

Presentation:  Presentation.pptx

Introduction

Problem: A Video Game Production company is looking to launch their next big product. Given the size of the market and the overwhelming amount of data available, our firm was hired to analyze all the video games currently available.

Goal: Our goal is to recommend what video game genre will be most profitable for the production company to launch next. To meet our goal, we chose a Video Games Sales report that provided the following information:

- *Global revenue*
- *NA revenue*
- *EU revenue*
- *JP revenue*
- *Other revenue*
- *Genre*
- *Critic Score*
- *User Score*

As part of our analysis, we wanted to see whether the game's revenue in each region and across the globe had a significant correlation with its genre, user, and critic rating.

By doing this deep dive, we hoped to figure out what genre of video game would be most profitable in which region - which will allow the Production company to focus its marketing and brand recognition initiatives in these areas to increase its profitability.

Data Cleaning and Statistical Analysis:

To meet our goal, we first started with cleaning the report and bringing in any other additional data set that would support our market analysis.

Excel Cleaning:

- Trimmed extra spaces in names to ensure they can be joined in an SQL query later if needed
- Updated number format (example: 44.00 to 44,000)

Statistical Analysis: Through our analysis, we gained insights that the games with the genre of “Action” had the highest sales across the globe. Additionally, it had the highest revenue across North America, the EU, and other countries except for Japan.

- **How:**
We calculated the total sales in different regions and globally for each video game genre- providing insights into which video game genres have the highest total sales globally.
- **SQL Query:**

```
select sum(NA_Sales_Unscaled), sum(JP_Sales_Unscaled), sum(EU_Sales_Unscaled),  
sum(Other_Sales_Unscaled), sum(Global_Sales_Unscaled), Genre_Cleaned  
from `video_games_sales_as_at_22_dec_2016_(cleaned)`  
Group BY Genre_Cleaned  
order by sum(Global_Sales_Unscaled) desc;
```

“Action” also had the highest critic count and came in third in terms of rating.

- **How:**
We analyzed the relationship between average critic scores, total critic counts, and total global sales across different video game genres. This query helped us understand that there is a correlation between critic scores, critic counts, and global sales within each genre.
- **SQL Query:**

```
select sum(NA_Sales_Unscaled), sum(JP_Sales_Unscaled), sum(EU_Sales_Unscaled),  
sum(Other_Sales_Unscaled), sum(Global_Sales_Unscaled), Genre_Cleaned  
from `video_games_sales_as_at_22_dec_2016_(cleaned)`  
Group BY Genre_Cleaned  
order by sum(Global_Sales_Unscaled) desc;
```

Once we reviewed the correlation between genre and critic rating, we wanted to see if individual games by critic rating would result in similar results - which showed that out of the top 10 games that were ranked highest by critics, four of them were action (with number one being action as well)

- **How:**
We identified the top-rated video games based on critic scores and their genre to see the highest-rated games by critics and understand their genres.
- **SQL Query:**

```
select avg(Critic_Score), sum(Critic_Count), sum(Global_Sales_Unscaled),
Genre_Cleaned
from`video_games_sales_as_at_22_dec_2016_(cleaned)`
Group BY Genre_Cleaned
order by sum(Global_Sales_Unscaled) desc;
```

Lastly, we were able to find out that the game with the highest user count was action as well.

- How:
We reviewed the most popular video games based on user counts, along with their user scores and genre to identify the most popular games among users and understand their genres, user counts, and user scores.

- SQL Query:

```
select DISTINCT(Names_Cleaned), Genre_Cleaned, Critic_Score,
Year_of_Release_Cleaned
from`video_games_sales_as_at_22_dec_2016_(cleaned)`
order by Critic_Score desc limit 10;
```

```
select distinct(Names_Cleaned), User_Count, User_Score, Genre_Cleaned
from`video_games_sales_as_at_22_dec_2016_(cleaned)`
order by User_Count desc limit 10;
```

Recommendations

Based on our statistical analysis, we are making the following business recommendations to our client:

First Recommendation:

The next product, to gain the most profitability across the globe, should be an action game. In our analysis, we identified that action across the regions has significantly higher revenue compared to the rest of the genres. For example, Action generates approximately \$398,890 more than Sports games, which comes second in the global revenue scale, and approximately \$1,532,800 more than Strategy games, which came last.

