

DATA ANALYSIS PORTFOLIO

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Professional Background

I hold a B.Sc.(Ed) degree in Mathematics from the University of Lagos, Nigeria. Throughout my career as a data analyst with more than three years of industry experience in collecting, organizing, interpreting and disseminating various types of statistical figures, I have emphasized the importance in research and energetic presentation and also in confident communication in a way that circulate information very clear, efficient and beneficial for end users. I'm well organized and creative to finding solutions to problems and determining modifications for optimal use of organizational data to drive successful business solutions. I enjoy working collaboratively but can also run with projects on my own, with proven ability to work proactively in complex and fast-paced office environment.

Portfolio Outline

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Udemy Project Description

- As a data analyst for Udemy, I was tasked by my finance manager and senior leadership team to present data on course revenue in order to understand and identify opportunities to increase revenue and improve the company's business model, monitor the performance of the various courses, and identify the top twenty most popular courses.

Methodology

- I investigated Udemy consumer subscription trends in four (4) different subject areas. Using Google Sheets, the data was cleaned up of duplicates, blank cells were removed, and inconsistent data was corrected. To build the necessary charts and visuals, Google Sheets and Tableau were used to evaluate the clean data. The study's objectives are to pinpoint potential chances for revenue growth and monitor performance in the areas of web development, graphic design, business finance, and musical instruments.

Result/Conclusion

- The provided data shows that web development is the most popular of all the subjects and also provided the highest revenue.
- Reduction of free web development most popular courses will further help drive up more revenue.
- Given that web development was the main source of most of the revenue, there may be opportunities to further boost revenue.

The Problem

- The business problem is to analyze and measure the performance of different courses provided on the Udemy website, discover opportunities for additional revenue increase, and identify the top 20 most popular subject areas that members found interesting. The data analysis should be completed within three (3) weeks.
- Data from the following topics; Web Development, Graphic Design, Business Finance, and Musical Instruments will help in providing requisite information. To facilitate comprehension, the data is presented in descriptive, tabular, and visual formats.
- The analysis seeks to understand the subject with the total number of subscribers, the subject with the highest average content duration, price, and number of students, the subject with the highest free and paid courses, the level with the highest average price of web development courses, the subject with the highest top 20 most popular courses, and if content duration impact the price of courses.

Data Design

I investigated Udemy consumer subscription trends in four (4) different subject areas. Using Google Sheets, the data was cleaned up of duplicates, blank cells were removed, and inconsistent data was corrected. To build the necessary charts and visuals, Google Sheets and Tableau were used to analyze the clean data.

The study's objectives are to pinpoint potential chances for revenue growth and monitor performance in the areas of Web Development, Graphic Design, Business Finance, and Musical Instruments.

According to the findings, Web Development has the highest income and outperformed the other subject areas.

I used Tableau to visualize the data since it is better suited to managing large data sets and can provide a more detailed analysis.

Findings

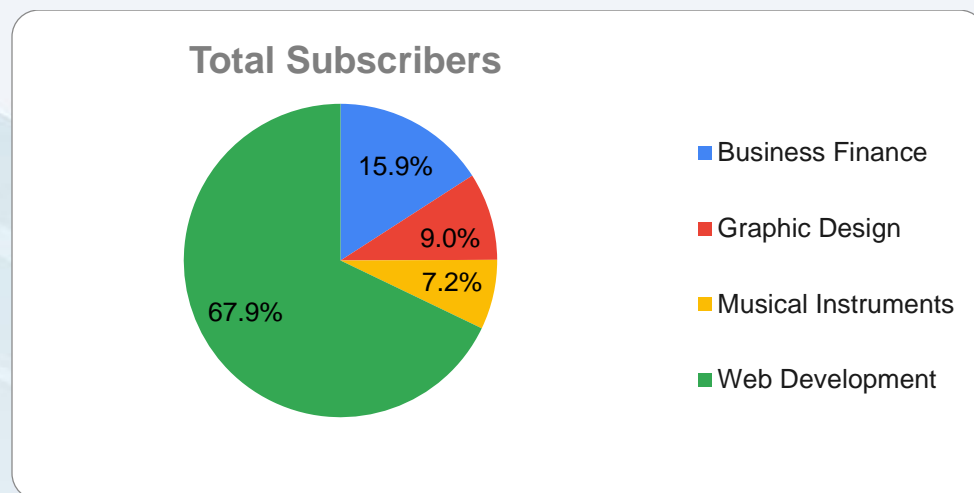
Finding 1

Table 1: Total Subscriptions by Subject

According to the provided data on the different course titles, the largest percentage (67.9%) of the subscribers enrolled in Web Development. The total number of subscribers is 7,981,935.

