

# Uncovering the Gaming Industry's Hidden Gems: A Comprehensive Analysis of Video Game Sales

## Team members

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# ***PROJECT REPORT***

## **1. INTRODUCTION**

The gaming industry is one of the most competitive and dynamic industries in the world. Every year, hundreds of new video games are released, and while some games receive critical acclaim and commercial success, others are overlooked or underrated. This can result in high-quality games that deserve recognition being lost in the sea of new releases.

"Uncovering the Gaming Industry's Hidden Gems: A Comprehensive Analysis of Video Game Sales" is a research study that aims to identify and bring attention to these hidden gems in the gaming industry. The study involves a comprehensive analysis of

the sales data of various video games, including their sales figures, user ratings, and critical reviews. By analysing this data, we aim to identify high-quality games that have been overlooked or underrated by the gaming industry and the general public.

The study also aims to provide insights into the gaming market and its trends, including the popularity of various gaming platforms and genres. By understanding the gaming market and its trends, industry professionals, gamers, and critics can make more informed decisions about future game development and marketing strategies.

Ultimately, our goal with this study is to promote a more diverse and innovative gaming industry that prioritizes quality games over profit margins. We hope that by identifying and promoting hidden gems, we can contribute to a gaming culture that values creativity and excellence in game design.

## **1.1 Overview**

"Uncovering the Gaming Industry's Hidden Gems: A Comprehensive Analysis of Video Game Sales" is a research study that examines the sales data of video games to identify high-quality games that have been overlooked by the gaming industry and the general public.

The study involves analysing the sales data of various video games over a specific period, including their sales figures, user ratings, and critical reviews. The analysis also involves comparing the sales figures of different games across various platforms and regions to identify patterns and trends in the gaming market.

The study aims to promote a diverse and innovative gaming industry by bringing attention to high-quality games that have been underrated or overlooked. By identifying these hidden gems, industry professionals, gamers, and critics can help promote a culture that prioritizes quality games over profit margins.

Additionally, the study can provide valuable insights into the gaming market and its trends, informing decisions about future game development and marketing strategies.

Overall, "Uncovering the Gaming Industry's Hidden Gems: A Comprehensive Analysis of Video Game Sales" is a research study that aims to promote a more diverse and innovative gaming industry while providing valuable insights into the gaming market and its trends.

## **1.2 Purpose**

The purpose of uncovering the gaming industry's hidden gems through a comprehensive analysis of video game sales is to identify and bring attention to high-quality video games that have been overlooked or underrated by the industry and the general public.

The gaming industry is incredibly competitive, with many new games released every year. Unfortunately, not all games receive the attention they deserve, which can result in their underperformance in terms of sales and recognition. By conducting a comprehensive analysis of video game sales, industry professionals, gamers, and critics can identify games that have been overlooked, and give them the attention they deserve.

Additionally, this analysis can be used to provide insights into the gaming market and its trends. By examining the sales data of various games, one can identify patterns and trends that can inform decisions about future game development and marketing strategies.

Ultimately, the purpose of uncovering the gaming industry's hidden gems is to promote a diverse and innovative gaming industry that prioritizes quality games over profit margins.

## **2. Problem Definition & Design Thinking**

### **2.1 Empathy Map**

The empathy map is a tool that can be used to understand the thoughts and feelings of the target audience of a product or service. In the context of "Uncovering the Gaming Industry's Hidden Gems: A Comprehensive Analysis of Video Game Sales," the empathy map can be used to understand the perspective of gamers and industry professionals who are looking for high-quality video games.

Here's an empathy map for gamers and industry professionals:

### **What do they see?**

- ✓ A sea of new video game releases every year
- ✓ Promotions and advertisements for popular games
- ✓ User reviews and ratings for different games

### **What do they hear?**

- ✓ Word of mouth recommendations from friends and peers
- ✓ Reviews and critiques of games from industry professionals

- ✓ News about upcoming games and gaming trends

### **What do they think and feel?**

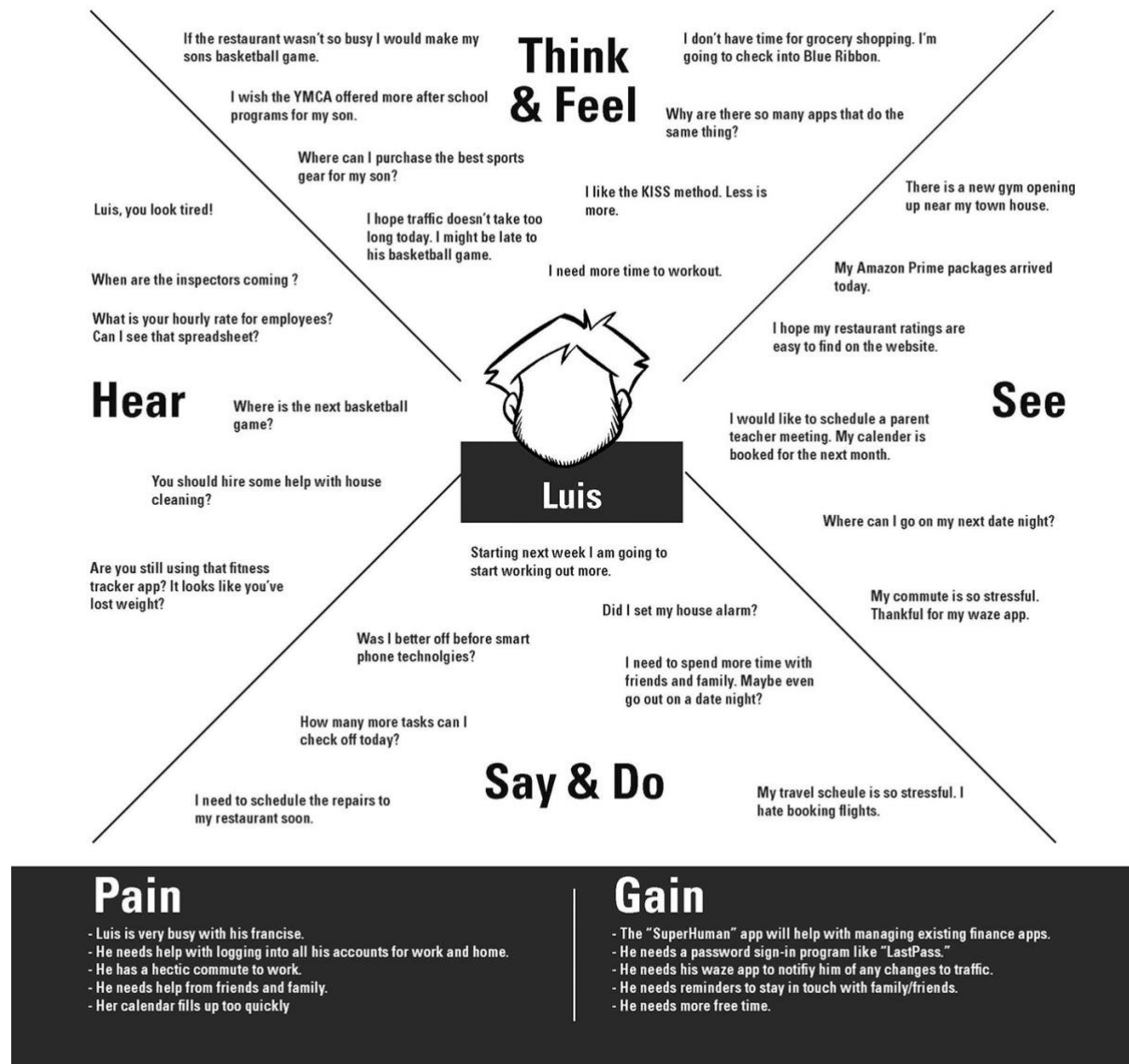
- ✓ Excitement about discovering new, high-quality games
- ✓ Frustration with the overwhelming number of new releases and not knowing where to start
- ✓ Scepticism about the quality of games that have been overlooked or underrated
- ✓ Desire for a diverse and innovative gaming industry

### **What do they say and do?**

- ✓ Research and read reviews before purchasing a new game
- ✓ Discuss and share their opinions about games with friends and peers
- ✓ Attend gaming events and conventions to learn about new releases and trends
- ✓ Purchase games that they feel are high-quality, regardless of their popularity or sales figures

By understanding the perspective of gamers and industry professionals, we can better identify and promote high-quality video games that have been overlooked or underrated. We can also

make informed decisions about game development and marketing strategies that prioritize quality over profit margins.