This shows that action games are well beloved across the globe based on the sales report and have a great chance of succeeding in the global market for our clients to launch their new product in. A great amount of users and critics for this specific genre have contributed to higher ratings for these games and we are confident that based on the data available, we will be able to get as much traction similar to our competitors.

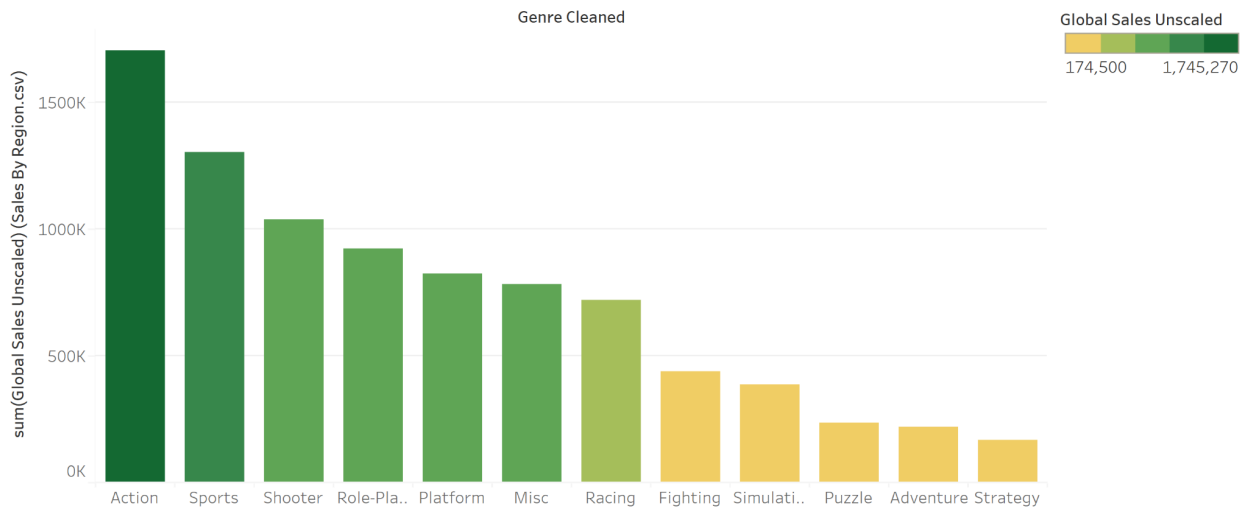
Second Recommendation:

Our second recommendation is based on where the product should focus its launch in. As per our analysis, the product will have the most success in North America and the EU based on the sales report. For Action genres, the revenue of North America makes approximately 50% of the global sales and for the EU, it makes approximately 30%. That being said, it would be important for our client to focus its marketing and brand awareness campaigns in these regions knowing that there is already a heavy liking for these specific types of games.

Another fact we discovered was that given the various cultural contexts in Japan, action games will not have the most success given the heavy emphasis on Role-playing games in Japanese culture. Understanding that there is very little market opportunity to succeed in this area, it would be best if we save our efforts and marketing costs in Japan and ensure that the majority of the focus is geared towards North America and the EU.

