

VIDEO GAMES

with

DATA ANALYST

Long-term Internship

Project Report

Team members :

Team leader : PAMU poornima

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Team member : PAULA SONIL KUMAR,



## Introduction:

### Overview:

Video games have evolved from simple pixelated adventure to immersive, interactive experience. They encompass various genres like action, adventure, role-playing, and simulations providing players with diverse worlds to explore and challenges to conquer. With advances in technology, gaming has become a mainstream form of entertainment.

Certainly here's a concise overview: video games have evolved significantly since their inception. Initially, they were simple pixelated experiences, but now they encompass complex narratives, stunning graphics, and immersive gameplay. From classic arcade games to modern AAA titles, video games cater to a diverse range of tastes and preferences.



Purpose:

The purpose of video games varies depending on the individual player and the game itself. For many, they serve as a form of entertainment and relaxation, providing an escape from everyday life. Others play for social interaction, either competing against friends or cooperating with them in multiplayer games. Video games can also offer intellectual stimulation.

Literature Survey:

1. Effects on players: Studied on the cognitive, emotional, and behavioral effects of video games on players of different ages and backgrounds.

2. Social Interaction:

Exploration of how video games facilitate social interaction and communication among players, both online and offline. This includes studies on multiplayer dynamics, community formation



3) educational potential : - Examination of the educational value of video games and their use as tools for learning and skill development. This includes research on serious games, gamification, and the effectiveness of educational game design in various contexts.

4) Industry trends :  
Analysis of industry practices, market trends, and technological innovations in the video game industry. This includes studies on games development processes, business models.

### THEORETICAL Analysis:

Theoretical analysis of video games involves applying various theoretical frameworks to understand and interpret different aspects of gaming culture, design, and player experiences.

### Narratology:

Analyzing video games as narrative experience, focusing on storytelling techniques, character development, plot structures, and the way in which players interact.



Story Layout

New story point

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- sales in differen...
- Genre with Rank
- Total Sales
- Top10 publishers
- Best 10 selling ...
- Top10 EU sellin...
- Top10 Japan...
- Top10 ...
- Dashboard 1
- top selling video...

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Show title

Size

Custom size (1616 x 964)

## Story 1

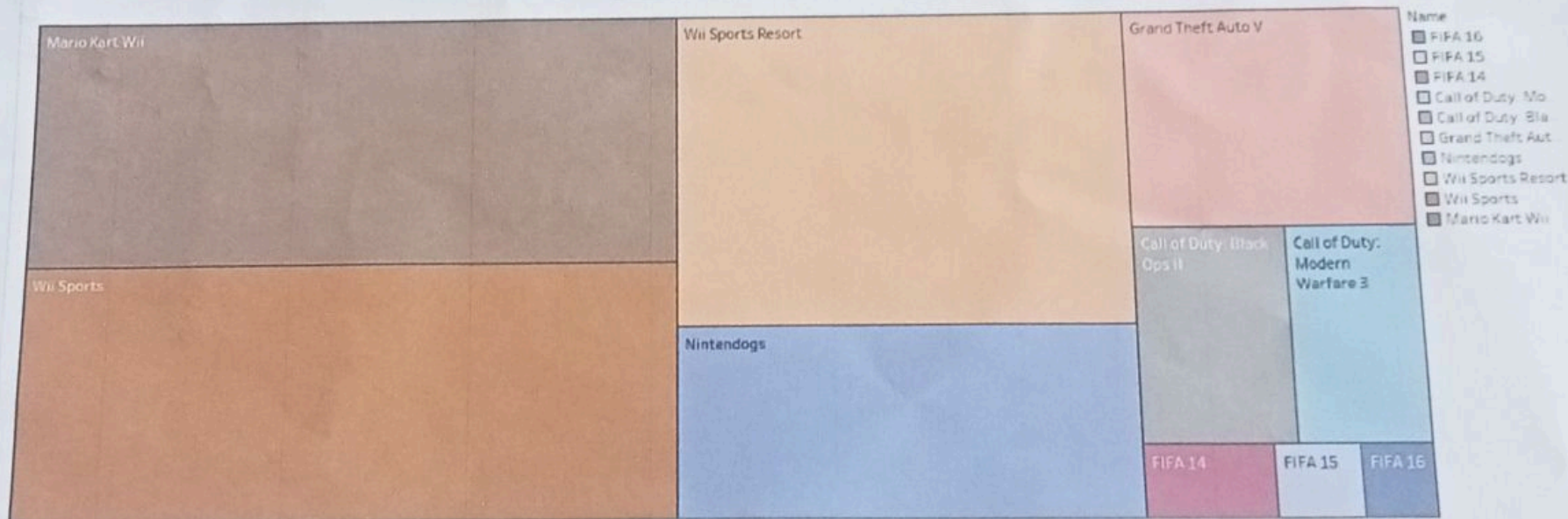
This bar chart showcasing gaming publishers and their respective global sales, where Nintendo emerges with the highest global sales, offers a clear snapshot of the dominant players in the gaming industry and their market performance. Each bar in the chart represents a different gaming publisher, with the height of the bar corresponding to their global sales figures. The bar representing Nintendo stands out at the tallest, indicating its position at the top in terms of global sales among the listed publishers. This visualization highlights Nintendo's significant presence and success in the gaming market compared to its competitors.

