



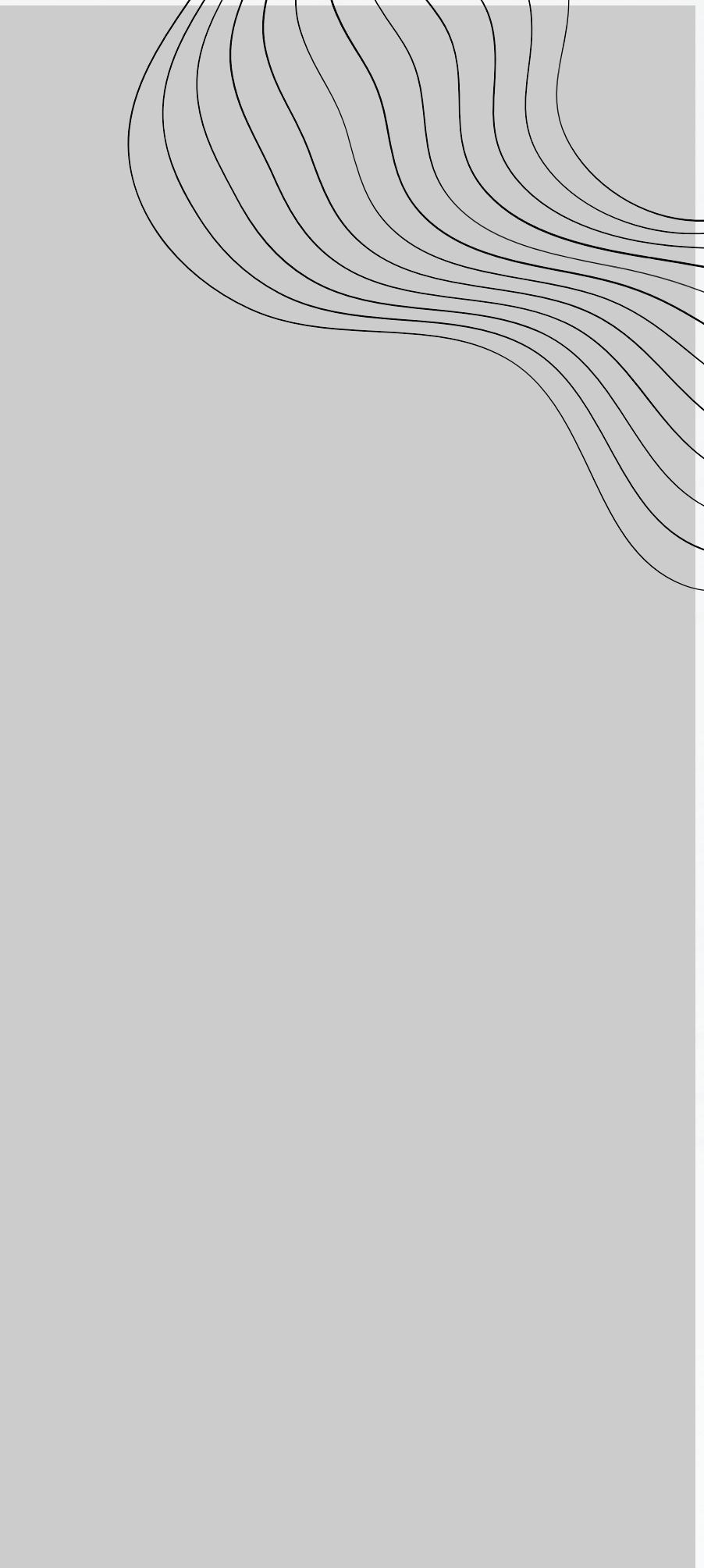
**WHEN WAS THE BEST  
ERA OF  
VIDEO GAMES?**

# OVERVIEW

**Video games are a big industry**, with the global gaming market expected to surpass \$300 billion by 2027, according to Mordor Intelligence. With such high stakes, major game publishers are heavily motivated to produce the next blockbuster hit. But are video games truly improving, or has the best era of gaming already come and gone?

