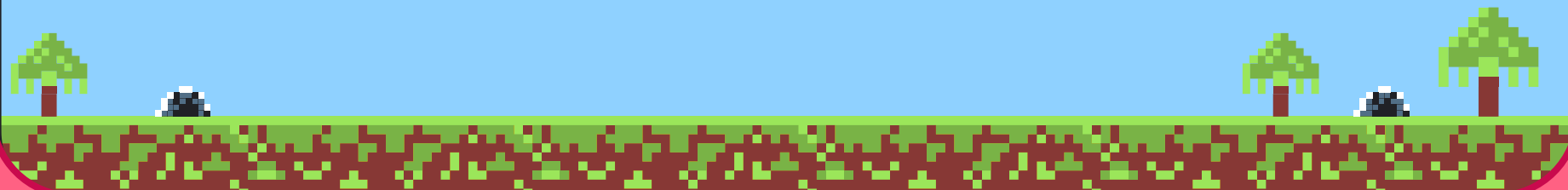




# Project Introduction

Welcome to our project, which focuses on utilizing Python to analyze data—more especially, data from video games. The goal is to demonstrate how Python may be used to import, clean, and analyze real-world data in order to get insightful information.

- Objective of the Project: The objective of this project is to utilize Python for analyzing video games data to extract meaningful insights, identify patterns, and make data-driven decisions. This includes Exploratory Data Analysis (EDA), data cleaning & visualization to answer business questions effectively for decision-making.



# Exploratory Data Analysis



◆ Data



Video Games

# Data Cleaning



- ☒ Drop useless columns.
- ☒ Check for Missing Values.
- ☒ Drop Missing Values.
- ☒ Fill Missing Values.
- ☒ Check for data types.
- ☒ Check for duplicates.



## Notes

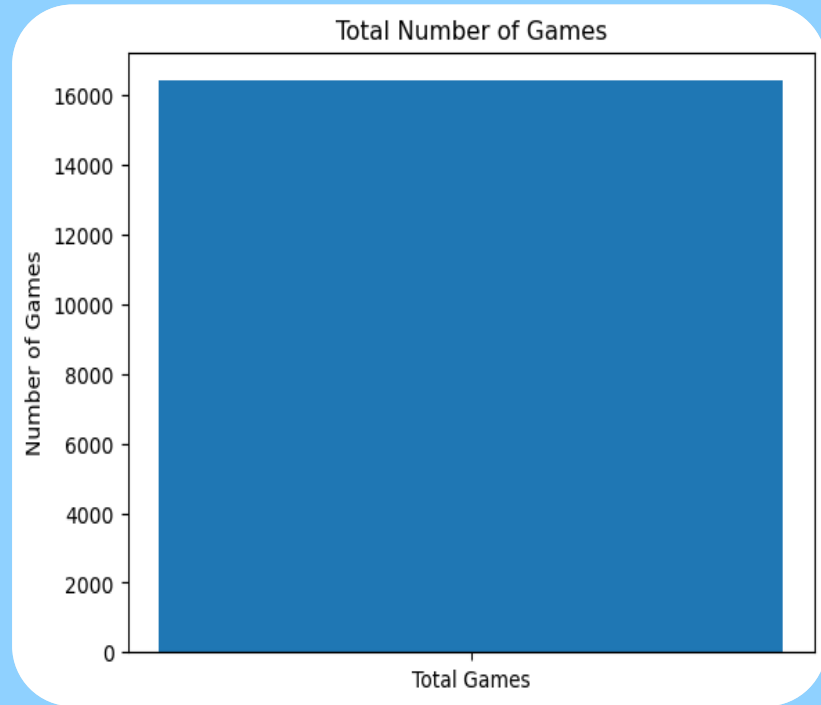
After each step, check for data accuracy.

After cleaning, We have 16,416 row & 13 column.



Q1- How many games are in the dataset?