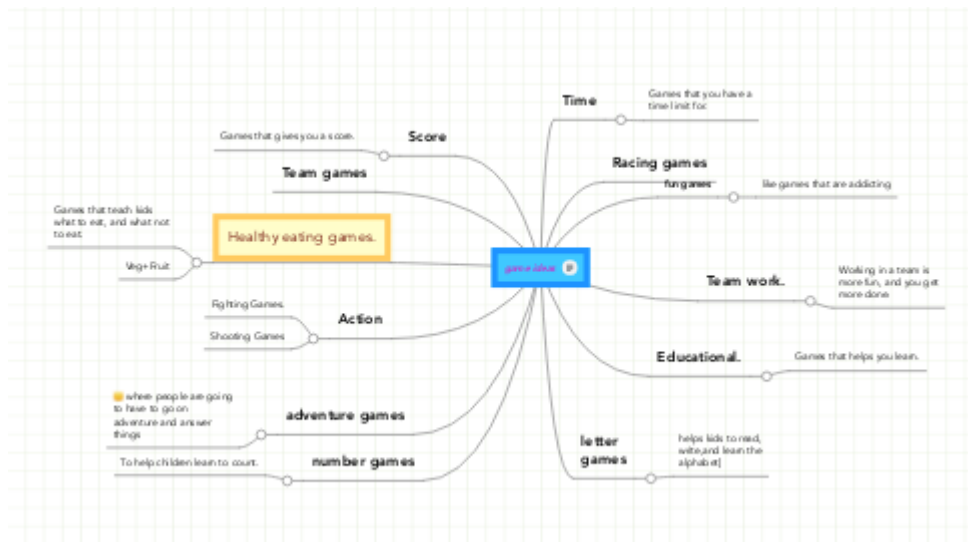


## 2.2 Ideation & Brainstorming Map



Here's an ideation and brainstorming map for uncovering the gaming industry's hidden gems through a comprehensive analysis of video game sales:

- Define what is meant by "hidden gems" in the gaming industry
- Research and gather data on video game sales, including both well-known and lesser-known titles
- Analyse the data to identify patterns and trends in sales, including which types of games tend to be more successful
- Look for games that have not received as much attention or recognition despite their high quality or potential for success
- Consider factors such as gameplay mechanics, storyline, graphics, and user reviews in evaluating the quality and potential of a game
- Determine how to define success for a video game, whether it's sales numbers, critical acclaim, or user satisfaction
- Create a list of potential hidden gems based on the analysis and evaluation
- Playtest and review the games on the list to confirm their quality and potential for success
- Develop marketing strategies to help promote the hidden gems to a wider audience, such as social media campaigns or partnering with influencers or game reviewers
- Consider partnering with game developers to help bring attention to their lesser-known titles and promote the discovery of new and unique gaming experiences.



## 3. RESULT

### 3.1 Data Model

Rank	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					
Super Mario Bros.	NES 1985	Platform Nintendo	29.08	3.58	6.81	
	0.77 40.24					
Mario Kart Wii	Wii 2008	Racing Nintendo	15.85	12.88	3.79	3.31
	35.82					
Wii Sports Resort	Wii 2009	Sports Nintendo	15.75	11.01	3.28	2.96 33
Pokemon Red/Pokemon Blue	GB 1996	Role-Playing Nintendo	11.27			
	8.89 10.22 1	31.37				
Tetris	GB 1989	Puzzle Nintendo	23.2	2.26	4.22	0.58
	30.26					
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							
New Super Mario Bros.	Wii	Wii	2009	Platform	Nintendo		14.59	7.06	4.7
		2.26							
		28.62							
Duck Hunt	NES	1984	Shooter	Nintendo	26.93	0.63	0.28		
		0.47							
		28.31							
Nintendogs	DS	2005	Simulation	Nintendo	9.07	11	1.93		
		2.75							
		24.76							
Mario Kart DS	DS	2005	Racing	Nintendo	9.81	7.57	4.13	1.92	
		23.42							
Pokemon Gold/Pokemon Silver			GB	1999	Role-Playing	Nintendo		9	
		6.18	7.2	0.71	23.1				
Wii Fit	Wii	2007	Sports	Nintendo	8.94	8.03	3.6	2.15	
		22.72							
Wii Fit Plus	Wii	2009	Sports	Nintendo	9.09	8.59	2.53	1.79	22
Kinect Adventures!	X360	2010	Misc	Microsoft Game Studios		14.97	4.94		
		0.24	1.67	21.82					
Grand Theft Auto V	PS3	2013	Action	Take-Two Interactive	7.01	9.27	0.97		
		4.14	21.4						
Grand Theft Auto: San Andreas			PS2	2004	Action	Take-Two Interactive	9.43	0.4	
		0.41	10.57	20.81					
Super Mario World	SNES		1990	Platform	Nintendo	12.78	3.75		
		3.54	0.55	20.61					
Brain Age: Train Your Brain in Minutes a Day				DS	2005	Misc	Nintendo		
		4.75	9.26	4.16	2.05	20.22			
Pokemon Diamond/Pokemon Pearl	DS	2006	Role-Playing	Nintendo		6.42			
		4.52	6.04	1.37	18.36				
Super Mario Land	GB	1989	Platform	Nintendo	10.83	2.71	4.18		
		0.42	18.14						
Super Mario Bros. 3	NES	1988	Platform	Nintendo	9.54	3.44	3.84		
		0.46	17.28						
Grand Theft Auto V	X360	2013	Action	Take-Two Interactive	9.63	5.31	0.06		
		1.38	16.38						
Grand Theft Auto: Vice City	PS2	2002	Action	Take-Two Interactive	8.41	5.49			
		0.47	1.78	16.15					
Pokemon Ruby/Pokemon Sapphire	GBA	2002	Role-Playing	Nintendo		6.06	3.9		
		5.38	0.5	15.85					
Pokemon Black/Pokemon White	DS	2010	Role-Playing	Nintendo		5.57			
		3.28	5.65	0.82	15.32				

