**Project Report**

**Video Game Sales**

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**MSDA 3060**

**Data Visualization and Storytelling**

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**Audience 1:** Game Publisher

* **Background:** Mino games, a startup game publisher, was not doing well with the sales from past year, they need a solid comeback to get back into the race in the gaming industry. In order to come back from the debt, they researched and collected a dataset that has the data of past released games and their sales activities. They need to plan a perfect pathway by analyzing the past data and try to predict the success of their next project.
* **Research Question:**

What are the attributes that impact more on video game sales?

* **Analysis:**

We have a dataset of 16,300 records with the attributes including:

1. **Rank:** Games are ranked based on the sales.
2. **Name:** Name of the game
3. **Platform:** Platform the game is released for.
4. **Year:** The exact year when the game is released originally after all the initial testing (Beta version).
5. **Genre:** The type of the game.
6. **Publisher:** Publisher of the game.
7. **NA\_Sales:** North America regional sales in millions.
8. **EU\_Sales:** Europe regional sales in millions.
9. **JP\_Sales:** Japan regional sales in millions.
10. **Other\_Sales:** other regional sales excluding North America, Europe, and Japan in millions.
11. **Global\_Sales:** Total sales Globally in millions.

For the analysis we need to compare different attributes with sales.

Firstly, we developed a region wise genre sales dashboard:

A group of colorful circles with text

Description automatically generated

In this chart the size of the bubbles represent the global sales and color represents the Genre. Here we can clearly find that action is the popular genre in Europe, North America and other continents. Whereas in Japan Role-play is the popular genre but still action is the second popular. Focusing on action-based games can produce massive sales. Planning a perfect and attractive game project in the action genre can rapidly increase the sales of the company.

As we know the genre to plan the project on before we proceed, we need to know one more thing. There is a word in the business world “Competition is always a good thing. It forces us to do our best”, which means we need know about our competitors in the same genre to plan strategy to get better outcome than the competitors. As there lot of competitors in the action genre for we can just focus on the top ten.

A screenshot of a graph

Description automatically generated

This is the chart that shows Top 10 competitors the action genre and their global sales.

Next, we for a safe side we also need to know the genre that has lower failure rate. For that we developed a bar chart:

A graph of different colored bars

Description automatically generated

This bar chart projects the average of global sales for each genre produced which allows us know the success rate. Here Platform genre got is at the top place. Therefore, we can say platform might not produce the sales as action, but it can produce decent sales with low risk. Focus on Platform genre to get decent sales with low risk of failure. Planning a project on platform genre can reduce the risk percentage.

As we know before we get in the genre, we need to know our competitors first:

A screenshot of a computer

Description automatically generated

In this we only have two competitors, Nintendo and Sony. So, all we need is a 10% new idea than the games published by the other competitors.

* **Summary:**

The research reveals that action games dominate sales in various regions, particularly in Europe and North America, with RPGs leading in Japan. Emphasizing action games is recommended for rapid sales growth. Competition analysis in the action genre identifies the top 10 competitors globally. For a balanced approach, the study suggests considering the Platform genre, which shows a high success rate with lower risk. With only two identified competitors, Nintendo and Sony, a slight innovation of 10% in new ideas is advised for a competitive edge. Overall, the findings guide game publishers to strategically plan and innovate, balancing genre preferences, competition, and risk factors for optimal sales outcomes.

* **Findings:**

1. Focusing on action-based games can produce massive sales.
2. Focus on Platform genre to get decent sales with low risk of failure.

* **Recommendations:**

1. Planning a perfect and attractive game project in the action genre can rapidly increase the sales of the company.
2. Planning a project on platform genre can reduce the risk percentage.

**Audience 1:** Game Developer

* **Background:** Most of the game developers who are freshmen in the gaming industry are so confused about getting into a domain which can give them more opportunities in future and has more demand. So, they can enhance their skills in that particular domain and get to work with a publisher who is related to that domain.
* **Research Question:**

What is the optimal platform-genre alignment to enhance video game experience?

* **Analysis:**

To know the platform- genre combinations that are in demand we can just compare their global sales.