Games : 16,416 games



Q2- Which platform has the  
most games?



The Platform : **PS2**

PS2

2127



Q3- What is the lowest common  
genre?



Genre : **Puzzle**

Puzzle 569





Q4- Which year has the most  
number of released games?



Year : 2008

2008

1427



Q5- What is the best-selling  
game worldwide?



The Game : **Wii Sports**

Wii Sports

82.53



Q6- Which publisher has released the most games?

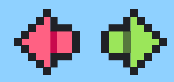


The Publisher : **Electronic Arts**

Electronic Arts 1344



Q7- Which platform has the highest global sales?



The Platform : PS2

PS2	1233.46
-----	---------



Q8- Which year had the highest global sales?  



Year : 2008

2008

671.79



Q9- Which game has the highest sales in Japan?  



The Game : **Pokemon Red / Blue**

Pokemon Red/Pokemon Blue	10.22
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Q10- What is the average global sales per game?

Average Sales : 82.53

Wii Sports

82.53

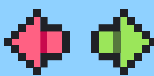
Q11- How many unique publishers    
are in the dataset?

Unique Publishers : 579

579



Q12- How many unique platforms  
are in the dataset?



Unique Platforms : 31

31

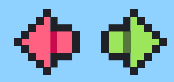


Q13- What is the most  
successful publisher based on  
total global sales?

Publisher : Nintendo

Nintendo 1786.72



Q14- Which genre has the highest average global sales?



Genre : Platform

Platform 0.940615



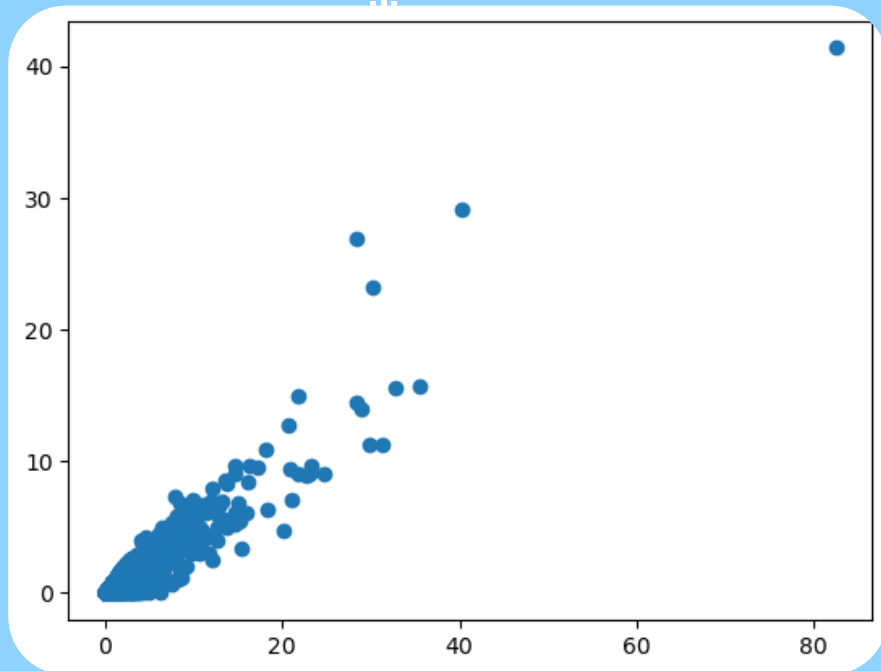
Q15- What percentage of total    
global sales come from the top  
10 best-selling games?