<i>subject</i>	SUM of num_subscribers
Business Finance	1868711
Graphic Design	1063148
Musical Instruments	846689
Web Development	7981935
Grand Total	11760483

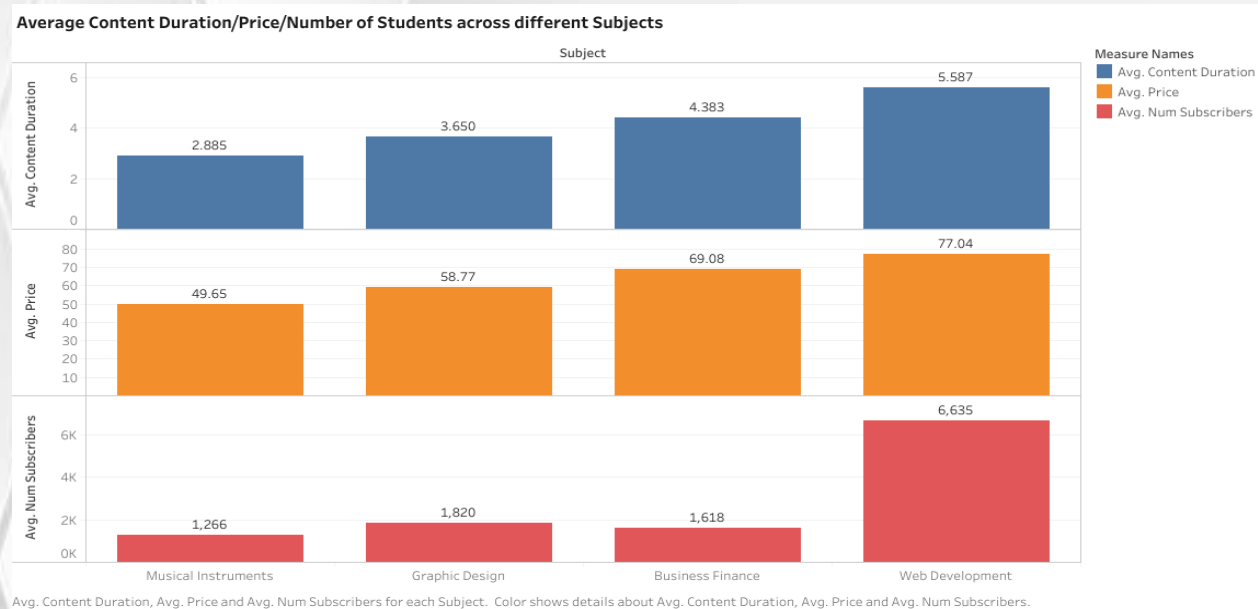
Figure 1: Total Subscribers by Subject



Finding 2

The result of the analysis revealed that Web Development has the highest average content duration, price, and number of students.

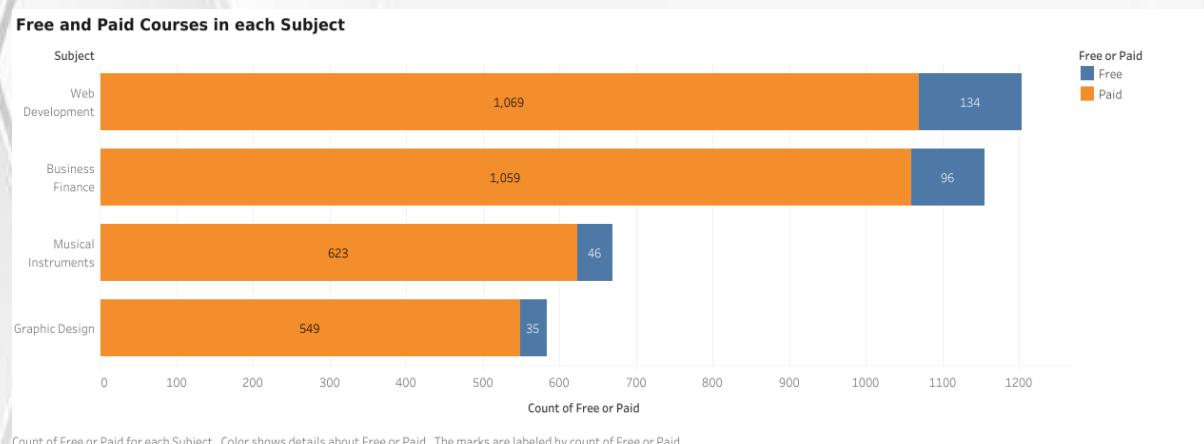
Figure 2: Average Content Duration/Price/Number of Students by Subject



Finding 3

This table shows that Web Development has the highest of free and paid courses at 134 and 1069 respectively.

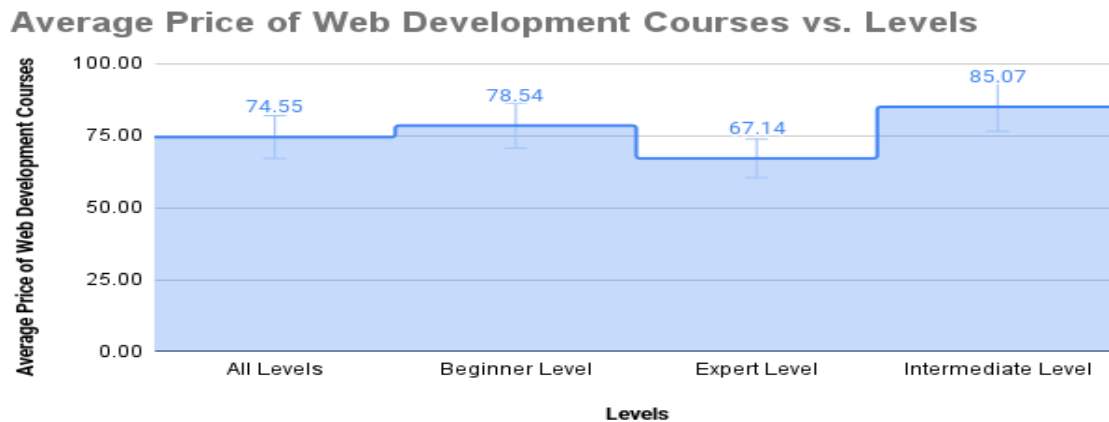
Figure 3: Free/Paid by Subject



Finding 4

The analysis showed that the Intermediate Level has the highest average price of Web Development Course compared to the other Levels.