This bar chart detailing the genre and platform of video games, where the action genre emerges with the highest representation among categories such as shooter, RPG, and others, offers a comprehensive overview of the popularity of different game genres across various platforms. In this chart, each genre is represented by a separate bar, while different platforms are distinguished within each genre. The height of each bar indicates the proportion or number of games belonging to that genre/platform combination. The bar representing the action genre stands out as the tallest among the genres, indicating its dominance or prevalence compared to other genres.

This pie chart illustrating game sales in Europe, where Wii Sports stands out with the highest sales. Among other titles, provides a clear visualization of the distribution of sales among different games in the region. In this chart, each game is represented by a slice of the pie, with the size of the slice corresponding to its sales figures. Wii Sports occupies the largest slice, indicating that it has the highest sales among the listed games in Europe. This visualization immediately highlights the significant popularity and success of Wii Sports in the European gaming market compared to other titles. It suggests that Wii Sports has resonated strongly with European

It is a tree chart showcasing the top 10 selling video games in Japan, where Mario Kart Wii emerges with the highest sales among the listed titles, offers a visually engaging representation of the popularity and sales performance of these games in the Japanese market. In this chart, each game is represented by a branch or node within the tree structure, with the thickness of the branch or size of the node indicating its sales figures. Mario Kart Wii stands out prominently as the top-selling game, with the largest branch or node in the chart. This visualization effectively communicates the dominance of Mario Kart Wii in the Japanese gaming market.

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- sales in different...
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☒ Show title

Size

Custom size (1616 x 964)