Brain Age 2: More Training in Minutes a Day	DS	2005	Puzzle	Nintendo					
3.44 5.36 5.32 1.18 15.3									
Gran Turismo 3: A-Spec	PS2	2001	Racing	Sony Computer Entertainment					
6.85 5.09 1.87 1.16 14.98									
Call of Duty: Modern Warfare 3	X360	2011	Shooter	Activision					9.03
4.28 0.13 1.32 14.76									
Pokémon Yellow: Special Pikachu Edition	GB	1998	Role-Playing	Nintendo					
5.89 5.04 3.12 0.59 14.64									
Call of Duty: Black Ops	X360	2010	Shooter	Activision		9.67	3.73	0.11	
1.13 14.64									
Pokemon X/Pokemon Y	3DS	2013	Role-Playing	Nintendo		5.17	4.05		
4.34 0.79 14.35									
Call of Duty: Black Ops 3	PS4	2015	Shooter	Activision		5.77	5.81		
0.35 2.31 14.24									
Call of Duty: Black Ops II	PS3	2012	Shooter	Activision		4.99	5.88		
0.65 2.52 14.03									
Call of Duty: Black Ops II	X360	2012	Shooter	Activision		8.25	4.3		
0.07 1.12 13.73									
Call of Duty: Modern Warfare 2	X360	2009	Shooter	Activision			8.52		
3.63 0.08 1.29 13.51									
Call of Duty: Modern Warfare 3	PS3	2011	Shooter	Activision			5.54		
5.82 0.49 1.62 13.46									
Grand Theft Auto III	PS2	2001	Action	Take-Two Interactive	6.99	4.51	0.3	1.3	
13.1									
Super Smash Bros. Brawl	Wii	2008	Fighting	Nintendo		6.75	2.61		
2.66 1.02 13.04									
Call of Duty: Black Ops	PS3	2010	Shooter	Activision	5.98	4.44	0.48		
1.83 12.73									
Animal Crossing: Wild World	DS	2005	Simulation	Nintendo		2.55	3.52		
5.33 0.88 12.27									
Mario Kart 7	3DS	2011	Racing	Nintendo	4.74	3.91	2.67	0.89	
12.21									
Halo 3	X360	2007	Shooter	Microsoft Game Studios			7.97		
2.83 0.13 1.21 12.14									
Grand Theft Auto V	PS4	2014	Action	Take-Two Interactive	3.8	5.81	0.36		
2.02 11.98									
Pokemon HeartGold/Pokemon SoulSilver	DS	2009	Action	Nintendo			4.4		
2.77 3.96 0.77 11.9									

Super Mario 64	N64	1996	Platform	Nintendo	6.91	2.85	1.91	0.23	11.89
Gran Turismo 4	PS2	2004	Racing	Sony Computer Entertainment			3.01	0.01	1.1
			7.53	11.66					
Super Mario Galaxy	Wii	2007	Platform	Nintendo	6.16	3.4	1.2	0.76	11.52
Pokemon Omega Ruby/Pokemon Alpha Sapphire	3DS	2014	Role-Playing	Nintendo					
			4.23	3.37	3.08	0.65	11.33		

## 3.2 Activity

First we have stored the data list in the MySQL. For that we collect the data from the guided project and then we stored it in the MySQL. Here we attached the screenshot what we have stored in that.

The screenshot displays the MySQL Workbench interface. The main window shows a query result grid for the 'vgsales' table. The columns are: Rank, Name, Platform, Year, Genre, Publisher, NA\_Sales, EU\_Sales, JP\_Sales, Other\_Sales, and Global\_Sales. The data rows are as follows:

Rank	Name	Platform	Year	Genre	Publisher	NA_Sales	EU_Sales	JP_Sales	Other_Sales	Global_Sales
1	Wii Sports	Wii	2006	Sports	Nintendo	41.49	29.02	3.77	8.46	82.74
2	Super Mario Bros.	NES	1985	Platform	Nintendo	29.08	3.58	6.81	0.77	40.24
3	Mario Kart Wii	Wii	2008	Racing	Nintendo	15.85	12.88	3.79	3.31	35.82
4	Wii Sports Resort	Wii	2009	Sports	Nintendo	15.75	11.01	3.28	2.96	33
5	Pokemon Red/Pokemon Blue	GB	1996	Role-Playing	Nintendo	11.27	8.89	10.22	1	31.37
6	Tetris	GB	1989	Puzzle	Nintendo	23.2	2.26	4.22	0.58	30.26
7	New Super Mario Bros.	DS	2006	Platform	Nintendo	11.38	9.23	6.5	2.9	30.01
8	Wii Play	Wii	2006	Misc	Nintendo	14.03	9.2	2.93	2.85	29.02

The bottom panel shows the 'Action Output' with a log of SQL queries and their execution times:

#	Time	Action	Message	Duration / Fetch
2	13:16:26	SELECT * FROM vgsale.vgsales LIMIT 0, 1000	1000 row(s) returned	0.000 sec / 0.000 sec
3	13:16:28	SELECT * FROM vgsale.vgsales LIMIT 0, 1000	1000 row(s) returned	0.000 sec / 0.000 sec
4	13:16:28	SELECT * FROM vgsale.vgsales LIMIT 0, 1000	1000 row(s) returned	0.000 sec / 0.000 sec
5	13:16:29	SELECT * FROM vgsale.vgsales LIMIT 0, 1000	1000 row(s) returned	0.000 sec / 0.016 sec
6	13:16:29	SELECT * FROM vgsale.vgsales LIMIT 0, 1000	1000 row(s) returned	0.016 sec / 0.000 sec
7	13:16:30	SELECT * FROM vgsale.vgsales LIMIT 0, 1000	1000 row(s) returned	0.000 sec / 0.016 sec

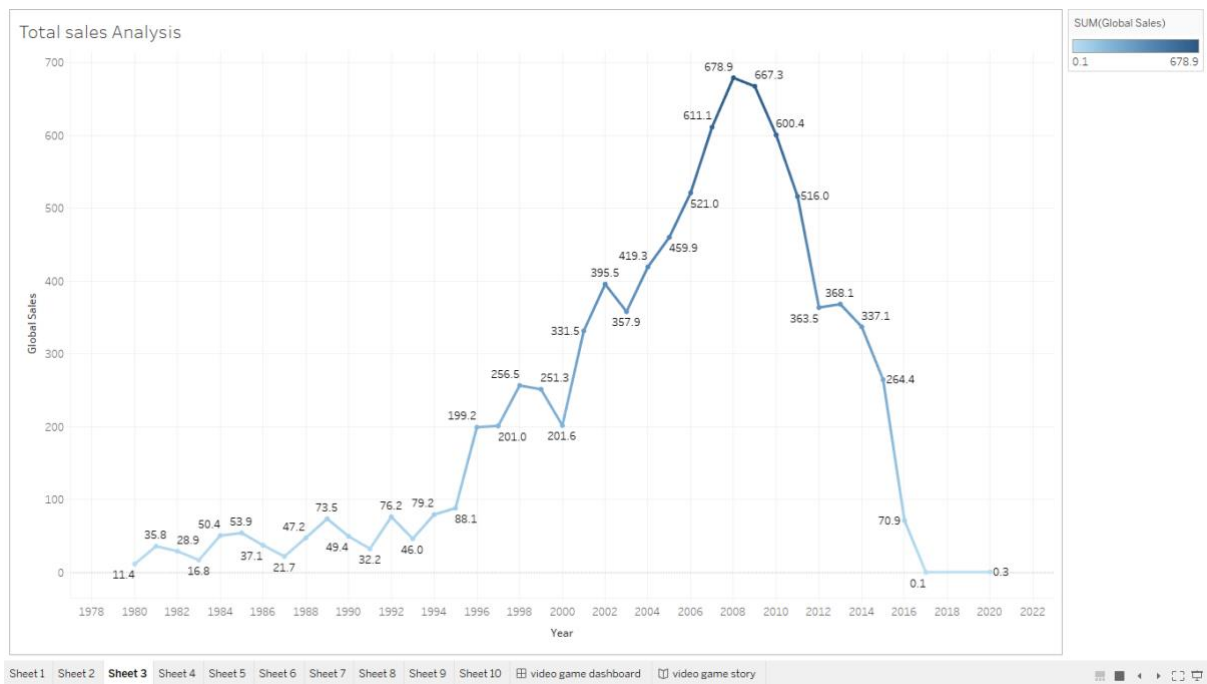
This data gives us the idea about the sales of video games in different regions of the world. The distribution is with respect to genres, publishers and platforms. Here I attached my Tableau activity.