Figure 4: Average Price of Web Development by Levels

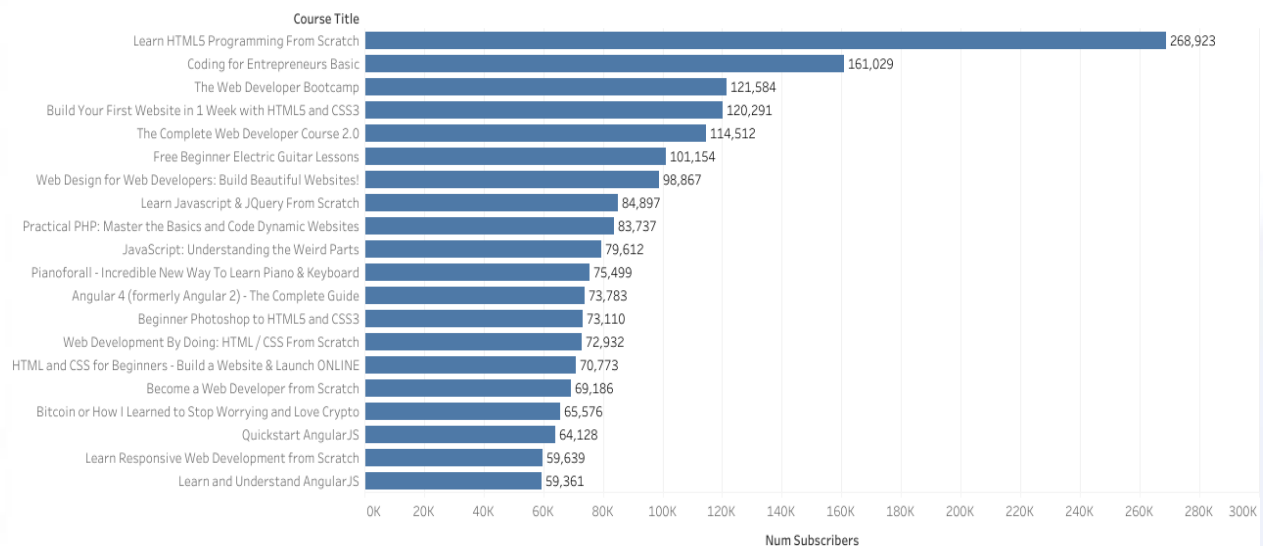


Finding 5

The result of the analysis shows that the top twenty most popular courses students subscribe for are the Web Development Courses compared to the other subjects.