## Story 1

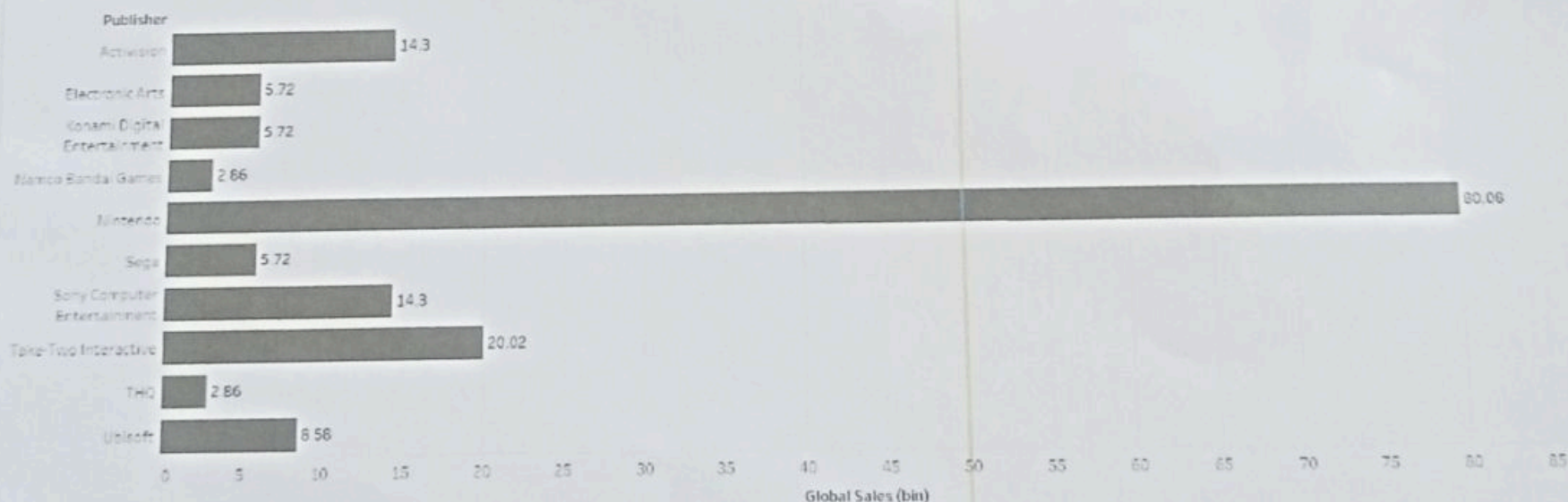
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In this bubble chart, each game genre is represented by a bubble, with the size of the bubble indicating its rank. And the action genre appears at the top with the largest bubble, signifying its highest rank among all genres. This visualization allows viewers to quickly grasp that the action genre is the most prominent or favored among the given set of genres. It suggests that action games are likely to have the highest demand, sales, or player engagement compared to other genres. A bubble chart depicting game genres with their respective ranks, where the action genre holds the highest rank.

This graph chart illustrating global game sales from 1980 to 2020 provides a comprehensive overview of the gaming industry's growth and evolution over four decades. In this chart, the x-axis represents the years from 1980 to 2020, while the y-axis represents the global sales figures, typically measured in a currency such as USD. Viewers can observe the trend of global game sales over time, including periods of rapid growth, fluctuations, or plateauing. This visualization allows for the identification of key milestones or turning points in the industry, such as the introduction of new gaming platforms, the release of groundbreaking titles, or shifts in consumer

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## Story 1

## New story point

Reset

Duplicate

- Sales in different...
- Genre with Rank
- Total Sales
- Top 10 publishers
- Best 10 selling...
- Top 10 EU sellin...
- Top 10 Japan...
- Top 10...
- Dashboard 1
- top selling video...

A Drag to add text

☒ Show title

Size

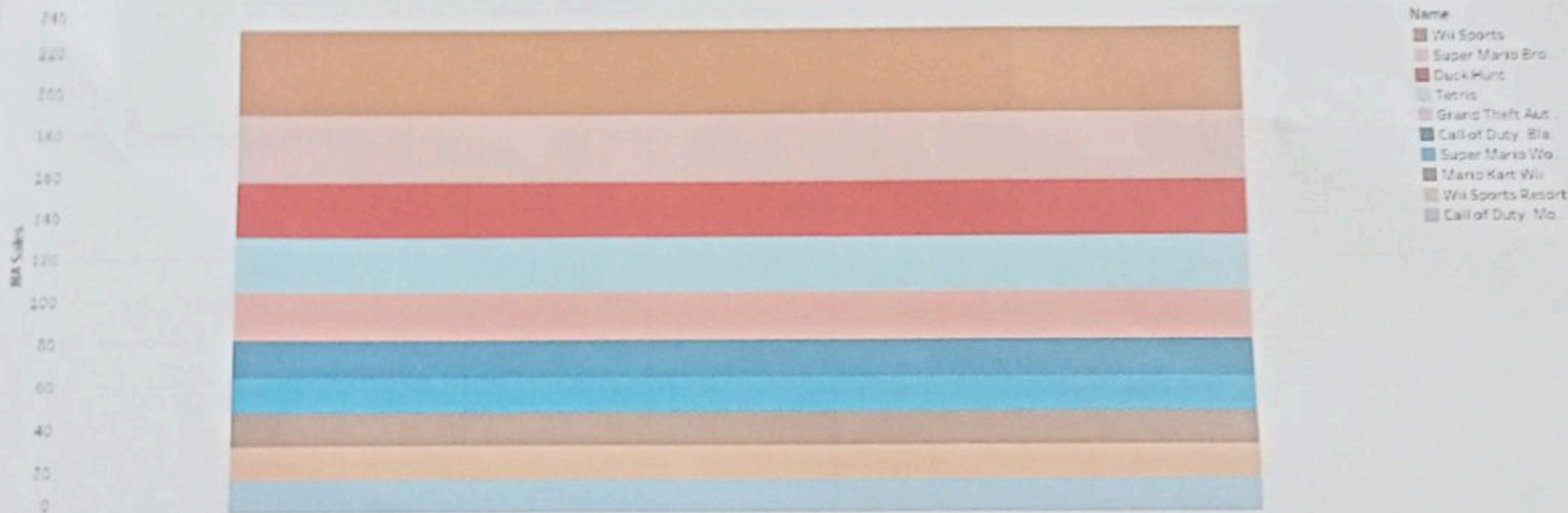
Custom size (1616 x 964)

