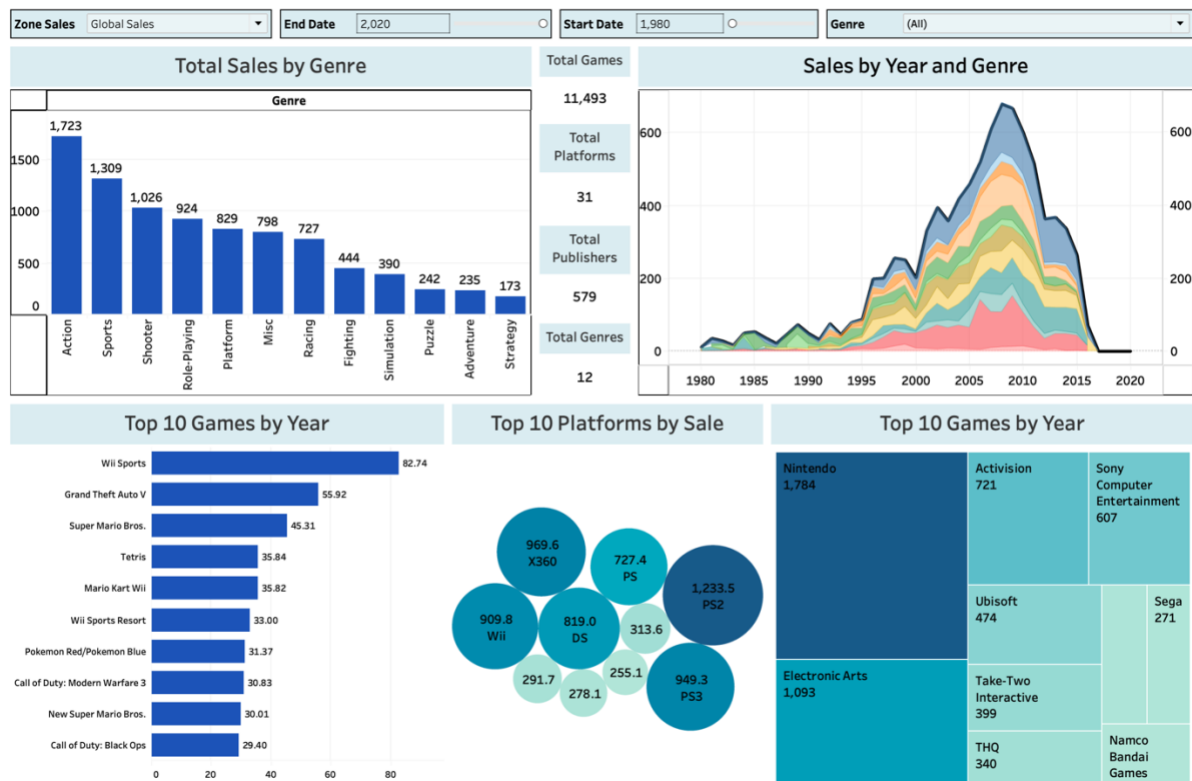# Video Game Sales Analysis Report

📌 Dashboard

Click on image to view and interact with dashboard

📌 Introduction

The video game industry has grown significantly over the decades, with certain **games, genres, publishers, and platforms dominating global sales**. This report analyzes **historical video game sales data (1980-2020)**, with a primary focus on **1980-2016 (because This dataset contains a list of video games with sales greater than 100,000 copies and very few games released post-2016 were able to reach this target)**, using **SQL-based data modeling and Tableau visualization**.

The goal is to uncover key insights about **top-selling games, popular genres, publisher performance, regional trends, and platform dominance** using a **fully normalized SQL database**.


📌 Data Preparation & Methodology

🗒 Database Normalization

To efficiently analyze sales trends, the dataset was **transformed into a 3NF relational database** with the following tables:

- **games** – Stores game names, release years, platform, genre, and publisher.
- **platforms** – Contains unique gaming platforms (PS2, Xbox, etc.).
- **genres** – Lists distinct game genres (Action, Shooter, Sports, etc.).
- **publishers** – Stores game publisher details (Nintendo, EA, Ubisoft, etc.).
- **sales** – Records global and regional sales data.