Figure 5: Top 20 Most Popular Courses by Subscribers

Top 20 Most Popular Courses and their Subscribers

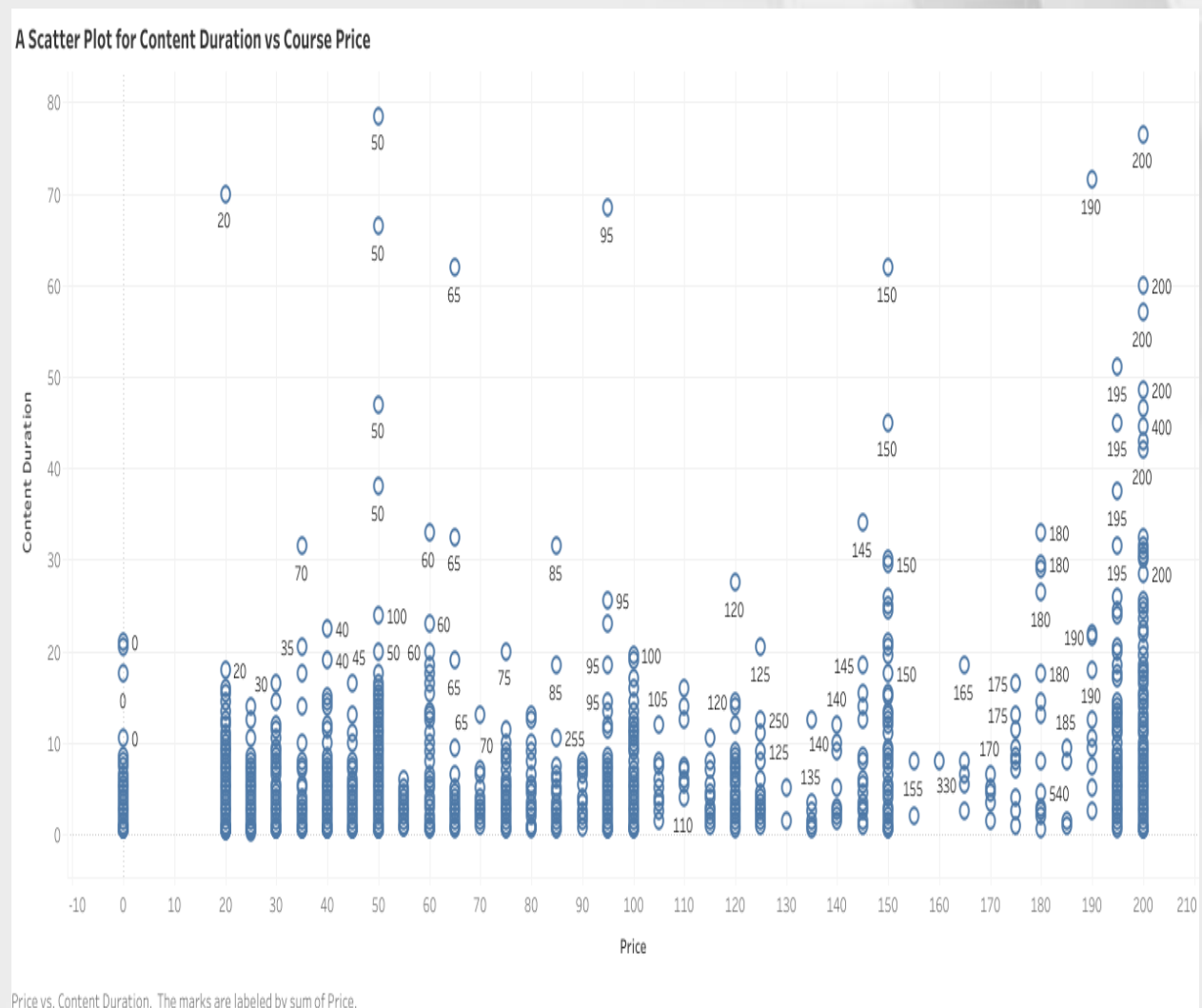


Sum of Num Subscribers for each Course Title. The marks are labeled by sum of Num Subscribers. The view is filtered on Course Title, which keeps 20 of 3,593 members.

Finding 6

The analysis showed that based on the trend, content duration do not have any effect or impact on the price of any course.

Figure 6: Content Duration by Price



Analysis

My initial insight into the data is that Web Development would have the highest number of subscribers among the different subjects being studied because it is the most popular of all the subject areas.

My inferences include a likely decrease in revenue because most of the top Web Development courses were offered for free, and more advanced level Web Development courses had higher prices, which discouraged subscribers from enrolling in additional Web Development courses.

The goal of the 5 why analysis is to identify and fix the root cause of the identified problems. The number of questions asked allowed for the identification of the root cause of the observed problem.

According to the findings of the investigation, there is a chance to grow sales in various subject areas.

Analysis

Whys Analysis



Conclusion

- Given that web development was responsible for the majority of revenue generated, there are possible prospects to grow revenue even higher.
- It may be necessary to calculate the total profit in relation to the number of subscribers enrolled in the various subjects.
- Reducing the most popular free web development courses will help increase revenue.
- According to the data supplied, web development is the most popular of all subjects and also generates the most revenue.





Capstone Project Description

- I have chosen to study the provided video game sales which is in millions of dollars, and because it may be challenging to obtain data that is completely accurate. I quickly reviewed the data, found some problems, intuitively determined the likely cause of the problems and their potential impact on the stakeholders, while keeping an open mind, and then analyzed the given data to support or refute my hypothesis. A decline in video game sales, a loss of profit, a high cost of video games, and lots more, were all part of my hypothesis.

Methodology

- I looked at how users ranked the sales of various genres of video games with over 100,000 copies sold. Using Google Sheets, the data were examined for duplications, blank cells were removed, and inconsistent data were corrected. Global sales, however, varied and were modified accordingly. To develop the appropriate graphics and visuals, Tableau and Google Sheets were used to evaluate the clean data.
- The study aims to establish user rankings, track video game sales performance, determine which geographical area made the most income, and find potential for revenue growth.

Result/Conclusion

- Sales of video games, particularly those in genres that have proven popular with consumers, may increase as a result of appealing marketing and celebrity endorsements.
- Since 526.2 million dollars' worth of the top 20 games were published by Nintendo, it increases the likelihood that video game sales will increase.
- Management should avoid publicly criticizing the government, especially in the North America region, where it has recorded more sales and where there is a prospect of further sales growth.

The Problem

- The business problem is to understand and measure the performance of various genres of video game sales with over 100,000 copies sold, identify opportunities for further revenue increase and identify the most popular genre, customers have found interesting. The data analysis is expected to be provided within three (3) weeks.
- Data of various genres of video game sales from the following region; North America, Europe, Japan, and Other part of the world respectively will help in providing requisite information. The data is provided in descriptive, tabular, and pictorially to enable its understanding.
- The analysis seeks to understand the genre with the highest global sales, the genre with the highest sales among the top 20 video game global sales, the region with the total highest video game sales of genres, the publisher with the highest sales that made up to the top 20 video game global sales, the platform with the highest global sales, and the year and decade that recorded the highest global sales.

Data Design

- I looked at how users ranked the sales of various genres of video games with over 100,000 copies sold. Using Google Sheets, the data were examined for duplications, blank cells were removed, and inconsistent data were corrected. To develop the appropriate charts and visuals, Google Sheets and Tableau were used to evaluate the clean data.
- The study aims to establish user rankings, track video game sales performance, determine which geographical area made the most income, and find potential for revenue growth.
- Tableau is better suited to managing massive data sets and can offer a highly in-depth analysis; hence, I used it for the data visualization.