A screenshot of a video game

Description automatically generated

We developed a bubble chart that compares the combinational global sales of different genres and platform combinations. Here we represented Genre as color of the bubbles, sales as the size of the bubbles, and the remaining are labeled inside the bubbles. To make the chart more understandable I also filtered the platform just to the top three.

By this chart we can clearly find that the games released with the combination of PS3-action has the first highest global sales of 305 million, Wii-Sports has the second highest global sales of 290 million, and third is the X360-Shooter with global sales of 277.2 million. So, these genre -platform combinations are in demand, it is better to build a career in any one of these domains.

As we came to know about the top three genre-platform combinations the next step is to know the top companies in these genre-platform combinations. To send applications to the respective companies that allow an individual to make a carrier in the they choose.

A screenshot of a computer

Description automatically generated

We developed a dashboard with three pie charts that represent the top three genre-platform alignments. The pie charts are filtered to the top five companies in the respective domain. So, we clearly know that if you choose Action-PS3 then Ubisoft, Sony Computer Entertainment, Activision, Electronic arts, or Take-two Interactive are the top publishers to seek a job in. If you choose Sports-wii alignment then Ubisoft, 505 Games, Electronic arts, Sega, or Nintendo are the best options to prefer. If you choose Shooter-X360 then Ubisoft, Activision, Electronic arts, Microsoft Game Studios, or Take-two interactive are the better options to go with.

After all this information in hand you might wonder what are the brands that are popular in global sales independent to the genre or platform. To answer this question we developed this box plot.

A screenshot of a computer screen

Description automatically generated

This box plot shows the top rulers of the business globally independent to the genre and platform. In this chart the publishers are represented by colors and global sales are represented by the size of the box. The companies are filtered and limited to top 10 by global sales.

* **Findings:**

1. Action-PS3, Sports-Wii, and Shooter-X360 are the top three genre-platform combinations that are in demand.
2. Working with the top rulers in these domains can help an developer to build a good carrier.

* **Summary:**

The study addresses the confusion among novice game developers regarding the optimal domain for career growth in the gaming industry. The research question focuses on identifying the ideal platform-genre alignments to enhance the video game experience. Through a comprehensive analysis, the research unveils that Action-PS3, Sports-Wii, and Shooter-X360 are the top three in-demand genre-platform combinations based on global sales.

In navigating the complex landscape of the gaming industry, particularly for aspiring game developers, the research offers invaluable insights into carving a successful career path. The background illuminates the common confusion faced by newcomers in selecting a domain with ample opportunities and future demand. The central research question, focusing on the optimal platform-genre alignment for an enhanced video game experience, underscores the practicality of aligning one's skills with market demands.

The analysis is thoughtfully structured, employing a bubble chart to visually represent global sales for various genre-platform combinations. This visual aid distinctly identifies Action-PS3, Sports-Wii, and Shooter-X360 as the most sought-after combinations, providing aspiring developers with a clear direction for skill enhancement. The subsequent step involves identifying the key players in these domains, facilitating strategic decision-making in career choices.

The dashboard, featuring pie charts for the top three genre-platform alignments, ensures that developers have a concise understanding of the major players. Whether one opts for Action-PS3, Sports-Wii, or Shooter-X360, publishers like Ubisoft, Electronic Arts, and Take-Two Interactive emerge as prominent choices. This strategic information not only streamlines the job-seeking process but also empowers developers to align themselves with industry leaders, enhancing the potential for career growth.

To guide developers in seeking opportunities, a dashboard with pie charts highlights the top five companies in each domain, such as Ubisoft, Electronic Arts, and Take-Two Interactive. Furthermore, a box plot identifies global sales leaders across genres and platforms, providing developers with insights into industry giants regardless of specific alignments. In summary, aspiring developers are encouraged to align their skills with the lucrative domains of Action-PS3, Sports-Wii, or Shooter-X360 and consider collaborating with industry leaders for a promising career.

* **Conclusion:**

In essence, the research findings offer a roadmap for budding game developers, emphasizing the importance of aligning with the demands of the market. The identified genre-platform combinations, coupled with insights into key industry players and global sales leaders, collectively provide a comprehensive guide for those seeking a prosperous and fulfilling career in the dynamic realm of video game development.