This bar chart displays the genre and positions of video games, where the action genre emerges as the highest represented among categories. Additionally, shooter, role, and strategy offers a comprehensive overview of the diversity of different game genres across various platforms. In this chart, each genre is represented by a separate bar, where different platforms are distinguished within each genre. The height of each bar indicates the proportion or number of games belonging to that genre/platform combination. The bar representing the action game stands out as the tallest among the genres, indicating its dominance in prevalence compared to other genres.

This bar chart illustrating game sales in Europe, where Wii Sports stands out as the highest sales among other titles. It provides a clear visual representation of the distribution of sales among different games in the region. In this chart, each game is represented by a slice of the pie, with the size of the slice corresponding to its sales figures. Wii Sports occupies the largest slice, indicating that it has the highest sales among the listed games in Europe. This visualization immediately highlights the significant popularity and success of Wii Sports in the European gaming market compared to other titles. It suggests that Wii Sports has resonated strongly with European

It is a tree chart illustrating the top 10 selling video games in Japan, where Mario Kart Wii emerges as the highest sales among the listed titles. It offers a visually engaging representation of the popularity and sales performance of these games in the Japanese market. In this chart, each game is represented by a branch or node within the tree structure, with the thickness of the branches or size of the node indicating its sales figures. Mario Kart Wii stands out prominently as the top-selling game, with the largest branch or node in the chart. This visualization effectively communicates the dominance of Mario Kart Wii in the Japanese gaming market.

In this stacked bar chart displaying the top 10 selling video games in North America, where Wii Sports emerges with the highest sales among the listed titles, provides a visual representation of the sales performance of these games in the North American market. In this chart, each game is represented by a stacked bar, with different segments of the bar corresponding to the sales figures of each game. The segment representing Wii Sports stands out as the tallest within the stacked bars, indicating its position as the top-selling game in North America. This visualization effectively conveys the significant popularity and sales success of Wii Sports.



Name

- Wii Sports
- Super Mario Bros
- Duck Hunt
- Tetris
- Grand Theft Auto
- Call of Duty: Black Ops
- Super Mario Wii
- Mario Kart Wii
- Wii Sports Resort
- Call of Duty: Modern Warfare



Dashboard Layout

Default  
Phone

Device Preview

Size  
Custom size (1700 x 1000)

Sheets

- sales in different...
- Genre with Rank
- Total Sales
- Top10 publishers
- Best 10 selling ...
- Top10 EU sellin...
- Top10 Japan ...
- Top10 ...

Objects

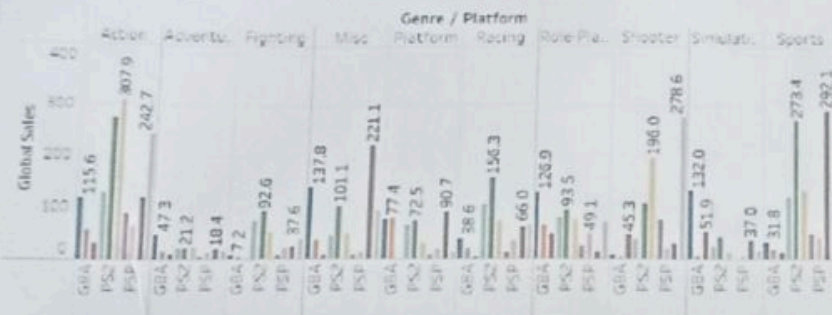
- Horizontal Container
- Vertical Container
- Text
- Extension
- Data Story
- Image
- Blank