Percentage of top 10 selling  
games : 4.18%

4.18 %

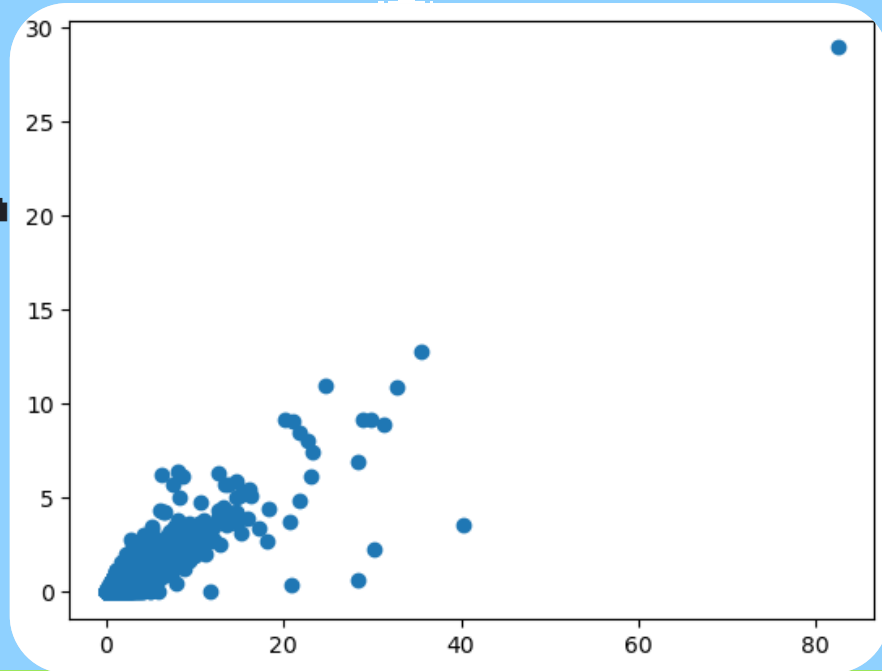
Q16- Determine strong positive correlation between different columns?

Strong Positive Correlation between Global Sales and North America Sales by **0.941238**



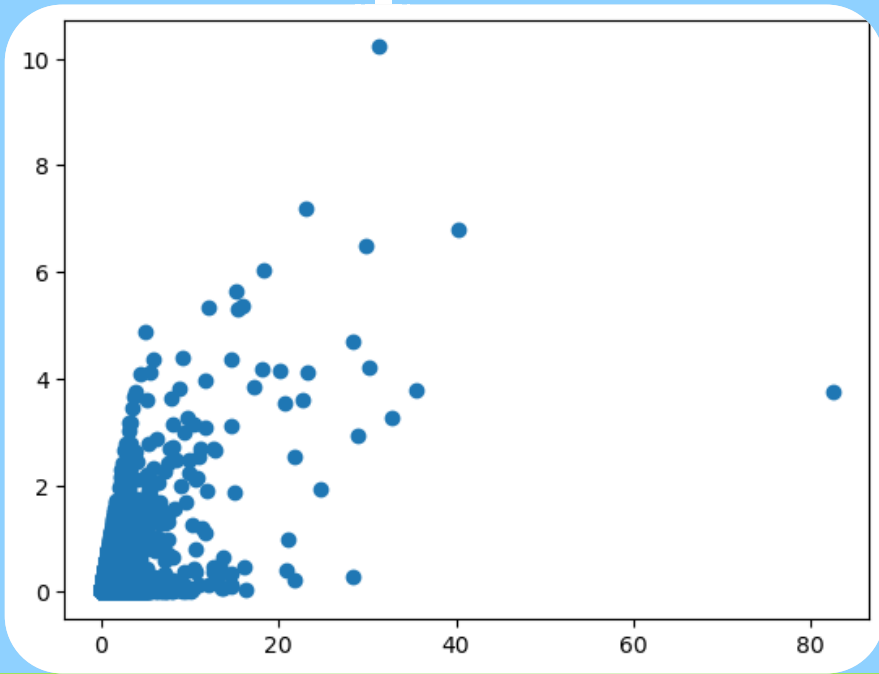
Q16- Determine strong positive correlation between different columns?