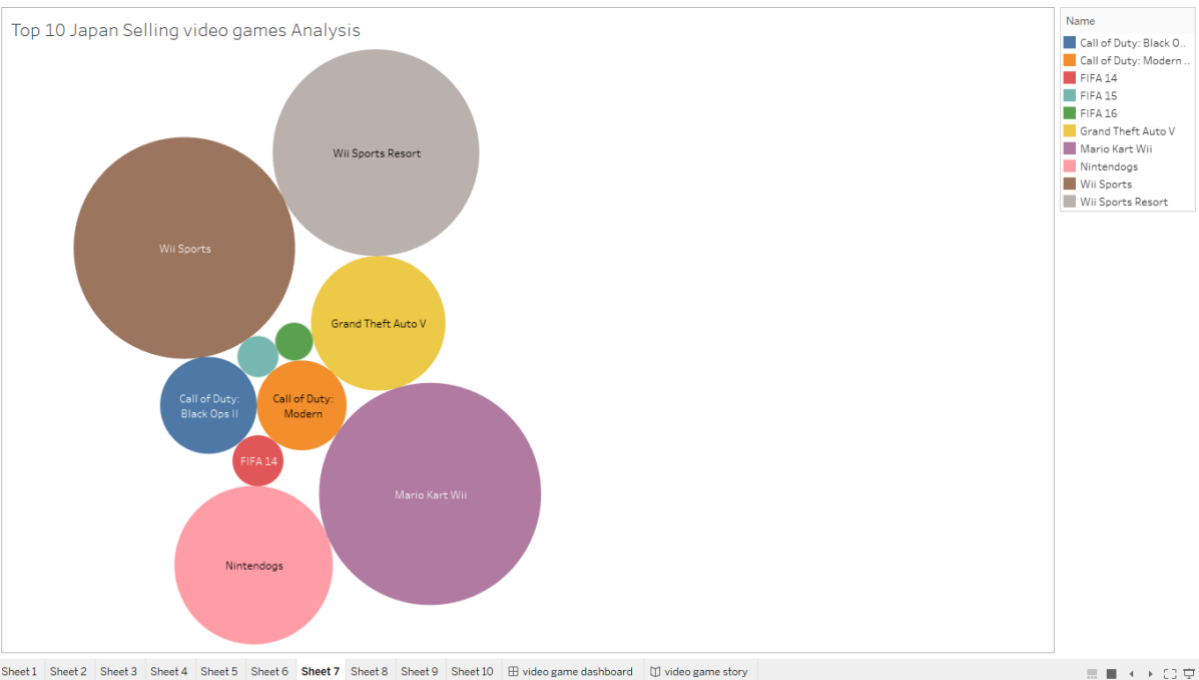
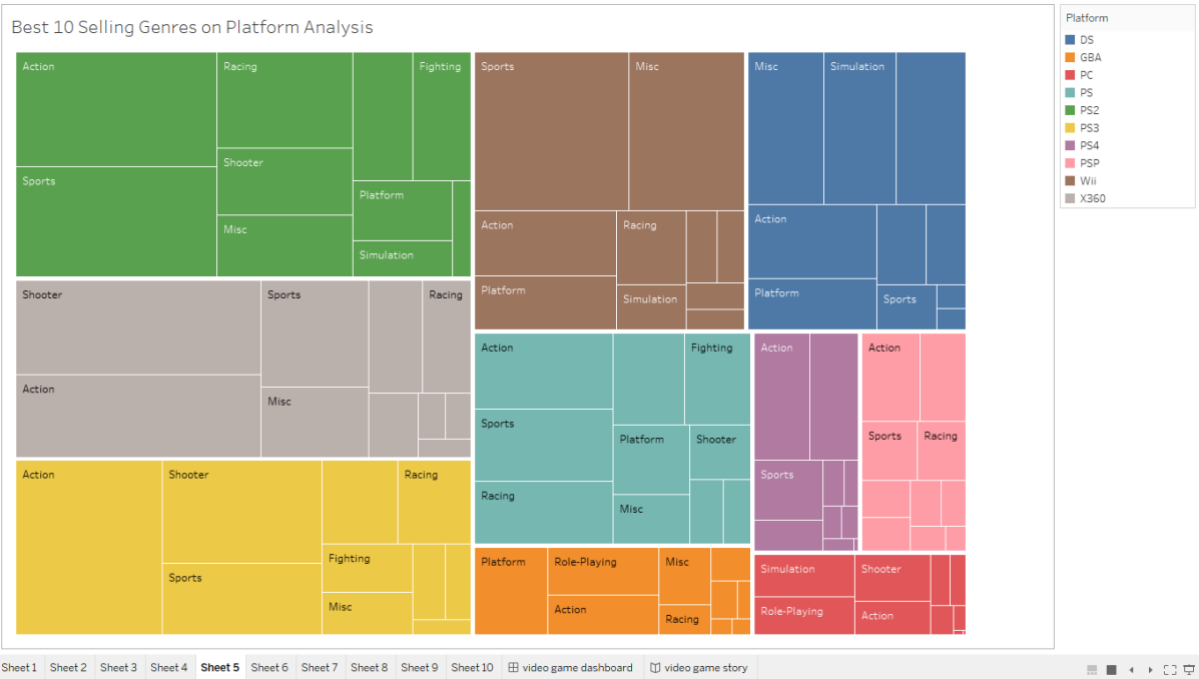
Then we create some sheets in tableau as follows:

This is all about the Rank which is based on the genre. From these we can easily understand that the action games are used widely.



