Video Game Sales Data

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Capstone Project

Example Data Analytics Case Study

Title	Predicting Video Game Sales Information
Industry Focus	Video Game Development
Problem Statement	In the dynamic video game industry, accurately predicting and adapting to market trends is crucial for sustained success. This capstone case study aims to address the challenge by utilizing sophisticated data analytics techniques to uncover the intricate patterns and factors influencing the popularity and commercial success of video game genres.
Business use case	1. Explore fundamental data analytics concepts applicable to the video game industry. 2. Identify key indicators and metrics for assessing video game genre popularity. 3. Employ predictive modeling to anticipate future market trends within the gaming industry.
Goals / Deliverables	A presentation that provides actionable insights for stakeholders to optimize strategic decision-making in the creation and marketing of video games
Are datasets available?	Yes
Dataset list	The data set can be downloaded from the link given in the below section
Websites to scrape the data needed	https://www.kaggle.com/datasets/gregorut/videogamesales

Commencing the analysis, I initially examined the dataset in an Excel spreadsheet, aiming to understand its nature, data types, and determine the most suitable approach for subsequent data analytics techniques. To establish a benchmark, I crafted a pivot table for effective data comparison. Subsequently, opting for R for in-depth analysis and data visualization, alongside Tableau for comprehensive skill practice, I embarked on synthesizing the newly acquired skills.