Strong Positive  
Correlation between  
Global Sales and  
Europe Sales by  
**0.901665**



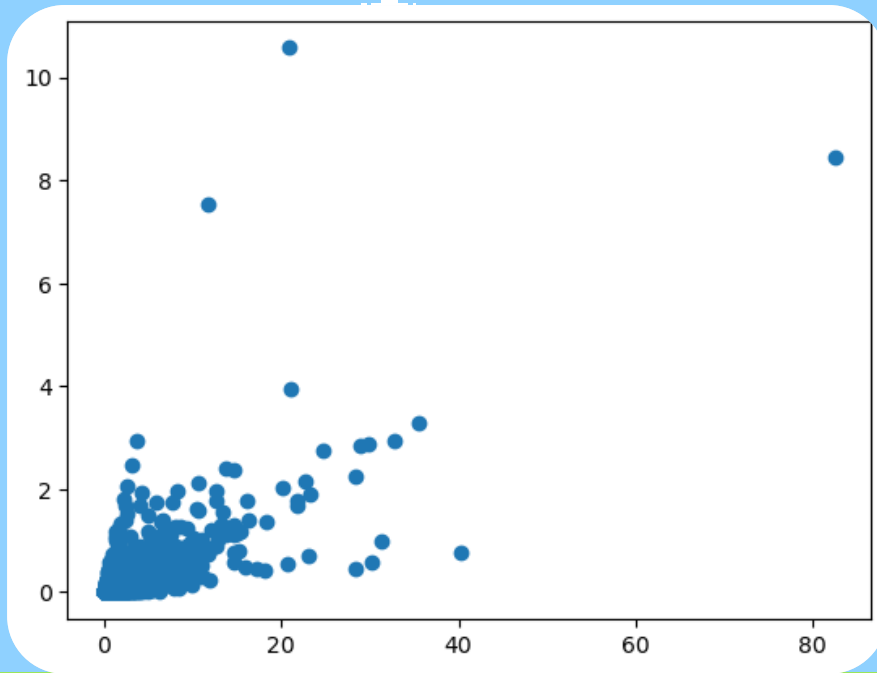
Q16- Determine strong positive correlation between different columns?

Strong Positive  
Correlation between  
Global Sales and  
Japan Sales by  
**0.613305**



Q16- Determine strong positive correlation between different columns?

Strong Positive  
Correlation between  
Global Sales and  
Other Sales by  
**0.748907**





Q17- Which game has the biggest difference between critic score and user score?

The Game : NFL 2K1

NFL 2K1

91.0

Q18- Which month has the most  
europe sales around years?