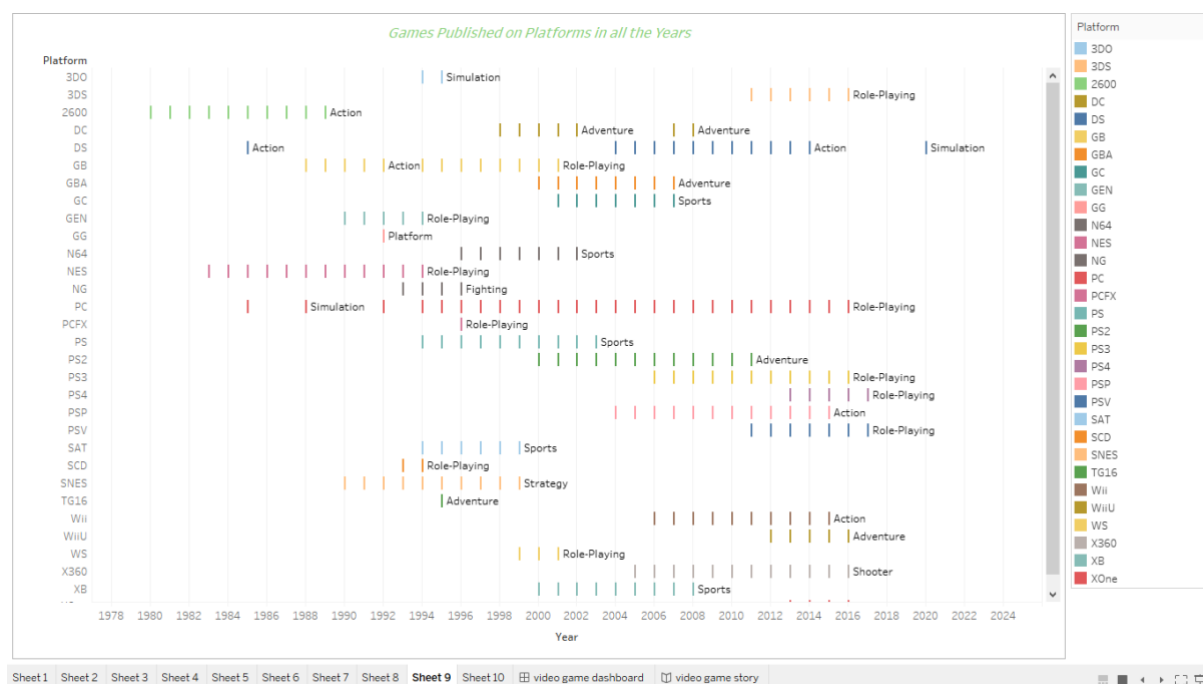
This graph represents the overall sales based on the year wise. Therefore in the year of 2008 is the most of the games are sold



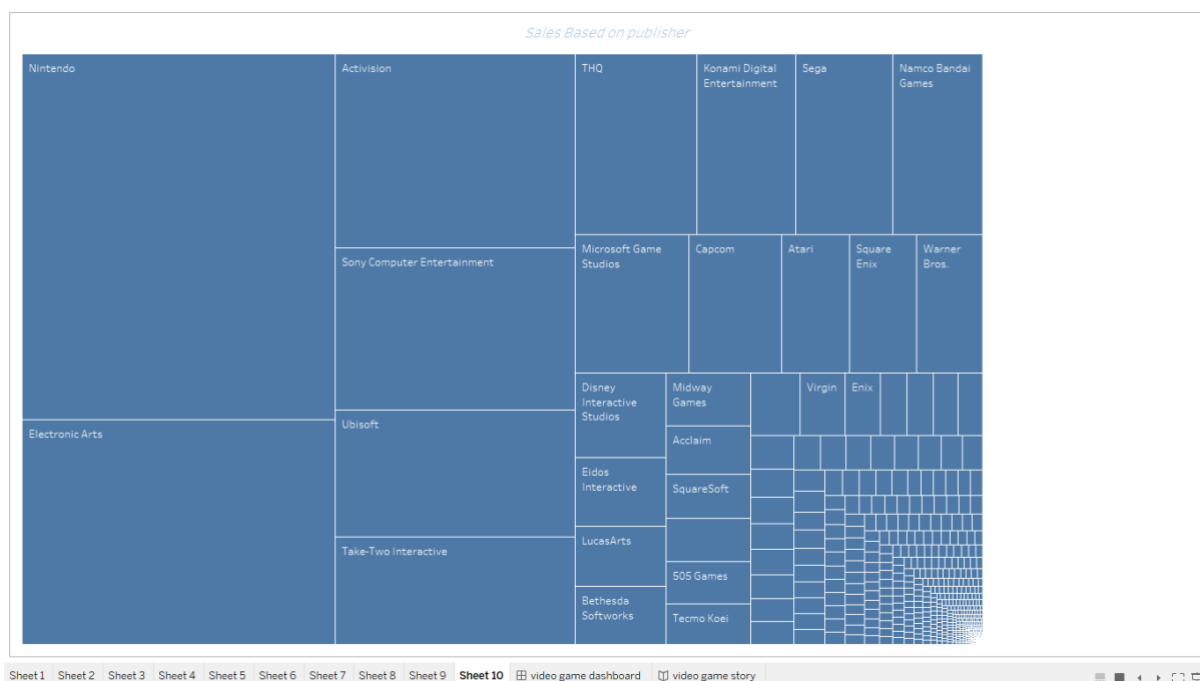


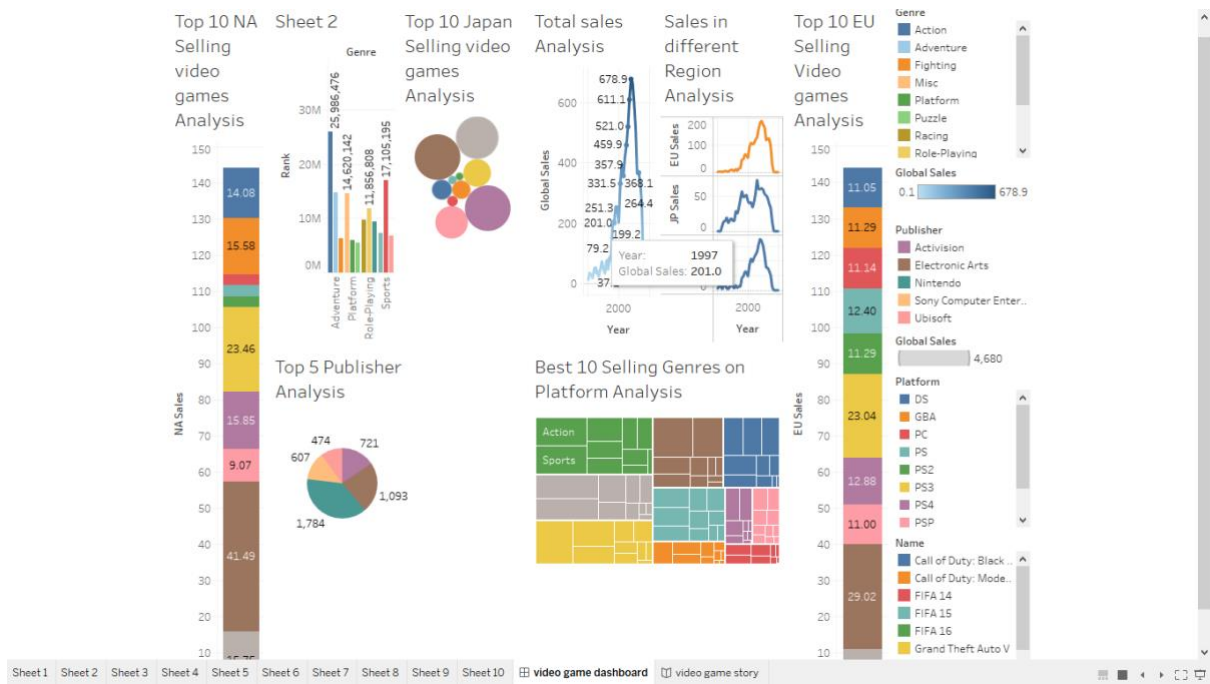


PUBLISHER vs PLATFORM - This is Gantt chart which shows the games published on every platforms since 1980. The highest games are being published on platforms like PS2, PS3, PS4, GB and PC. It is clearly shows that games in action genre are the highest sold and the most favourite games among the gamers.