Findings

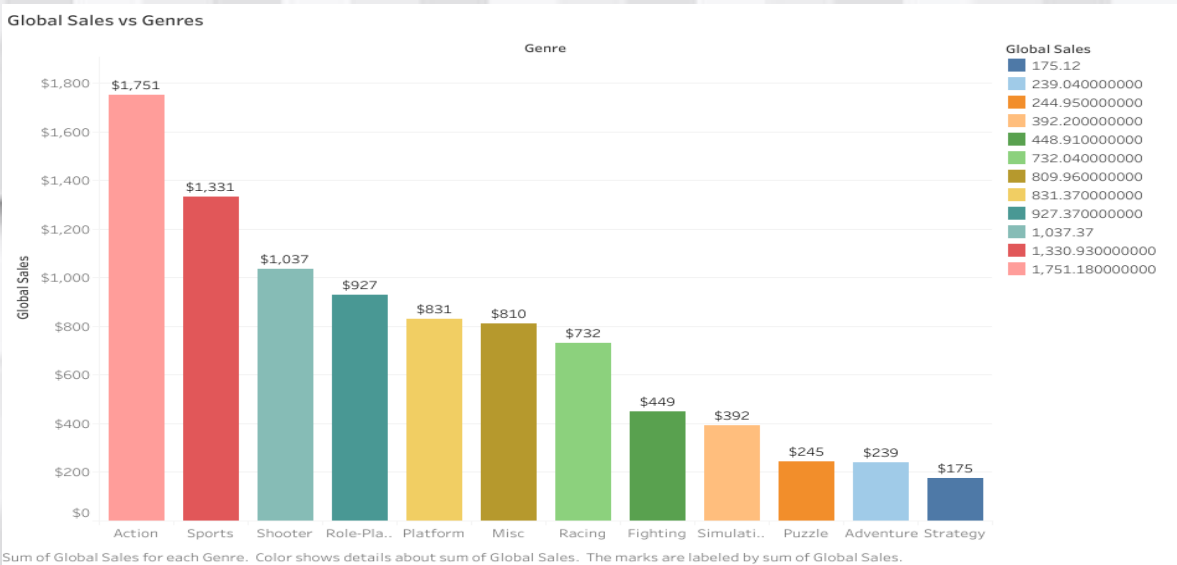
Finding 7

Table 2: Total Sales by Genres

This data shows that North America had the highest total sales of genres with 4,392.95 million dollars, while Other Sales was the lowest, with 797.75 million dollars among the regions. Action genre had the highest Global Sales and it also recorded a sum total Global Sales of 8,920.44 million dollars across Northern America, Europe, Japan, and Other Sales respectively.

<i>Genre</i>	SUM of NA_Sales	SUM of EU_Sales	SUM of JP_Sales	SUM of Other_Sales	SUM of Global_Sales
Action	\$877.83	\$525.00	\$159.95	\$187.38	\$1,751.18
Adventure	\$105.80	\$64.13	\$52.07	\$16.81	\$239.04
Fighting	\$223.59	\$101.32	\$87.35	\$36.68	\$448.91
Misc	\$410.24	\$215.98	\$107.76	\$75.32	\$809.96
Platform	\$447.05	\$201.63	\$130.77	\$51.59	\$831.37
Puzzle	\$123.78	\$50.78	\$57.31	\$12.55	\$244.95
Racing	\$359.42	\$238.39	\$56.69	\$77.27	\$732.04
Role-Playing	\$327.28	\$188.06	\$352.31	\$59.61	\$927.37
Shooter	\$582.60	\$313.27	\$38.28	\$102.69	\$1,037.37
Simulation	\$183.31	\$113.38	\$63.70	\$31.52	\$392.20
Sports	\$683.35	\$376.85	\$135.37	\$134.97	\$1,330.93
Strategy	\$68.70	\$45.34	\$49.46	\$11.36	\$175.12
Grand Total	\$4,392.95	\$2,434.13	\$1,291.02	\$797.75	\$8,920.44