The Month : January

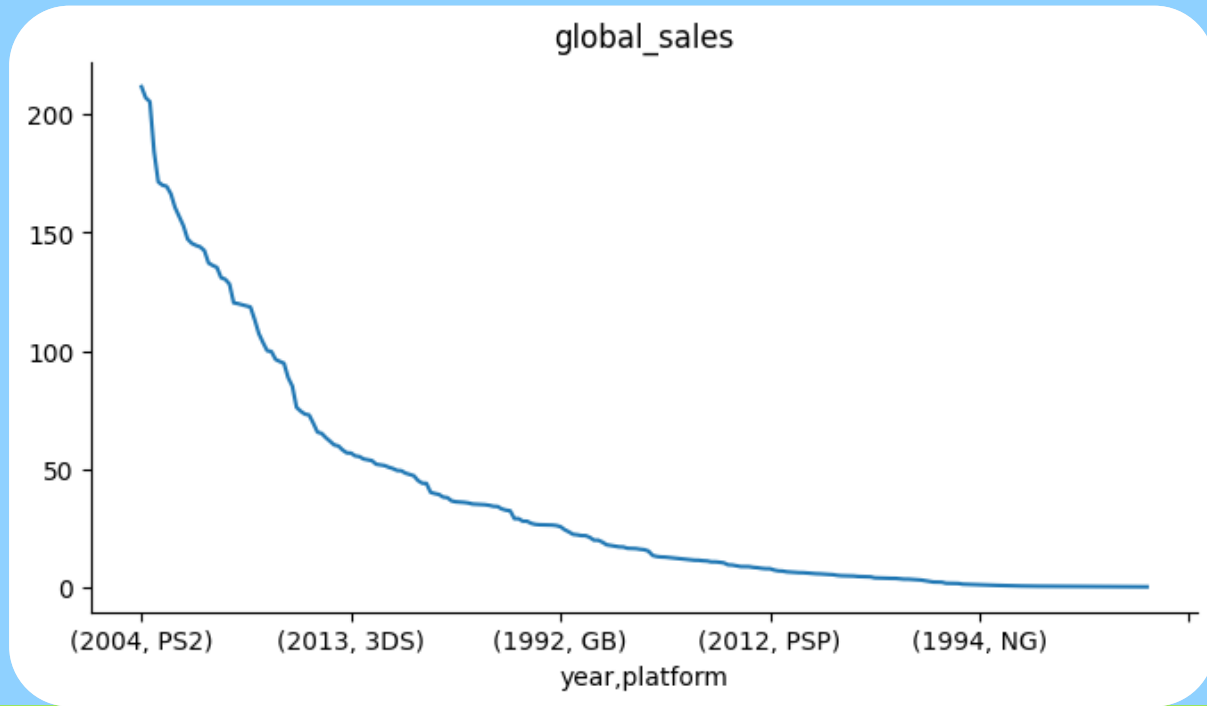
1 2397.29



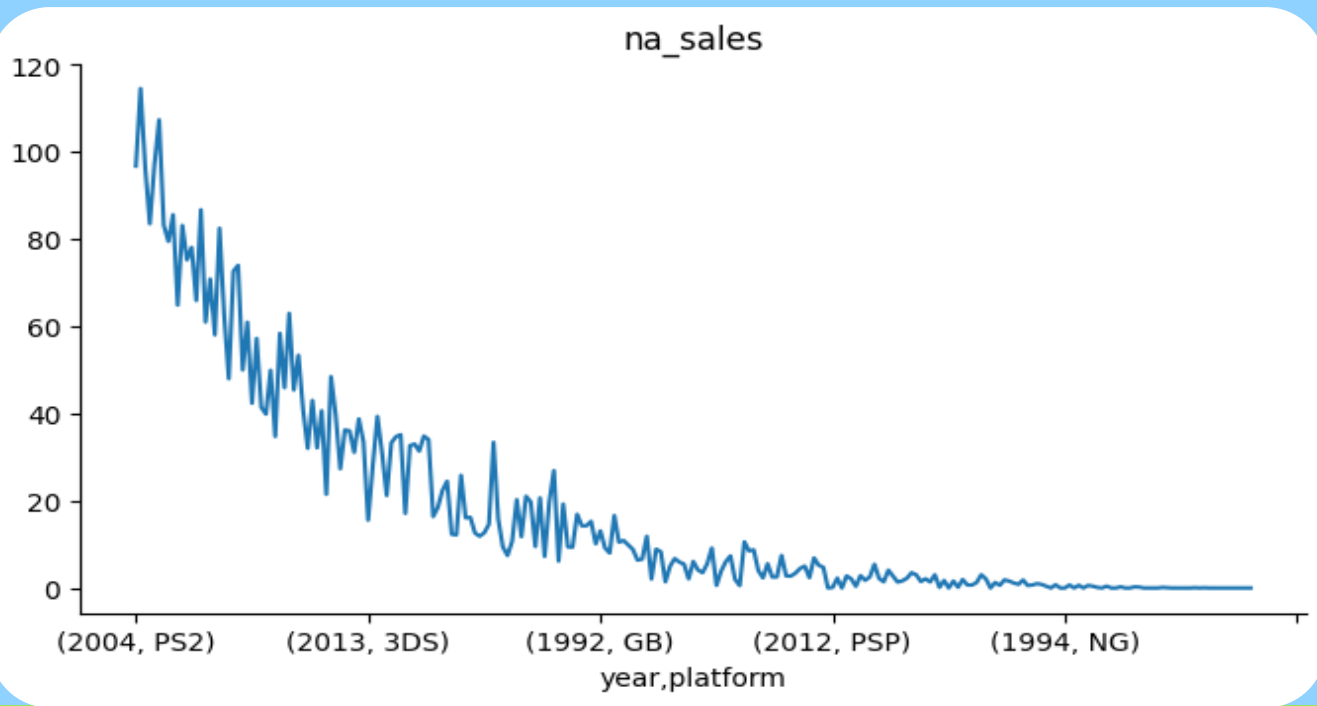
Q19- What is total global sales per platform each year?