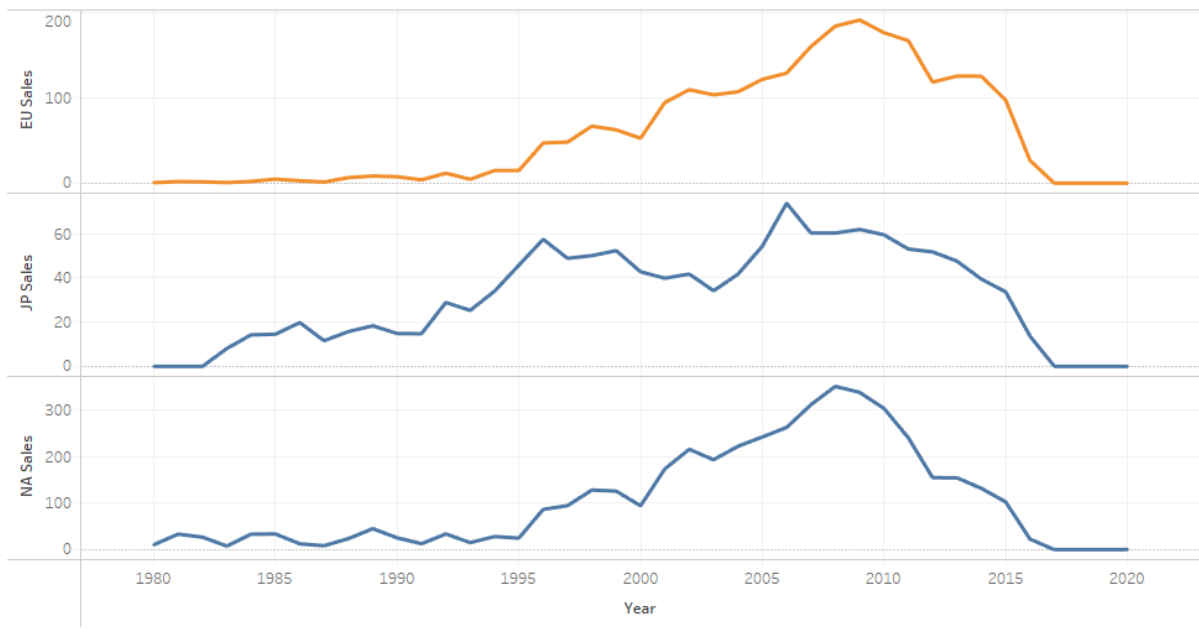
**SALES BASED ON PLATFORMS** - This tree map analysis based on the games sold globally by the publisher over the years. Here Nintendo is the clear winner but also electronic arts, Activision and Sony computer entertainment played a vital role in the game been sold.



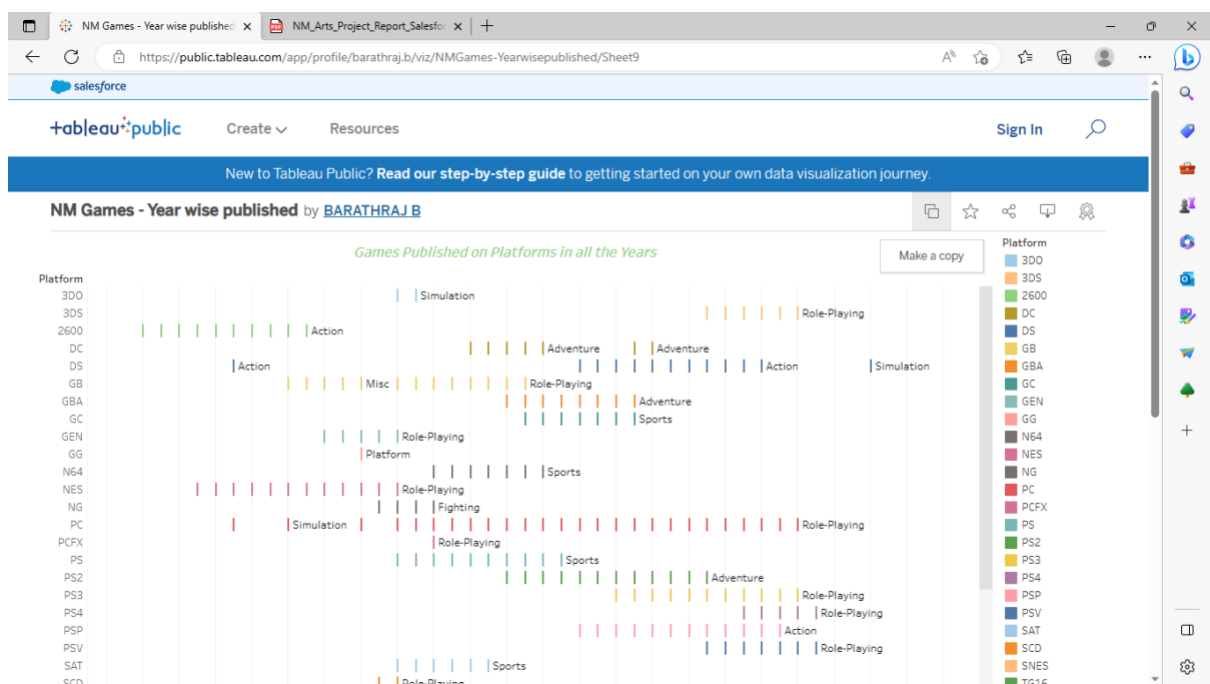
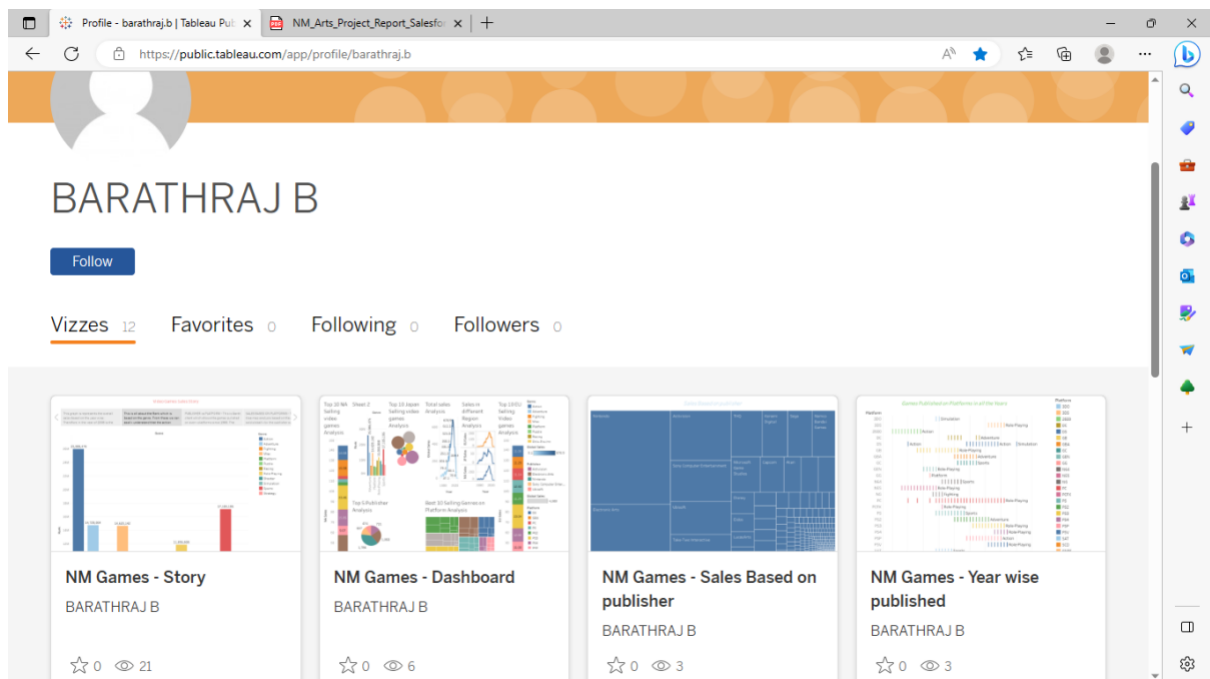