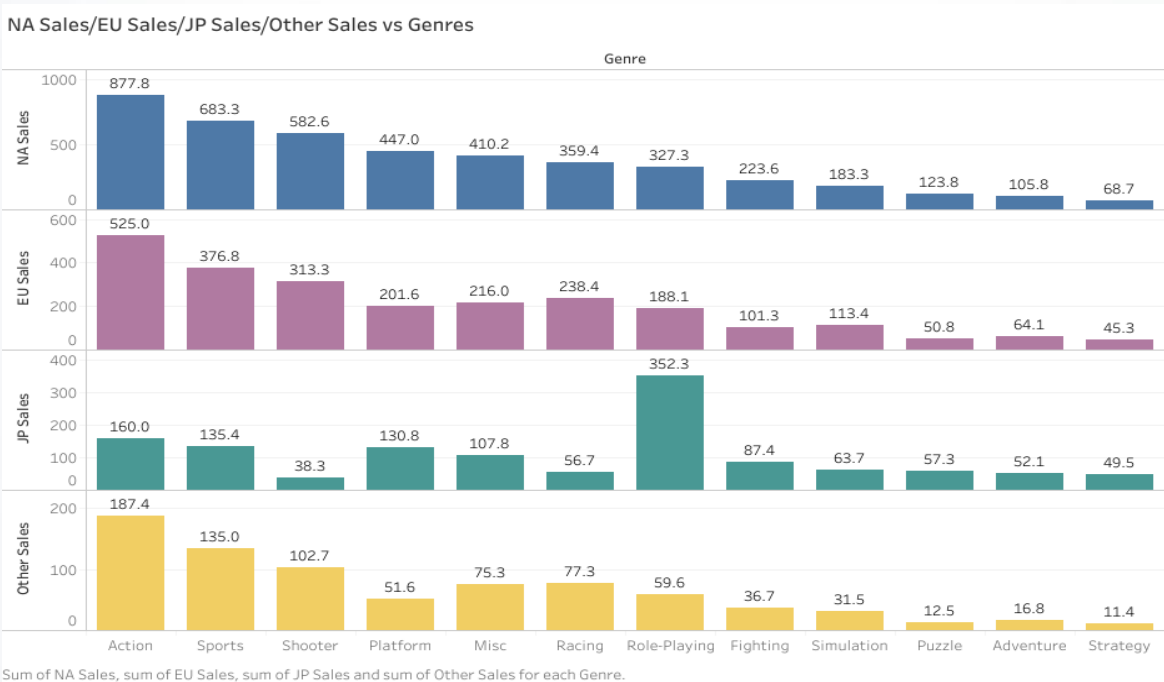
Figure 7: Global Sales by Genres



Finding 8

Figure 8: NA Sales/EU Sales/JP Sales/Other Sales by Genres

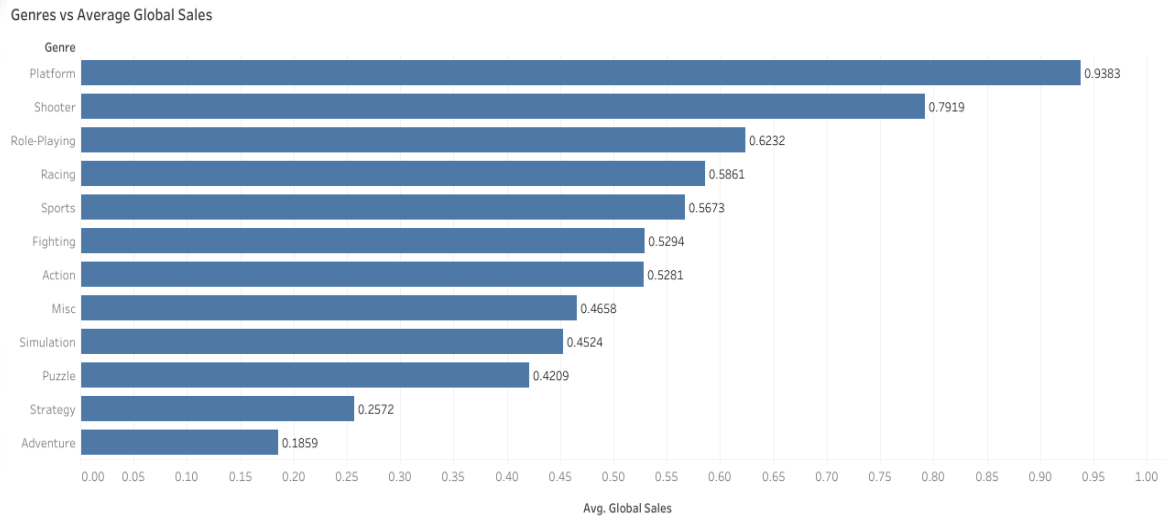
This data here shows that the Action genre recorded the highest sales across North America, Europe, and Other Sales respectively but didn't have the highest sales in Japan, while Strategy genre had the lowest sales across Northern America, Europe, and Other Sales respectively.



Finding 9

Figure 9: Average Global Sales by Genres

This data shows that the Platform genre recorded the highest average global sales. Platform has the highest average global sales of 0.938 million dollars.

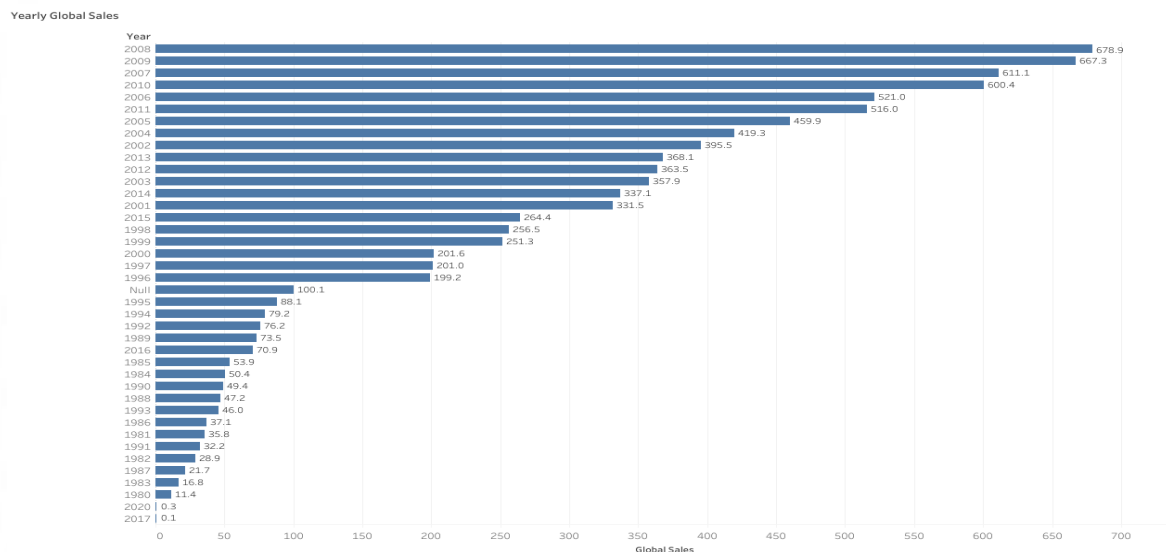


Average of Global Sales for each Genre. The marks are labeled by average of Global Sales.