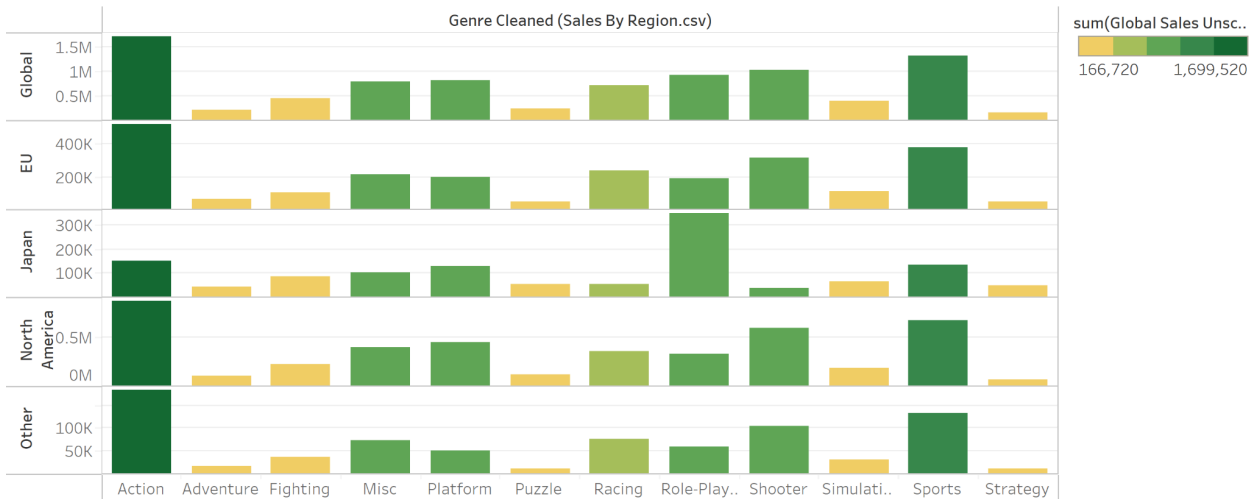
Visualizations:

Global Sales By Genre



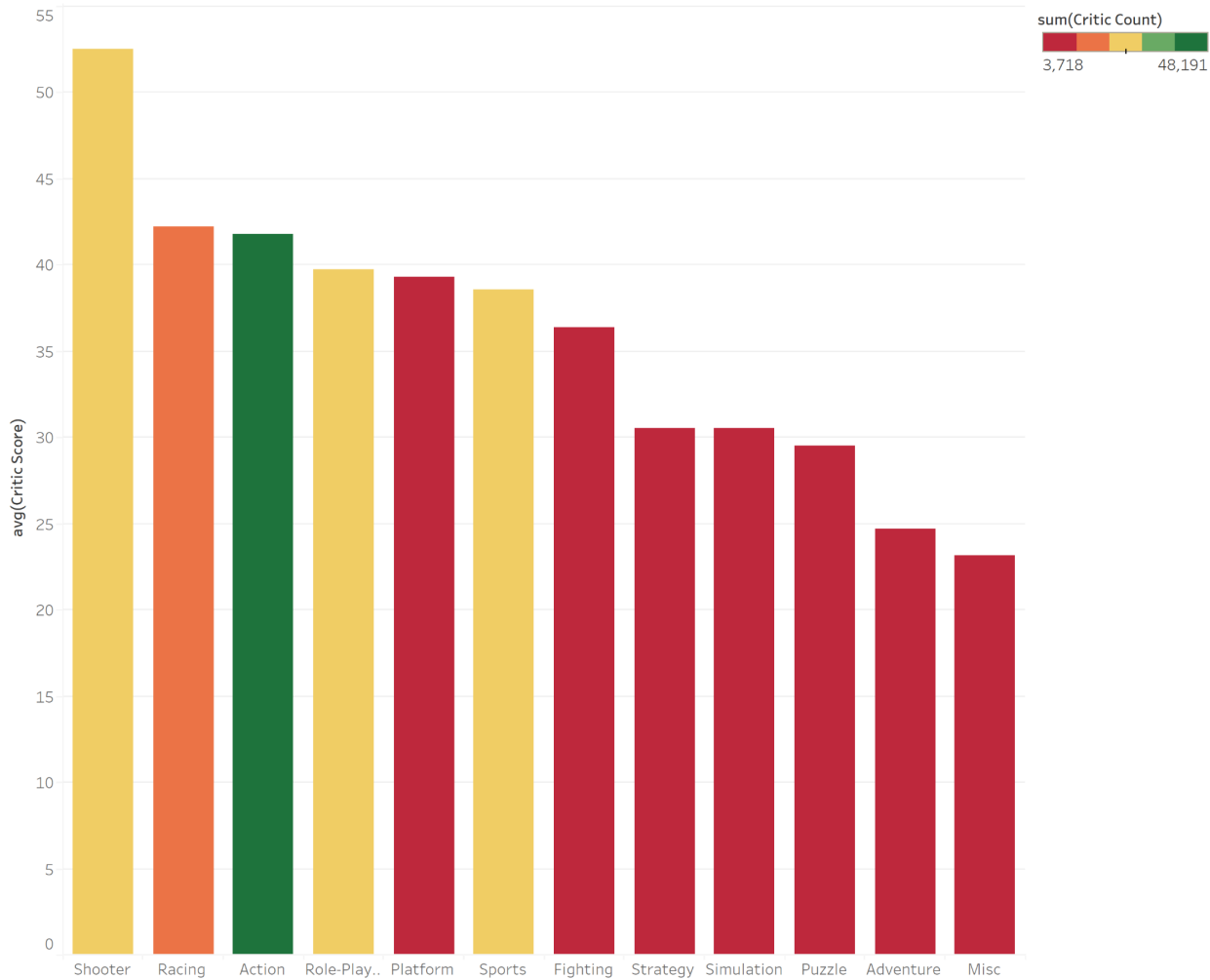
Sum of sum(Global Sales Unscaled) (Sales By Region.csv) for each Genre Cleaned. Color shows sum of Global Sales Unscaled. The view is filtered on Genre Cleaned, which excludes Null.