Focused on discerning video game genre popularity, I sought to ensure the data's comprehensibility for stakeholders. To streamline the analysis, I narrowed the focus to three prominent brands, facilitating a more targeted and meaningful exploration.
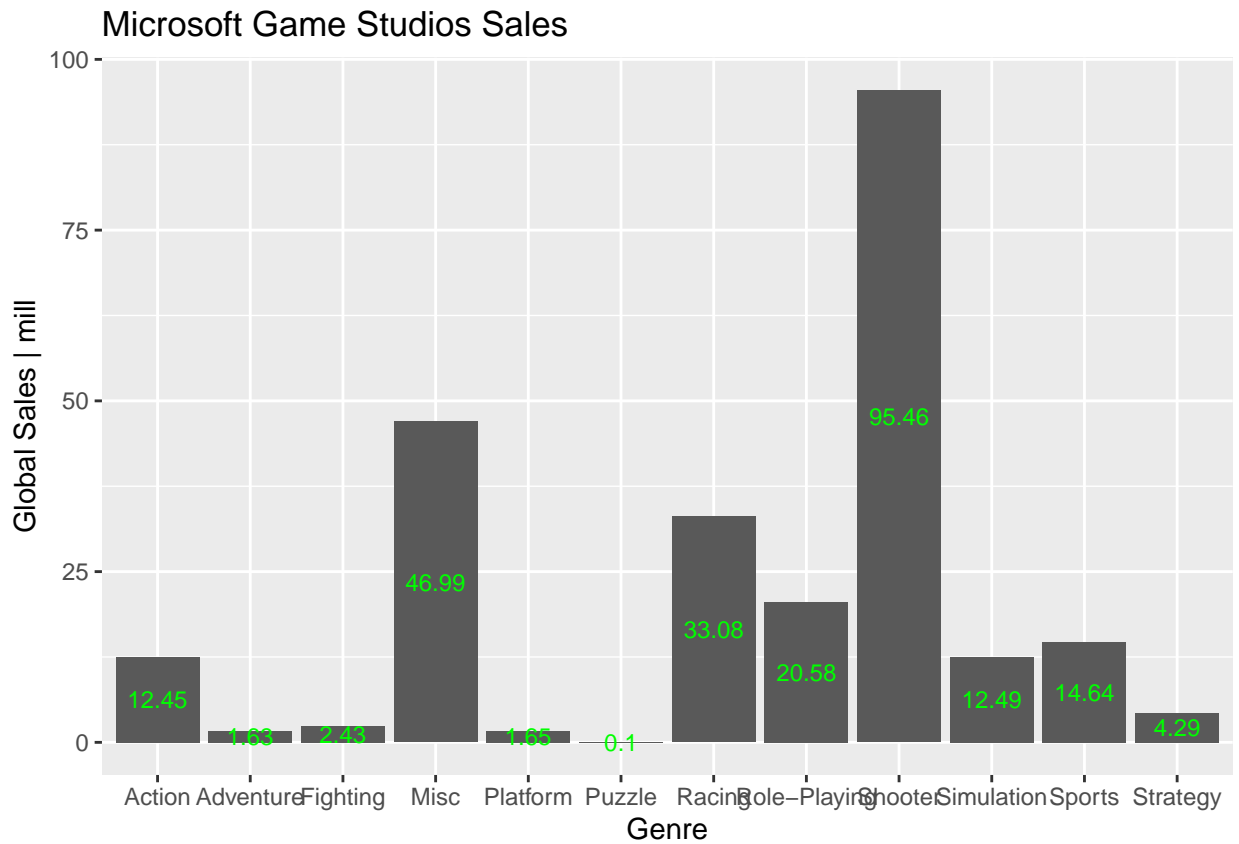
Nintendo Sales
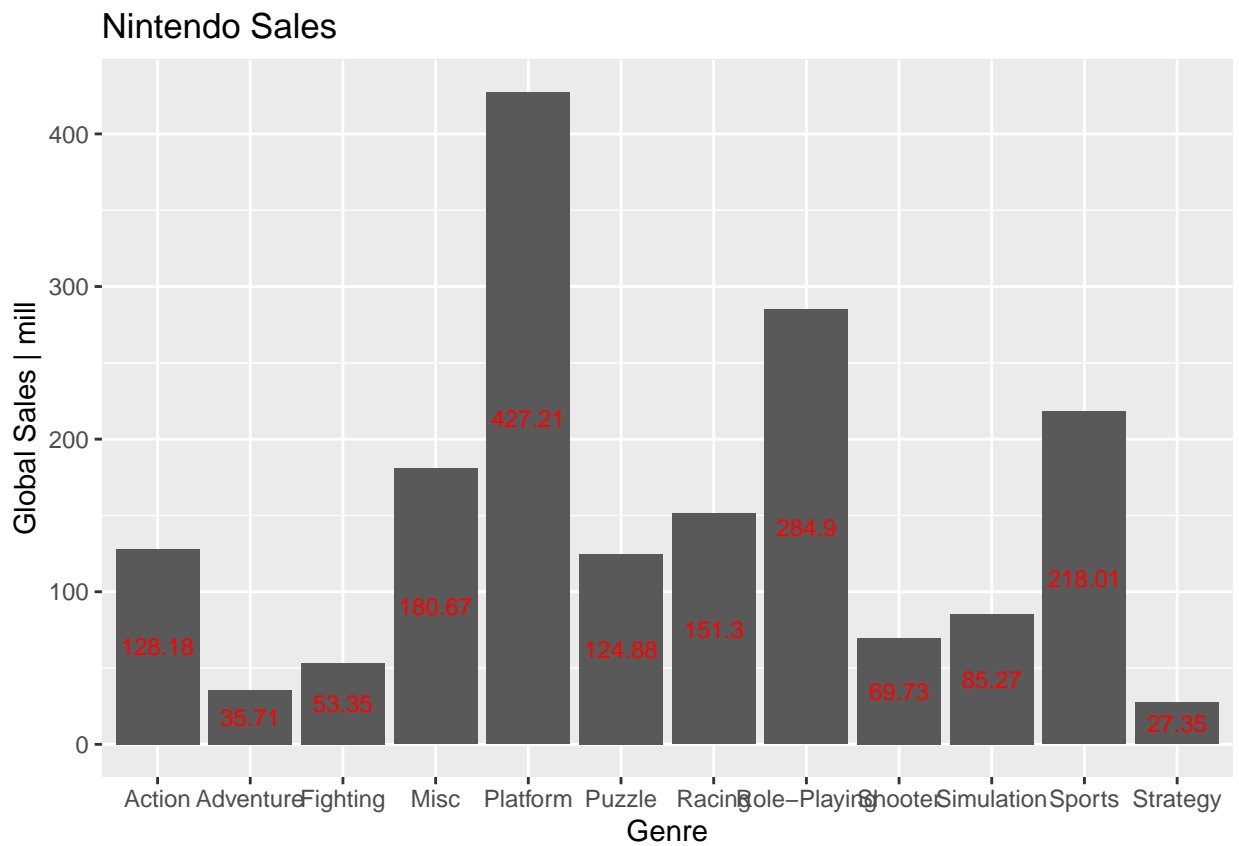
From the bar plot, we can see that the top three genres for Nintendo were:

- Platform
- Role-Playing
- Sports

Titles in these genres include games such as:

- Super Mario Bros
- Pokemon
- Wii Sports / Fit
- Donkey Kong 64 / Country

Microsoft Sales Data

Microsoft Game Studios Sales

Moving on to Microsoft, we see that the top three genres were:
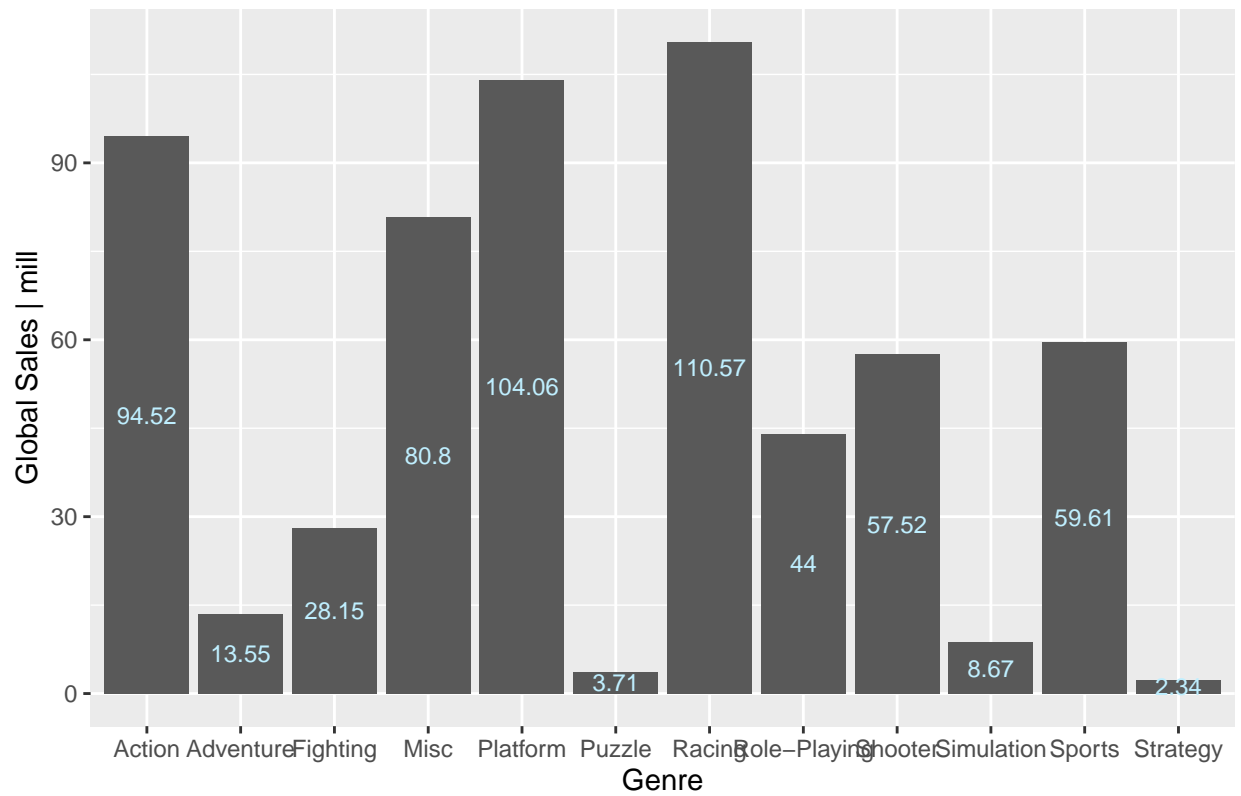
- Shooter
- Misc
- Racing

Titles in these genres include games such as:

- Haloe
- Minecraft
- Forza
- Kinetic Adventures

I would like to clarify that Minecraft and Kinetic Adventures, which were top sellers, are part of the Misc genre.