Finding 10

Figure 10: Yearly Global Sales

This data shows that the highest global sales were recorded in the year 2008 with 678.9 million dollars.

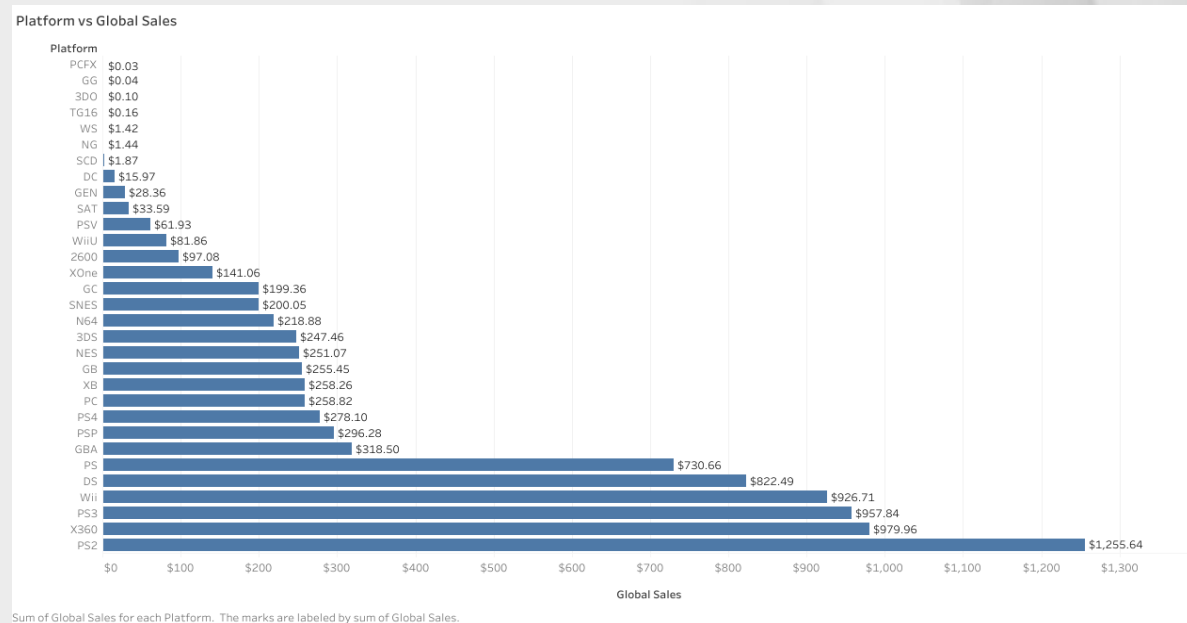


Sum of Global Sales for each Year. The marks are labeled by sum of Global Sales.

Finding 11

Figure 11: Global Sales by Platform

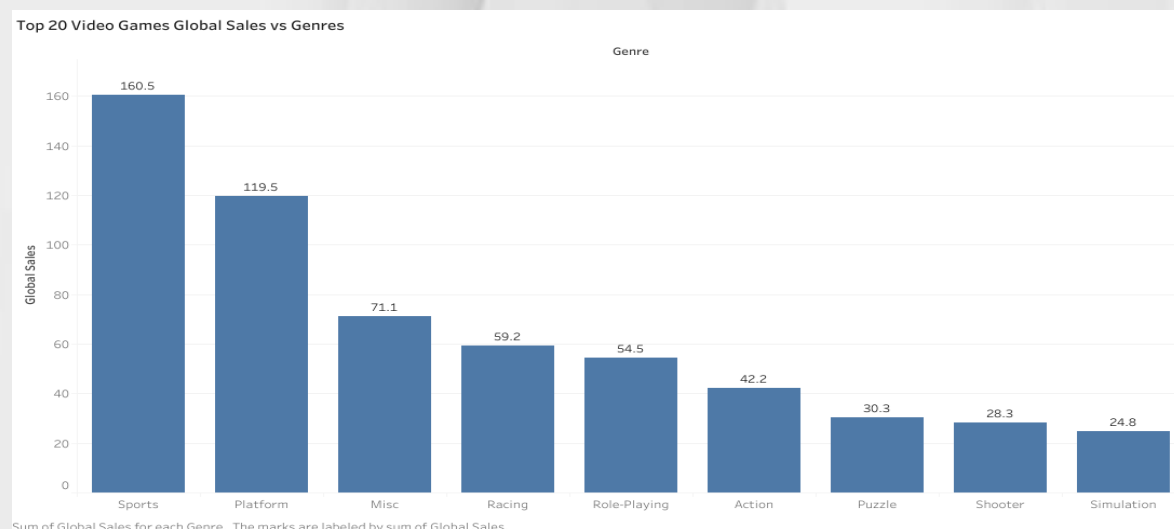
This data shows that PS2 platform had the highest sales globally, making up to 1,255.64 million dollars.