Genre Sales By Region



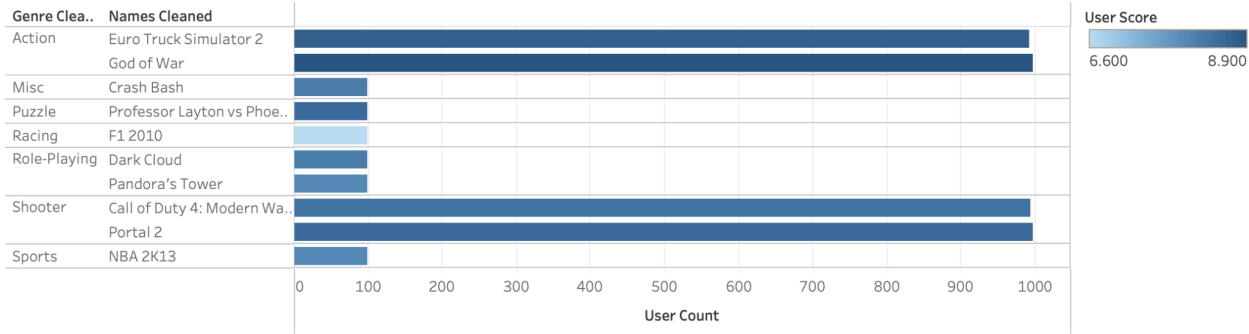
Sum of sum(Global Sales Unscaled) (Sales By Region.csv), sum of EU Sales Unscaled, sum of sum(JP Sales Unscaled), sum of sum(NA Sales Unscaled) and sum of sum(Other Sales Unscaled) for each Genre Cleaned (Sales By Region.csv). Color shows sum of sum(Global Sales Unscaled) (Sales By Region.csv). The view is filtered on Genre Cleaned (Sales By Region.csv), which excludes Null.

Average Critic Score



Sum of avg(Critic Score) for each Genre Cleaned (Critic Score by Genre.csv). Color shows sum of sum(Critic Count).

Breakdown of Genre by User Count



Sum of User Count for each Names Cleaned broken down by Genre Cleaned. Color shows sum of User Score.

References

- Popular Video Games 1980 - 2023. Kaggle. (2023).
<https://www.kaggle.com/datasets/arnabchaki/popular-video-games-1980-2023/data>
- SID_TWR. (2019b, May 10). *Video games sales dataset*. Kaggle.
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- Japan Nakama. (2023, January 4). *The cultural impact of Japanese video games*.
<https://www.japannakama.co.uk/the-cultural-impact-of-japanese-video-games/#:~:text=Designing%20new%20video%20game%20genres,creation%20of%20several%20other%20RPGs.>