		global_sales	eu_sales	other_sales	jp_sales	na_sales
year	platform					
2004	PS2	211.78	56.01	39.85	19.17	96.78
2009	Wii	207.08	58.31	17.54	16.57	114.55
2002	PS2	205.40	65.27	21.72	21.85	96.54
2003	PS2	184.29	61.20	20.69	18.88	83.54
2008	Wii	171.45	46.52	14.99	12.69	97.12
...	...	...	...	...	...	...
1988	PC	0.03	0.02	0.01	0.00	0.00
1994	3DO	0.02	0.00	0.00	0.02	0.00
1985	DS	0.02	0.00	0.00	0.02	0.00
2007	DC	0.02	0.00	0.00	0.02	0.00
2017	PSV	0.02	0.00	0.00	0.02	0.00

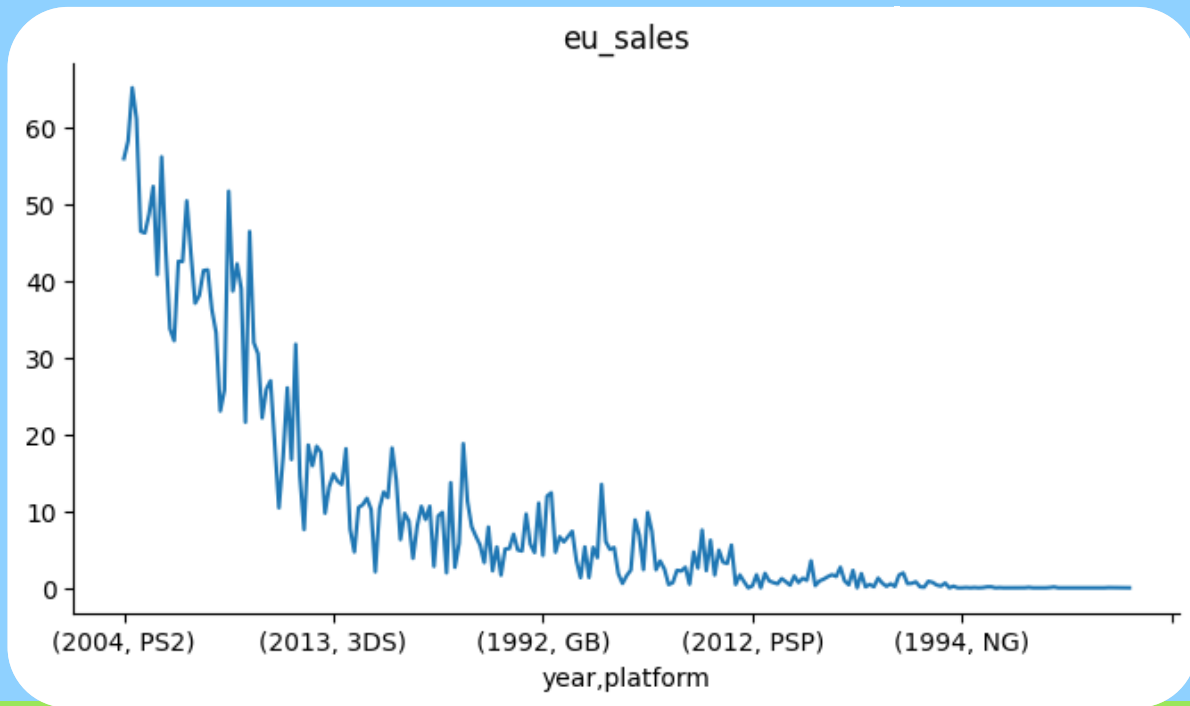
Q19- What is total global sales per platform each year?