Sony Sales Data

Sony Computer Entertainment Sales


Finally onto Sony, the top genres were:

- Racing
- Platform
- Action

Titles in these genres include games such as:

- Gran Turismo
- God of War
- Crash Bandicoot
- Spyro the Dragon

Sales by Location

Subsequent to discerning the optimal genres for the top three prominent publishers, a focused analysis was conducted to identify the best-selling genre within each available geographic location.
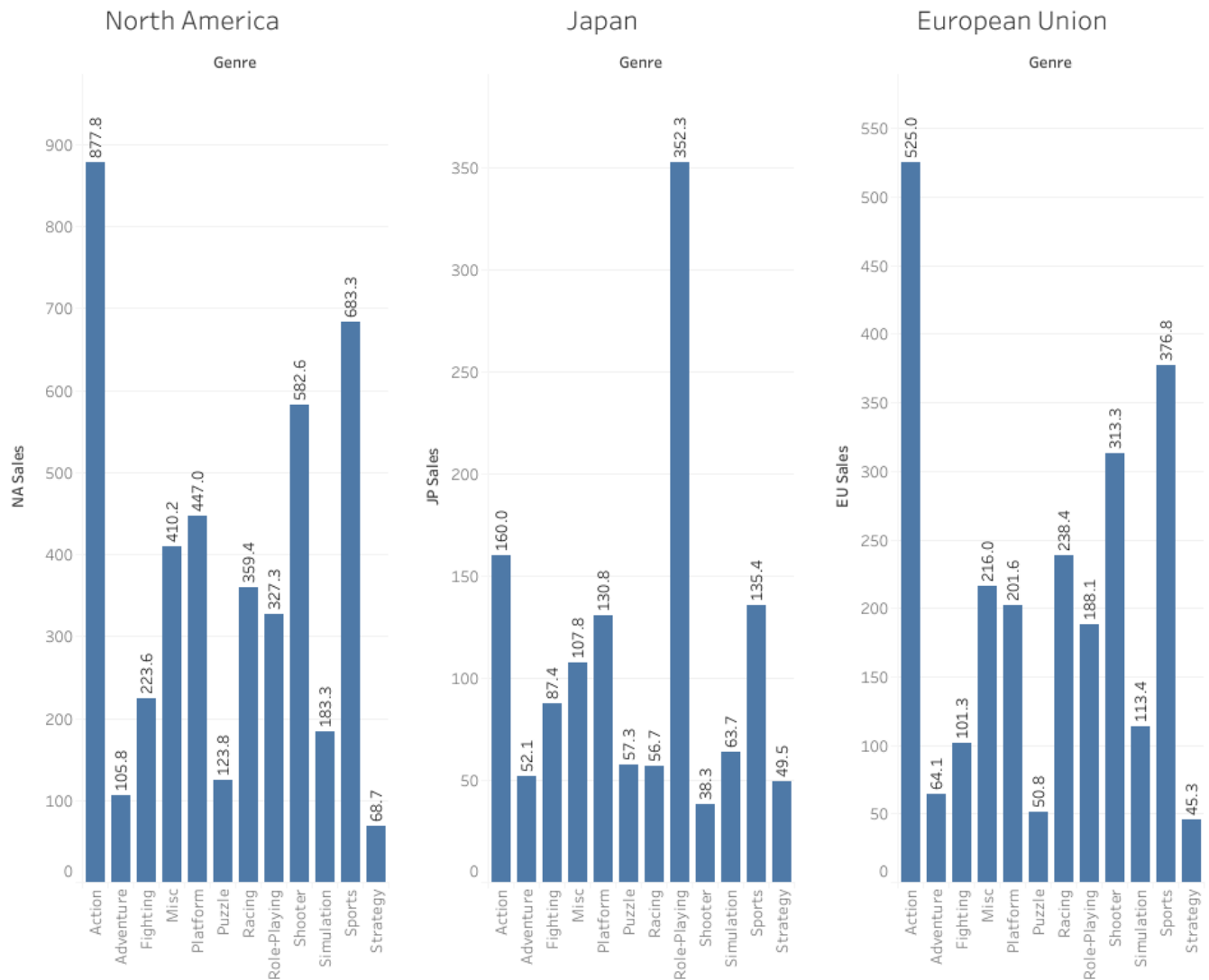
For North America we have:

- Action
- Sports
- Shooter

In Japan we have:

- Role-Playing
- Action
- Sports

In EU we have:

- Action
- Sports
- Shooter

Data-Driven Insights

Drawing upon the acquired insights, I have formulated a minimum of three discerning propositions for the purpose of making informed and strategic decisions concerning the company's forthcoming video game initiatives. These proposals encompass considerations related to partnership establishment, creative development, and targeted marketing endeavors. The data-driven nature of these insights enhances the precision and efficacy of the recommendations, aiming to contribute positively to the company's strategic trajectory in the dynamic landscape of the video game industry.

Insight 1

A strategic collaboration has been forged to develop and market a platform or role-playing game in Japan, leveraging a partnership with the esteemed gaming giant, Nintendo. With its headquarters situated in Japan, Nintendo stands as a renowned brand, distinguished by its timeless titles and a dedicated global fanbase. The preferable selection for this collaboration is the role-playing genre, given its exceptional market performance in Japan, emerging as the top-selling category with a notable 352 million copies sold. Additionally, role-playing games have consistently proven to be a cornerstone of success for Nintendo, amassing a commendable 427 million in global sales. It is noteworthy that our assessment of publisher performance takes into account global sales, while regional sales are specifically considered for the Japanese market. As a secondary option, the platform genre holds considerable merit, narrowly missing the third position in Japan, thus rendering it a viable and competitive alternative.

Insight 2

A collaborative venture has been established for the development of a shooter game in partnership with Microsoft, with targeted marketing efforts directed towards either the North American or European market. Shooter games have demonstrated unparalleled success in the Microsoft ecosystem, consistently ranking among the top three genres in both North America and Europe. Notably, the genre secured the third position with sales totaling 582 million in North America and achieved a similar standing in Europe, generating sales amounting to 313 million, further affirming its robust market performance.

Insight 3

An alliance has been established for the development and marketing of an action game in collaboration with Sony, with targeted distribution across North America, Europe, or Japan. The action genre has notably emerged as Sony's top-selling category, securing the premier position in both North America and Europe, and a commendable second place in the Japanese market. Demonstrating its pervasive appeal, this genre consistently ranks among the top three best-selling categories across all available geographic locations. Impressively, the game has garnered substantial sales figures, amassing 877 million in North America, 160 million in Japan, and 525 million in Europe, affirming its robust performance in diverse markets. Given these compelling metrics, this collaboration stands as a strategic and reliable choice, underlining its significance as a versatile and consistently appealing venture for Sony.

Conclusion

In conclusion, this capstone study has provided valuable insights into the dynamics of the gaming industry, particularly in collaboration with industry giants such as Sony and Microsoft. As a beginner in the field, the journey of conducting this research has been both enlightening and challenging. The exploration of sales data across different genres and geographic locations has offered a foundational understanding of market trends.

While the findings presented here shed light on significant patterns and preferences, it's important to acknowledge the limitations of my beginner-level expertise. As I reflect on the depth of analysis, there remains a lingering uncertainty about whether a more intricate examination of the data could have unearthed additional nuances. The decision not to delve further into certain aspects was made with a conscious recognition of my novice status and a desire to maintain a manageable scope for this study.

This capstone serves as a stepping stone in my journey as a researcher, and I recognize the potential for future studies to delve deeper into specific dimensions of the gaming industry. As I continue to refine my skills, I remain open to feedback and critique, recognizing that the pursuit of knowledge is an ongoing process. In closing, this study lays the groundwork for future exploration and underscores the significance of continuous learning in the dynamic realm of data analysis and research.