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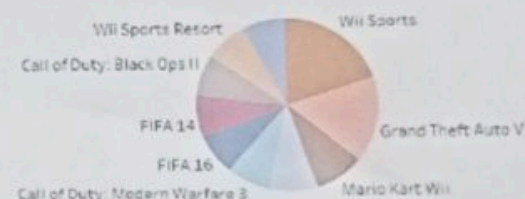
Show dashboard title

## top selling video games in different counties dashboard

### Best 10 selling Genre on platform



## Top10 EU selling videogames



## Top10 Japan selling video games



## Top10 NorthAmerican selling videogames



- sales in different...
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- Top10 Japan ...
- Top10 ...
- Dashboard 1
- top selling video...

A Drag to add text

☒ Show title

Size

Custom size (1616 x 964)

## Story 1

This graph chart illustrating global game sales from 1990 to 2020 provides a comprehensive overview of the gaming industry's growth and evolution over four decades. In this chart, the x-axis represents the year data from 1990 to 2020, while the y-axis represents the global sales figures, typically measured in billions of units. This visualization allows for the identification of key milestones or turning points in the industry, such as the introduction of new gaming platforms, the release of groundbreaking titles, or shifts in consumer

This bar chart showcases top gaming publishers and their respective global sales, where Nintendo emerges with the highest global sales, offers a clear snapshot of the dominant players in the gaming industry and their market performance. Each bar in the chart represents a different gaming publisher, with the height of the bar corresponding to their global sales figures. The bar representing Nintendo stands out as the tallest, indicating its position at the top in terms of global sales among the listed publishers. This visualization highlights Nintendo's significant presence and success in the gaming market compared to its competitors.

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EU Sales

1500  
1000  
500  
0



Name

- Wii Sports
- Grand Theft Auto V
- Mario Kart Wii
- FIFA 15
- Call of Duty: Mo
- FIFA 14
- Call of Duty: Bli
- Wii Sports Resort
- Nintendo DS

EU Sales

146.12



## Experimental investigation:

Experimental investigation of video games involves designing and conducting scientific studies to explore various aspects of gaming, player behaviour, and their effects. Here are some common areas of research in experimental investigation of video games.

**Cognitive effects:** Studying how playing video games affects cognitive function such as attention, memory, spatial skills, problem-solving, and multitasking. Experimental designs may include measuring cognitive.

**Emotional responses:** Investigating how video games influence emotional experience, including positive emotions like enjoyment and excitement, as well as negative emotions like frustration or anxiety.

Experimental may use self-report measures, physiological indicators or behavioural observation to assess emotional responses to gaming.

## Dashboard Layout

Default

Phone

Device Preview

## Size

Custom size (1500 x 900)

## Sheets

- sales in different...
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- Total Sales
- Top10 publishers
- Best 10 selling...
- Top10 EU selling...
- Top10 Japan...
- Top10...

## Objects

- Horizontal Container
- Vertical Container
- Text
- Extension
- Data Story
- Image
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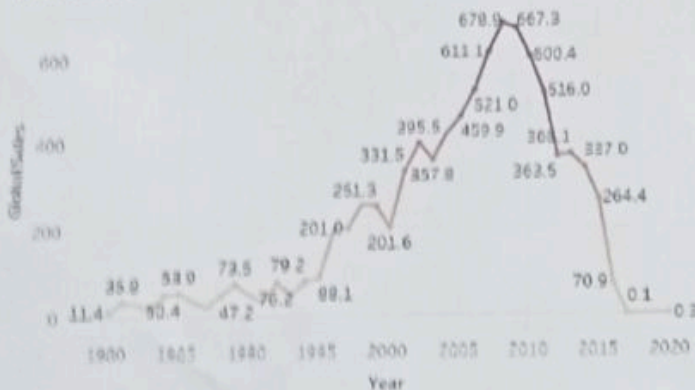
☐ Show dashboard title