## Sales in different Region Analysis

Sales in different Region Analysis



After creating these type sheets in tableau we can publish the sheets in tableau publication



And we have run the HTML program for web page to attach our dashboard and story

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<!DOCTYPE html>
<html lang="en">

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  <meta charset="utf-8">
  <meta content="width=device-width, initial-scale=1.0" name="viewport">

  <title>Video Games Sales Analysis</title>
  <meta content="" name="description">
  <meta content="" name="keywords">

  <!-- Favicons -->
  <link href="assets/img/favicon.png" rel="icon">
  <link href="assets/img/apple-touch-icon.png" rel="apple-touch-icon">

  <!-- Google Fonts -->
  <link
href="https://fonts.googleapis.com/css?family=Open+Sans:300,300i,400,400i,600,
600i,700,700i|Raleway:300,300i,400,400i,500,500i,600,600i,700,700i|Poppins:300
,300i,400,400i,500,500i,600,600i,700,700i" rel="stylesheet">

  <!-- Vendor CSS Files -->
  <link href="assets/vendor/aos/aos.css" rel="stylesheet">
  <link href="assets/vendor/bootstrap/css/bootstrap.min.css" rel="stylesheet">
  <link href="assets/vendor/bootstrap-icons/bootstrap-icons.css"
rel="stylesheet">
  <link href="assets/vendor/boxicons/css/boxicons.min.css" rel="stylesheet">
  <link href="assets/vendor/glightbox/css/glightbox.min.css" rel="stylesheet">
  <link href="assets/vendor/remixicon/remixicon.css" rel="stylesheet">
  <link href="assets/vendor/swiper/swiper-bundle.min.css" rel="stylesheet">

  <!-- Template Main CSS File -->
  <link href="assets/css/style.css" rel="stylesheet">

  <!-- =====
  * Template Name: Presento - v3.9.1
  * Template URL: https://bootstrapmade.com/presento-bootstrap-corporate-
template/
  * Author: BootstrapMade.com
  * License: https://bootstrapmade.com/license/
  ===== -->
</head>

<body>
```

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<!-- ===== Header ===== -->
<header id="header" class="fixed-top d-flex align-items-center">
  <div class="container d-flex align-items-center">

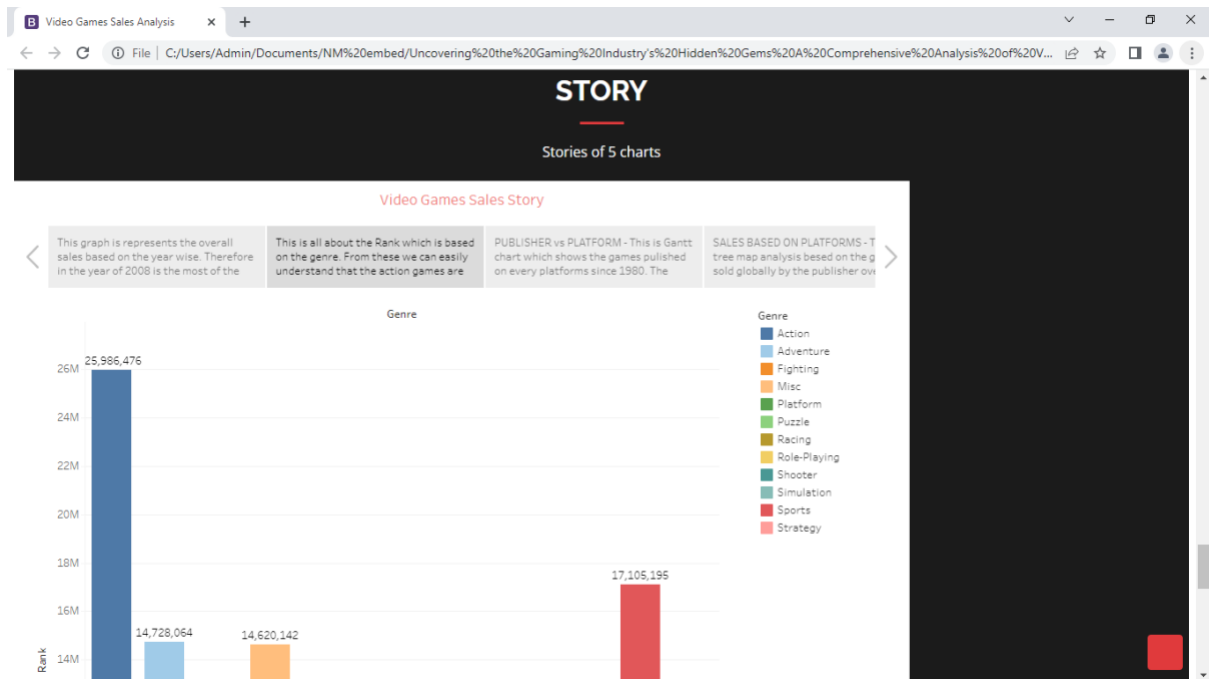
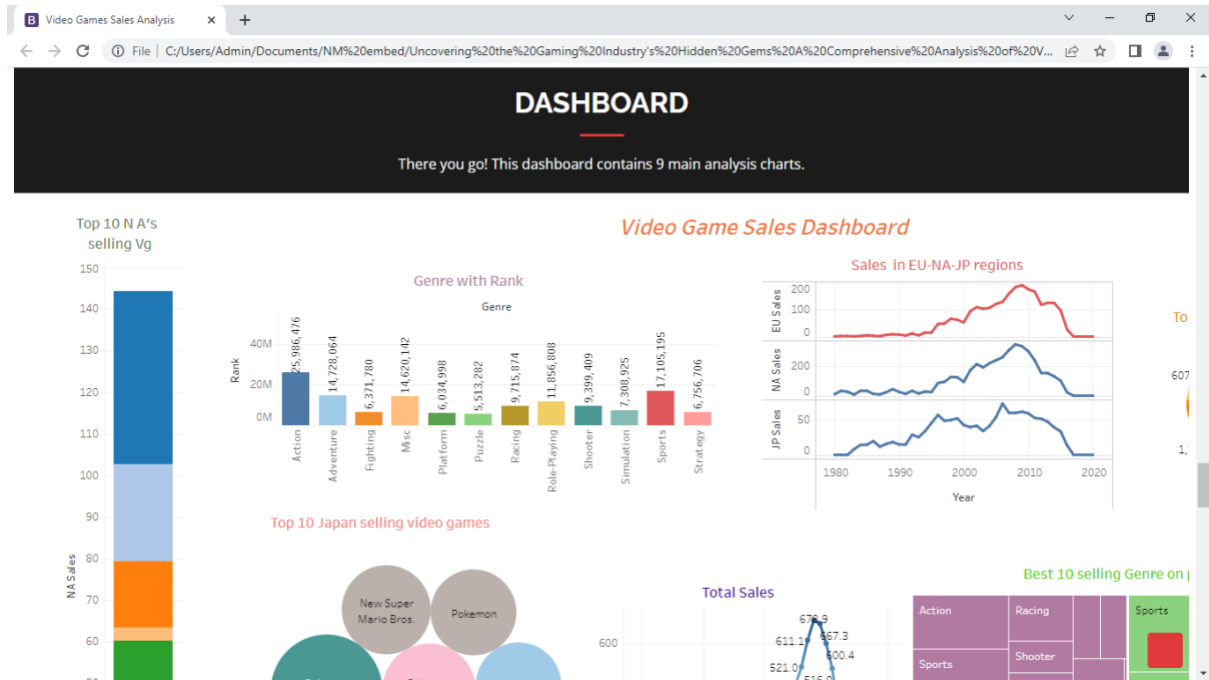
    <h3 class="logo me-auto"><a href="index.html">VIDEO GAMES SALES
ANALYSIS</a></h3>
    <!-- Uncomment below if you prefer to use an image logo -->
    <!-- <a href="index.html" class="logo me-auto"></a>-->

    <nav id="navbar" class="navbar order-last order-lg-0">
      <ul>
        <li><a class="nav-link scrollto active" href="#hero">Home</a></li>
        <li><a class="nav-link scrollto" href="#about">Prologue</a></li>
        <li><a class="nav-link scrollto" href="#services">Challenge</a></li>
        <li><a class="nav-link scrollto" href="#portfolio">Charts</a></li>
        <li><a class="nav-link scrollto" href="#team">Dashboard</a></li>
        <li><a class="nav-link scrollto" href="#Story">Story</a></li>
        <li><a class="nav-link scrollto" href="#Report">Conclusion</a></li>

        <!-- <li class="dropdown"><a href="#"><span>Drop Down</span> <i
class="bi bi-chevron-down"></i></a>
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            <li><a href="#">Drop Down 1</a></li>
            <li class="dropdown"><a href="#"><span>Deep Drop Down</span> <i
class="bi bi-chevron-right"></i></a>
              <ul>
                <li><a href="#">Deep Drop Down 1</a></li>
                <li><a href="#">Deep Drop Down 2</a></li>
                <li><a href="#">Deep Drop Down 3</a></li>
                <li><a href="#">Deep Drop Down 4</a></li>
                <li><a href="#">Deep Drop Down 5</a></li>
              </ul>
            </li>
            <li><a href="#">Drop Down 2</a></li>
            <li><a href="#">Drop Down 3</a></li>
            <li><a href="#">Drop Down 4</a></li>
          </ul>
        </li>
        <li><a class="nav-link scrollto" href="#contact">Contact</a></li>
      </ul>
      <i class="bi bi-list mobile-nav-toggle"></i>
    </nav> .navbar -->

  </div>
</header><!-- End Header -->