This structure **eliminates redundancy** and improves query efficiency.

Schema:
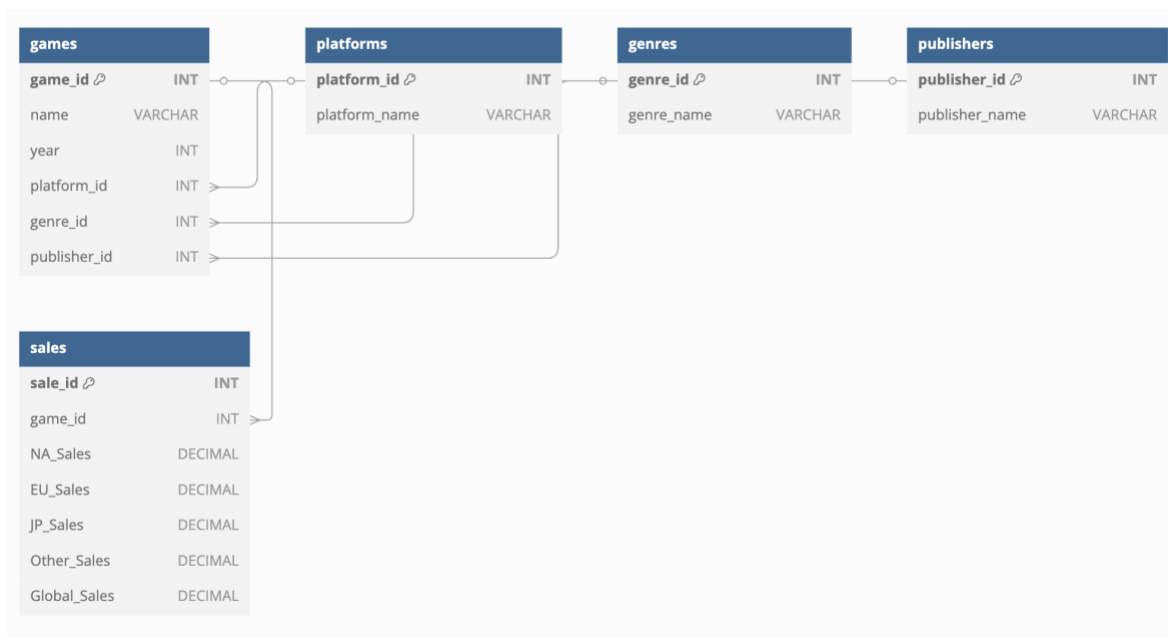
◈ SQL Query Analysis

The following key business questions were answered using SQL queries:

1. **What are the top 10 best-selling games of all time?**
2. **Which are the top 5 highest-selling game genres?**
3. **Which publishers have sold the most games?**
4. **Which publisher dominates in each region?**
5. **Which platforms have generated the highest total sales?**
6. **Which genres are the most popular in each region?**

📌 Findings & Insights

1 Top 10 Best-Selling Games of All Time

Game	Total Sales (Million Units)
Call of Duty: Ghosts	164.28
FIFA 14	154.26
FIFA 15	152.16
FIFA Soccer 13	129.28
Call of Duty: Black Ops 3	126.60
Call of Duty: Modern Warfare 3	123.32
Call of Duty: Black Ops	119.23
Call of Duty: Black Ops II	118.88
Grand Theft Auto V	110.76
Call of Duty: Advanced Warfare	109.50

◆ **Key Takeaways:**

- The **Call of Duty franchise dominates** with **6 out of the top 10 best-selling games**.
- **FIFA games** also performed exceptionally well, indicating the **global appeal of sports games**.
- **Grand Theft Auto V (GTA V)** remains a best-seller despite being released in **2013**.