## video game sales dashboard

## Top10 publishers



## Total Sales



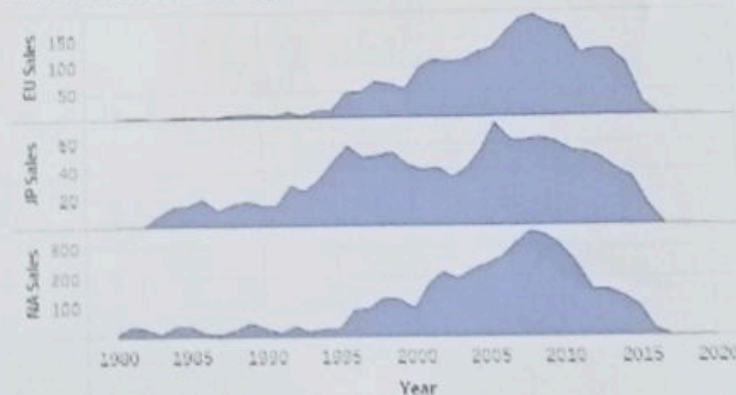
## Genre with Rank



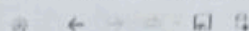
## Genre

- Action
- Adventure
- Fighting
- Misc
- Platform
- Puzzle
- Racing
- Role-Playing
- Shooter
- Simulation
- Sports
- Strategy

## sales in different region







Story Layout

New story point

Blank Duplicate

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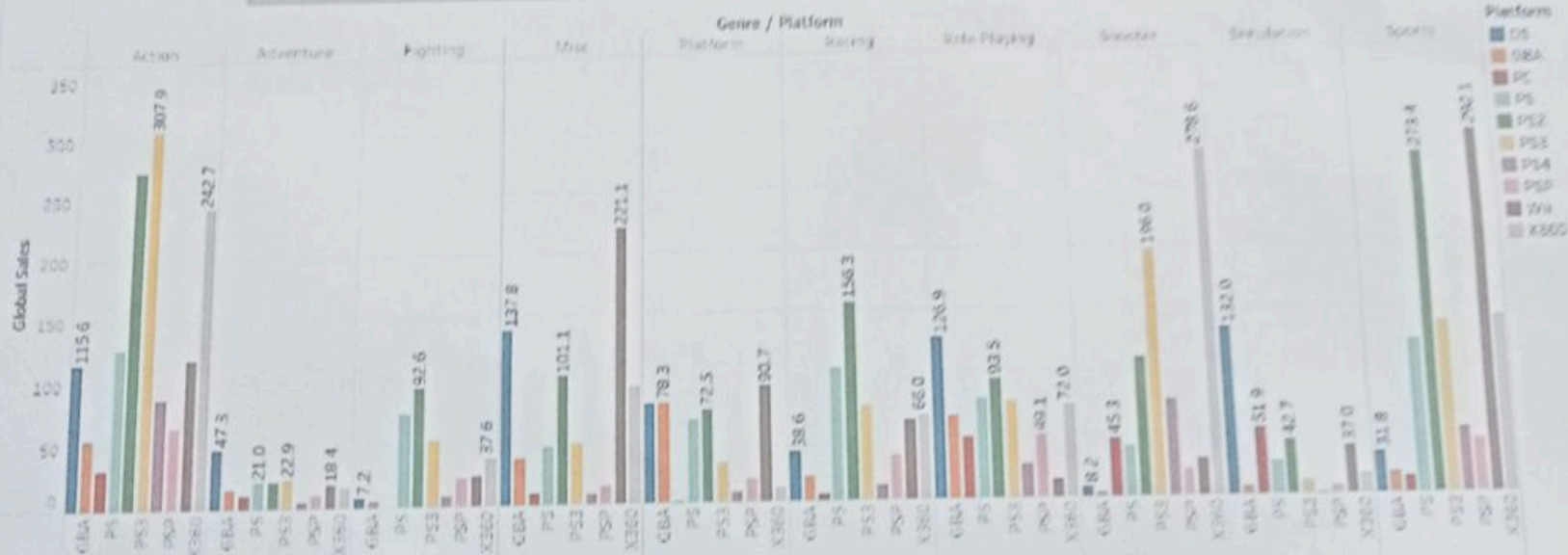
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This chart can be used to identify the most popular genres and platforms, as well as to track the growth of the gaming industry over time.