```



## **5. ADVANTAGES & DISADVANTAGE**

It all started in 1952 when British professor A.S. Douglas created OXO, better known as tic-tac-toe at the University of Cambridge. Then Space war! Came out in 1962, which was the first video game that could be played on multiple computer installations.

In 1972, Atari introduced Pong, the first truly successful commercial arcade video game. Since then, video games have evolved from arcade systems to home consoles, handheld consoles, and mobile devices. Today, video games make up a massive \$100 billion global industry.

### **Advantages:**

- Identification of hidden gems: A comprehensive analysis of video game sales can uncover video games that have not received much attention but have a high potential for success. This can help game developers and publishers to identify hidden gems that they may have overlooked.
  
- Improved decision-making: With the help of data on video game sales, stakeholders in the gaming industry can make more informed decisions regarding game development, marketing, and distribution. This can lead to more successful games and better returns on investment.



- **Competitive edge:** By identifying and leveraging hidden gems, game developers and publishers can gain a competitive edge in the gaming industry.
- **Market insights:** Analysing video game sales data can provide insights into consumer preferences, trends, and behaviours. This information can be used to create games that are better tailored to the needs and wants of the market.

### **Disadvantages:**

- **Limited data availability:** Video game sales data can be difficult to obtain and may not be available for all games. This can limit the scope of analysis and lead to incomplete or inaccurate conclusions.
- **Biases in data:** The data on video game sales may be biased due to various factors, such as limited availability in certain regions, platform exclusivity, or marketing campaigns. This can skew the analysis and lead to incorrect conclusions.

- Complexity of analysis: Analysing video game sales data can be complex and require specialized skills and tools. This can make it difficult for smaller game developers or publishers to conduct comprehensive analyses.
- Over-reliance on data: Relying solely on video game sales data to make decisions can overlook other important factors such as innovation, creativity, and player engagement. This can lead to a lack of diversity in the games being produced and a failure to capture the attention of new audiences

## **6. APPLICATIONS**

- Game development: Uncovering hidden gems in the video game industry can inform game developers about the types of games that are likely to be successful. This can help developers make informed decisions about which types of games to create, which game features to prioritize, and which platforms to release their games on.
- Marketing: Comprehensive analysis of video game sales can provide insights into the demographics and preferences of gamers. This can help marketers create targeted marketing

campaigns and promotional materials that appeal to specific audiences.

- Investment decisions: Investors can use video game sales data to identify promising game developers or publishers and make informed decisions about which companies to invest in.
- Competitive analysis: By analysing video game sales data, game developers and publishers can gain insights into their competitors' success strategies and use that information to develop their own successful games.
- Platform decisions: By analysing video game sales data, game developers and publishers can make informed decisions about which platforms to release their games on. This can help them maximize their reach and increase the likelihood of success.
- Predicting trends: Analysing video game sales data can help identify trends in the industry, such as the popularity of certain genres or game features. This can help game developers and

publishers anticipate future trends and create games that are well-positioned to succeed.

## **7. CONCLUSION**

In conclusion, a comprehensive analysis of video game sales can provide valuable insights into the gaming industry and help game developers and publishers make informed decisions. By identifying hidden gems and leveraging market insights, stakeholders in the gaming industry can gain a competitive edge and create successful games that meet the needs and wants of gamers. However, it's important to be aware of the limitations of relying solely on video game sales data and to consider other factors such as innovation, creativity, and player engagement in the game development process. Overall, a balanced approach that combines data analysis with other factors is likely to lead to the most successful outcomes in the gaming industry.

## **8. FUTURE SCOPE**

The future scope of uncovering the gaming industry's hidden gems through comprehensive analysis of video game sales is vast and exciting. Here are some potential areas of development:

- Increased data availability: With the growth of digital distribution platforms, it's likely that more data on video game

sales will become available in the future. This will allow for more comprehensive analyses and insights into the gaming industry.

- Improved data analysis tools: As data analysis tools and techniques continue to advance, it will become easier to analyse video game sales data and uncover hidden gems.
- Personalized gaming experiences: By leveraging data on video game sales and consumer preferences, game developers and publishers can create personalized gaming experiences that cater to individual player preferences.
- Improved market predictions: With more data and better analysis tools, it will become easier to predict market trends and anticipate which types of games will be successful in the future.
- Better investment decisions: As video game sales data becomes more comprehensive and accurate, investors will be able to make more informed decisions about which companies to invest in and which games to back.

- Cross-platform compatibility: With the growth of cloud gaming and game streaming services, it will become increasingly important for game developers and publishers to create games that are compatible across multiple platforms. Analysing video game sales data can help inform decisions about which platforms to target.

Overall, the future of uncovering the gaming industry's hidden gems through comprehensive analysis of video game sales looks bright, and we can expect to see many exciting developments in the years to come.