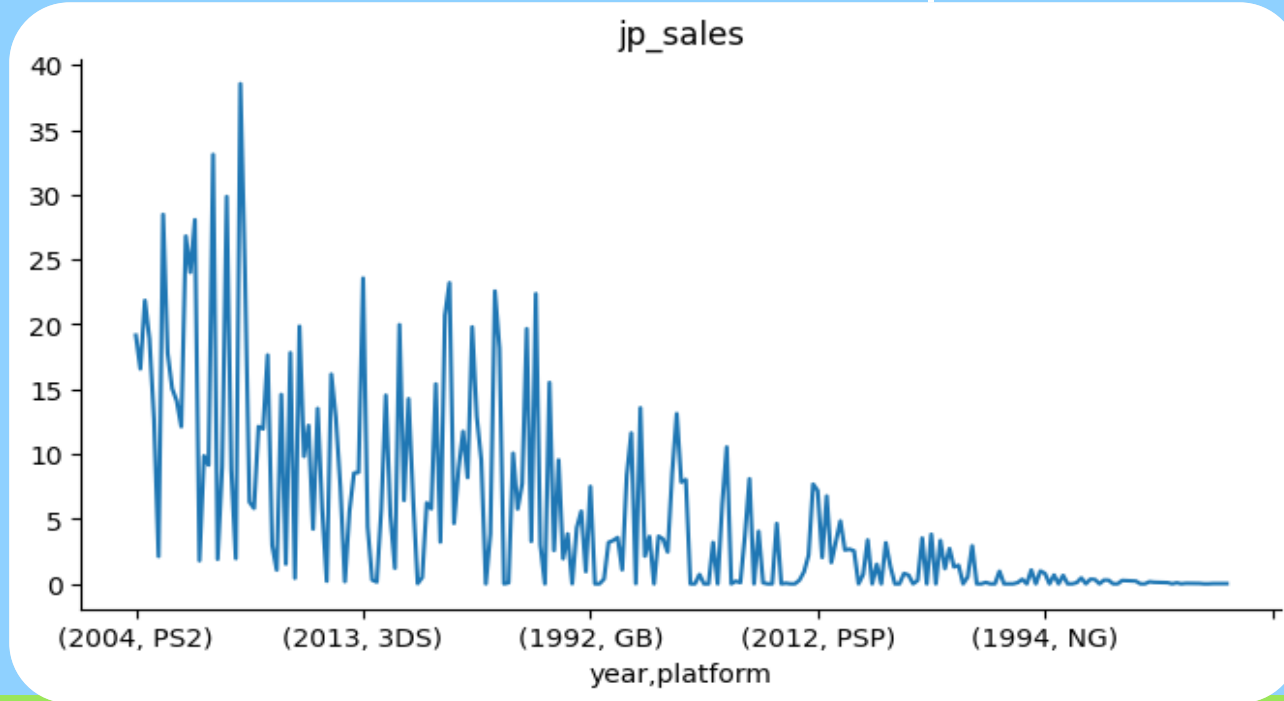
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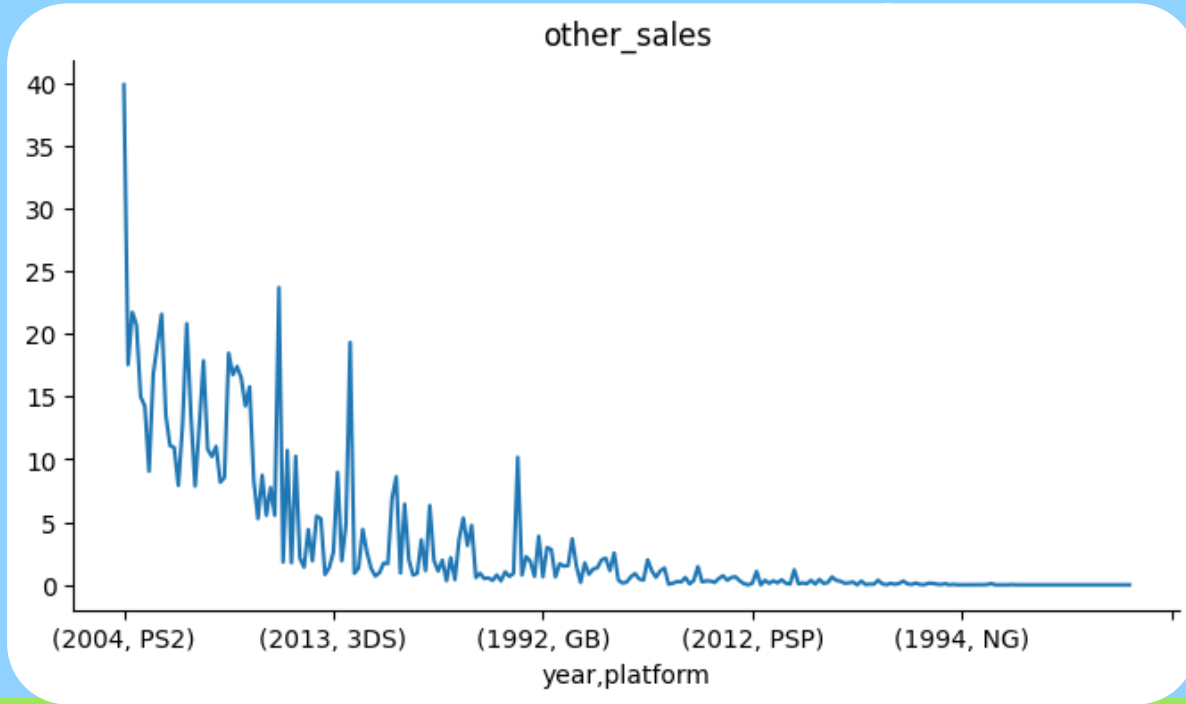
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Q20- Which publisher had the  
best average critic score  
considering only publishers  
with at least 20\* games?



The Publisher :  
Microsoft Game  
Studios

Microsoft Game Studios

74.47054



Q21- Which Racing game has the  
second highest global sales?

The Racing Game :  
Mario Kart DS

Mario Kart DS





Q22- Which best PS4 sold game in  
Europe?



The Game : Grand  
Theft Auto V

Grand Theft Auto V



Q23- What is the percentage of    
published games for each  
publisher?  

The percentage of  
published games of  
Nintendo: 4.26%

4.26 %



# Recommendations



## Focus on High-Performing Genres

The dataset indicates that certain genres, such as Action, Sports, Racing, and Role-Playing, have consistently high global sales. Future game development and marketing efforts should prioritize these genres to maximize revenue.

## Target Strong Regional Markets

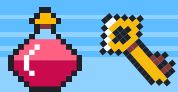
North America and Europe dominate sales figures. Expanding marketing campaigns and distribution in these regions could yield higher returns. However, Japan remains a key market for Role-Playing and Nintendo titles



# Recommendations

## Monitor Emerging Trends

The gaming industry rapidly evolves. Developers and publishers should continuously monitor shifts in consumer preferences, such as the rise of mobile gaming, cloud gaming, or VR/AR trends, to remain competitive.



Thank  
you