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2 Top 5 Best-Selling Game Genres

Genre	Total Sales (Million Units)
Action	4809.49
Sports	3627.82

Shooter	2637.10
Racing	1491.41
Misc	1439.99

◆ **Key Takeaways:**

- **Action games lead the market**, with **almost 5 billion units sold**.
- **Sports and Shooter genres** also show high sales, proving their **consistent popularity**.
- Racing games remain **niche but steady** in the industry.

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3 Top 5 Highest-Selling Publishers

Publisher	Total Sales (Million Units)
Electronic Arts (EA)	4018.81
Activision	2588.22
Nintendo	1827.06
Ubisoft	1227.03
Take-Two Interactive	925.98

◆ **Key Takeaways:**

- **EA dominates the industry** with **over 4 billion units sold**, largely due to **FIFA, Madden, and Battlefield**.
- **Activision ranks second**, driven by **Call of Duty**.
- **Nintendo is strong despite exclusivity to its own platforms**.
- **Ubisoft and Take-Two Interactive** have a **significant market presence**.

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4 Publisher Popularity in Each Region

Publisher	North America	Europe	Japan
Electronic Arts	1980.55	1457.04	38.87
Activision	1506.37	767.22	23.79
Nintendo	835.21	427.18	466.48
Ubisoft	622.62	448.95	15.56
Take-Two Interactive	549.02	250.7	11.88

◆ **Key Takeaways:**

- **EA leads in both North America & Europe**, likely due to FIFA and sports games.
- **Nintendo dominates in Japan**, reflecting strong demand for **Pokemon, Zelda, and Mario** franchises.

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5 Most Sales by Platform

Platform	Total Sales (Million Units)
X360	2461.74
PS3	2385.11
PS2	2015.62
Wii	1680.73
PC	1548.00

◆ **Key Takeaways:**

- **Xbox 360 (X360) leads**, followed closely by **PlayStation 3 (PS3)**.
- **PlayStation 2 (PS2)**, despite being older, still holds **strong lifetime sales**.
- **Nintendo Wii** is highly successful, particularly for family-oriented games.
- **PC gaming remains significant** but is often underreported due to **digital distribution**.

6 Genre Popularity in Each Region

Genre	North America	Europe	Japan
Action	2393.53	1609.45	235.6
Sports	1840.28	1139.97	188.64
Shooter	1396.67	878.86	68.81
Misc	791.9	381.13	113.06
Racing	734.55	514.12	63.52

◆ **Key Takeaways:**

- **Action games dominate across all regions**, especially in the West.
- **Sports games are also very strong, particularly in North America and Europe**.
- **Shooters are mainly a Western phenomenon**, with far less traction in Japan.
- **Japanese gamers prefer RPGs and Nintendo-style casual games over racing & shooters**.

📌 Conclusion & Recommendations

Key Industry Trends:

✓ **Action, Sports, and Shooter games dominate sales**, showing their broad appeal across markets.

✓ **The Call of Duty and FIFA franchises consistently top the charts**, proving the importance of annualized releases for major publishers.

✓ **Electronic Arts (EA) leads global sales**, driven by its strong sports game portfolio.

✓ **Nintendo dominates the Japanese market**, emphasizing the importance of regional preferences in game development.

✓ **Xbox 360 and PlayStation 3 were the most successful platforms**, highlighting the golden era of console gaming (2005-2015).

✓ **PC gaming remains strong but is often underrepresented due to digital sales not being fully accounted for in traditional datasets.**

📌 Business Recommendations:

🔷 **Publishers should continue investing in Action and Sports games**, as they have shown consistent demand across decades.

🔷 **Game developers targeting Japan should focus on RPGs and casual-friendly games**, as shooters are less popular there.

🔷 **The dominance of franchises like Call of Duty and FIFA suggests that annual releases with minor improvements can still drive strong sales.**

🔷 **With declining sales post-2016 in the dataset, companies should explore how digital distribution (Steam, Epic, PlayStation Store) affects reporting.**

🔷 **Cross-platform game development should remain a priority**, given that successful platforms like X360, PS3, and PS2 had strong multi-platform support.