In this project, we analyze critics and user scores, along with sales data, for the top 400 video games released since 1977. The goal is to determine if there was a "best era" of gaming by identifying the release years that were most favored by users and critics. Additionally, we investigate into the business side by examining sales data for these games.

The analysis will require joining datasets and applying set theory comparisons. The database contains two tables, each limited to 400 rows for this project.



# PROBLEM STATEMENT

This project aims to analyze video game sales data and critic/user review scores to explore trends and identify potential "golden ages" for video games.

# GOALS

01.

**Identify the best-selling games:**

Find the top 10 games based on sales figures.

02.

**Analyze critic scores:**  
Identify the top 10 years with the highest average critic score for games with a minimum release count of 4 (ensuring a good sample size).

03.

**Find years of critic-user agreement on game ratings:**

Identify years where both critics and users rated the released games highly (average critic score  $> 9$  OR average user score  $> 9$ ).

# DATASET AND SOURCE

The project utilizes two pre-existing tables:

- **games\_sales:** Contains information about video game sales figures.
- (Combined) **critics\_avg\_rating\_by\_year** and **users\_avg\_rating\_by\_year:** These tables (assumed to be combined for the queries) provide pre-calculated average critic and user scores grouped by release year.
- **games\_reviews:** Contains information about critic and user score of video game.

The complete dataset with over 13,000 games is available on Kaggle, but only a limited sample of 400 games is used for this project.

# OUTPUTS

01

Retrieve the top ten best-selling games, with all columns from the **game\_sales** table, sorted in descending order by the **games\_sold** column. Name the **result** **best\_selling\_games**.

02

Get the ten years with the highest average critic scores, considering only years with at least four games released. The output should include columns for the **year**, **num\_games\_released**, and the **avg\_critic\_score**. Sort the table by **avg\_critic\_score** in descending order and name it **critics\_top\_ten\_by\_years**.

03

Identify the years where critics and users generally agreed that games were highly rated. Return years where either the average critic score was over 9 or the average user score was over 9. Use pre-calculated averages from the **users\_avg\_year\_rating** and **critics\_avg\_year\_rating** tables. The result should include columns for **year**, **num\_games**, **avg\_critic\_score**, **avg\_user\_score**, and **diff** between the critic and user **scores**. Sort the table by year in ascending order and name it **the\_best\_years**.

# DATA FINDINGS

01.

**Best-Selling Games:**  
The queries don't reveal specific game titles, but it allows identifying the top 10 games based on sales figures.

02.

**Top 10 Years for Critic Score :**  
The project can identify the top 10 years with the highest average critic score for game releases, considering a minimum release count per year.

03.

**Years of Critic-User Agreement on Game Ratings :**  
We can find years where both critics and users agreed on the quality of released games based on a threshold score (average critic score  $> 9$  OR average user score  $> 9$ ).

# DATA FINDINGS - BEST-SELLING GAMES

	name	platform	publisher	developer	games_sold	year
0	Wii Sports for Wii	Wii	Nintendo	Nintendo EAD	82.90	2006
1	Super Mario Bros. for NES	NES	Nintendo	Nintendo EAD	40.24	1985
2	Counter-Strike: Global Offensive for PC	PC	Valve	Valve Corporation	40.00	2012
3	Mario Kart Wii for Wii	Wii	Nintendo	Nintendo EAD	37.32	2008
4	PLAYERUNKNOWN'S BATTLEGROUNDS for PC	PC	PUBG Corporation	PUBG Corporation	36.60	2017
5	Minecraft for PC	PC	Mojang	Mojang AB	33.15	2010
6	Wii Sports Resort for Wii	Wii	Nintendo	Nintendo EAD	33.13	2009
7	Pokemon Red / Green / Blue Version for GB	GB	Nintendo	Game Freak	31.38	1998
8	New Super Mario Bros. for DS	DS	Nintendo	Nintendo EAD	30.80	2006
9	New Super Mario Bros. Wii for Wii	Wii	Nintendo	Nintendo EAD	30.30	2009

The table lists the top 10 best-selling video games of all time, based on the **games\_sold** column. Here's a breakdown of the information:

- **Nintendo Dominance:** Nintendo titles dominate the top 10 list, with several entries from the Wii and DS consoles. This highlights Nintendo's ability to create popular and accessible games that appeal to a wide audience.
- **Diverse Genres:** The list includes games from various genres, including sports (Wii Sports, Wii Sports Resort), platformers (Super Mario Bros. series), first-person shooters (Counter-Strike: Global Offensive), and battle royale (PUBG). This demonstrates the broad appeal of video games across different demographics.
- **Enduring Popularity:** Some games, like Super Mario Bros. and Pokémon Red/Green/Blue, have maintained their popularity for decades, showcasing the enduring appeal of classic titles.
- **Modern Success:** More recent titles like PUBG and Minecraft have also achieved massive commercial success, indicating the continued growth and evolution of the video game industry.

# DATA FINDINGS - TOP 10 YEARS FOR CRITIC SCORE

	year	num_games	avg_critic_score
0	1998	10	9.32
1	2004	11	9.03
2	2002	9	8.99
3	1999	11	8.93
4	2001	13	8.82
5	2011	26	8.76
6	2016	13	8.67
7	2013	18	8.66
8	2008	20	8.63
9	2017	13	8.62

This table presents the top 10 years based on the average critic score for video games released in those years. For each year, it shows:

- **year:** The specific year.
- **num\_games:** The number of games released in that year.
- **avg\_critic\_score:** The average critic score for all games released in that year.

**1. High-Scoring Years:** The table highlights years where critics, on average, gave high ratings to the released games.

**2. 1998 as a Peak Year:** 1998 stands out with the highest average critic score of 9.32. This suggests that a significant number of highly acclaimed games were released in that year.

**3. Consistent High Scores:** Years like 2004, 2002, 1999, and 2001 also had high average critic scores, indicating a consistent trend of quality game releases during those periods.

**4. More Recent Years:** While earlier years dominate the top of the list, more recent years like 2011, 2016, 2013, 2008, and 2017 also have high average critic scores, suggesting continued innovation and quality in the gaming industry.

# DATA FINDINGS - YEARS OF CRITIC-USER AGREEMENT ON GAME RATINGS

	year	num_games	avg_critic_score	avg_user_score	diff
0	1997	8	7.93	9.50	-1.57
1	1998	10	9.32	9.40	-0.08
2	2004	11	9.03	8.55	0.48
3	2008	20	8.63	9.03	-0.40
4	2009	20	8.55	9.18	-0.63
5	2010	23	8.41	9.24	-0.83

The "diff" column in the table represents the difference between the average critic score and the average user score for a given year. A positive "diff" value indicates that critics, on average, rated the games higher than users, while a negative "diff" value indicates the opposite.

**Positive "diff":** Critics generally had a more favorable opinion of the games released in that year compared to users. This could be due to various factors, such as a focus on technical aspects, storytelling, or artistic merit, which may not be as important to casual gamers.

**Negative "diff":** Users, on average, rated the games higher than critics. This could be due to factors like personal enjoyment, nostalgia, or a different set of expectations and priorities.

This table presents a list of years where critics and users showed a high degree of agreement in their ratings of video games released during those years. The table includes the following columns:

- **year:** The specific year.
- **num\_games:** The number of games released in that year.
- **avg\_critic\_score:** The average critic score for games released in that year.
- **avg\_user\_score:** The average user score for games released in that year.
- **diff:** The difference between the average critic score and the average user score.

1. **1998:** This year stands out with a near-perfect agreement between critics and users. Both groups gave high ratings to the games released in 1998, indicating a strong consensus on the quality of the games.

2. **2004:** This year also shows a significant alignment between critic and user scores, with a small positive difference favoring critic ratings. This suggests that critics were slightly more positive about the games released in 2004 compared to user ratings.

3. **Other Years:** While the other years listed in the table show some level of agreement, the difference between critic and user scores is more pronounced, indicating potential disparities in how critics and users perceive game quality.

# INSIGHTS

01

By analyzing sales data, we can identify commercially successful games.

02

Analyzing average critic scores can reveal periods with a higher concentration of critically acclaimed games.

03

Examining years with high agreement between critics and users can provide insights into specific periods where released games were widely praised.