Flow chart :

Collected the given data.  
Preprocessed the above data.  
Uploaded into IBM cognos.  
Created data modules.  
Created data visualizations.  
like dashboard and story.  
we used charts like pie, bubble.  
charts, like chart etc.  
we analysed all data  
and created document  
we rendered our HTML file  
to flask  
Completed our project.



## Applications :

creating a flowchart for the development process of video games can be complex but exciting. Here's a simplified version.

### 1. Conceptualization :

- Brainstorming game ideas.
- Selecting a concept.

### 2. Design :

- game mechanics : Define how the game will work.
- story boarding : map out the game's narrative and progression.
- level design : plan the layout of game travels.

### 3. Development :

- programming : writing the code to bring the game to life.
- Designing characters, environment, and other visual elements.

sales in different...

Genre with Rank

Total Sales

Top10 publishers

Best 10 selling ...

Top10 EU sellin...

Top10 Japan ...

Top10 ...

Dashboard 1

top selling video...

A Drag to add text

Show title

Size

Custom size (1616 x 964)

## Story 1

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## Conclusion:

Certainly, the conclusion of video games can vary greatly depending on the game itself. Some games have multiple endings based on player choices, while others have a fixed conclusion. Ultimately, the conclusion serves to wrap up the storyline and provide a satisfying resolution to the player's journey.

Result: The results of playing video games can vary of each individual some people find enjoyment, relaxation, and stress relief, while others might experience frustration or addiction if not managed properly. Research suggests that moderate gaming can have positive effects on cognitive skills, problem solving abilities, and social connections, but excessive gaming can lead to negative impact.





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When you look at the chart, you'll see three colored areas representing Japan (blue), Europe (orange), and North America (green). The height of each area shows the sales volume for that region. The areas are stacked on top of each other, with Japan at the bottom, Europe in the middle, and North America at the top. This visual representation allows you to quickly grasp the overall sales trend across the three regions. It also helps you identify which region has the highest sales volume and which one has the lowest. For example, if the North America area is the tallest, it suggests that region has the highest sales volume. Conversely, if the Japan area is the shortest, it suggests that region has the lowest sales volume.

This area chart illustrates global video game sales from 1990 to 2020, broken down by region. The chart shows the growth and evolution of the gaming industry's revenue and audience over four decades. In this chart, the X-axis represents the years from 1990 to 2020, and the Y-axis represents the global sales figures. The chart is divided into three distinct colored areas, each representing a major gaming market: North America (blue), Europe (orange), and Japan (green). The total height of the stacked areas represents the global sales volume. The chart shows a significant upward trend in sales over the years, with a particularly sharp increase starting around 2000. This growth is driven by factors such as the introduction of new gaming platforms, the rise of online gaming, and the expansion of the gaming market into new demographics.

This area chart illustrates the performance of different gaming publishers over time, from 1990 to 2020. The chart shows the sales volume for each publisher, represented by a different colored area. The total height of the stacked areas represents the combined sales of all publishers. The chart highlights the dominance of certain publishers, such as Nintendo, who consistently shows the highest sales volume. It also shows the emergence of new publishers and the decline of others. The chart is a valuable tool for understanding the competitive landscape of the gaming industry and for identifying trends in publisher performance.



## Advantages :

- 1) Entertainment : video game provide an immersive form of entertainment that can be enjoyable and engaging.
- 2) Skill development : certain games can help develop cognitive skills

## Disadvantages :

- 1) Addiction : excessive gaming can lead addiction, causing negative impacts on mental health.
- 2) Health Risks : prolonged periods of gaming can contribute to physical health issues such as eyestrain.

## Future Scope :

- 1) virtual reality and augmented technologies continue to evolve, offering immersive gaming experiences that blur the lines.
- 2) cloud gaming : cloud gaming services allow players to stream games directly to their devices.