Finding 12

Figure 12: Top 20 Video Games Global Sales by Genres

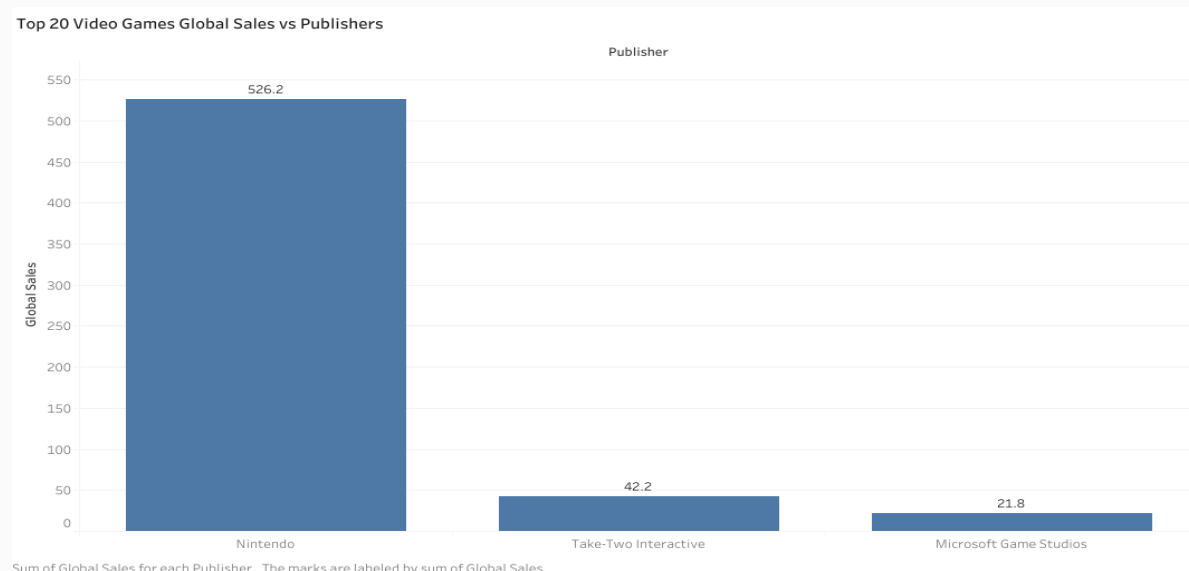
This data shows that Sports genre ranked highest in global sales among the top 20 video game sales globally.



Finding 13

Figure 13: Top 20 Video Games Global Sales by Publishers

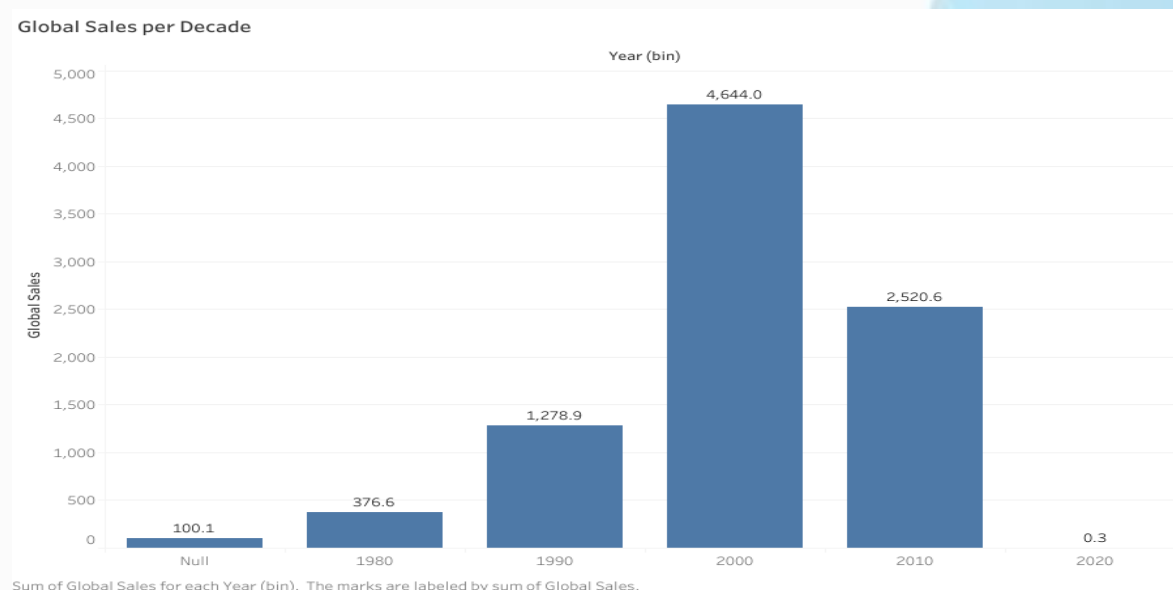
The data showed that the publisher, Nintendo, had the highest sales among the top 20 video games globally with a sales of 526.2 million dollars.



Finding 14

Figure 14: Video Games Global Sales per Decade

The data showed that the highest global sales in a decade were recorded between the years 2000 and 2009.



Analysis

My first insight from the data is that there may be a drop in video game sales. This drop could be the result of the video games' expensive initial investment costs, poor marketing, inadequate support facilities, etc.

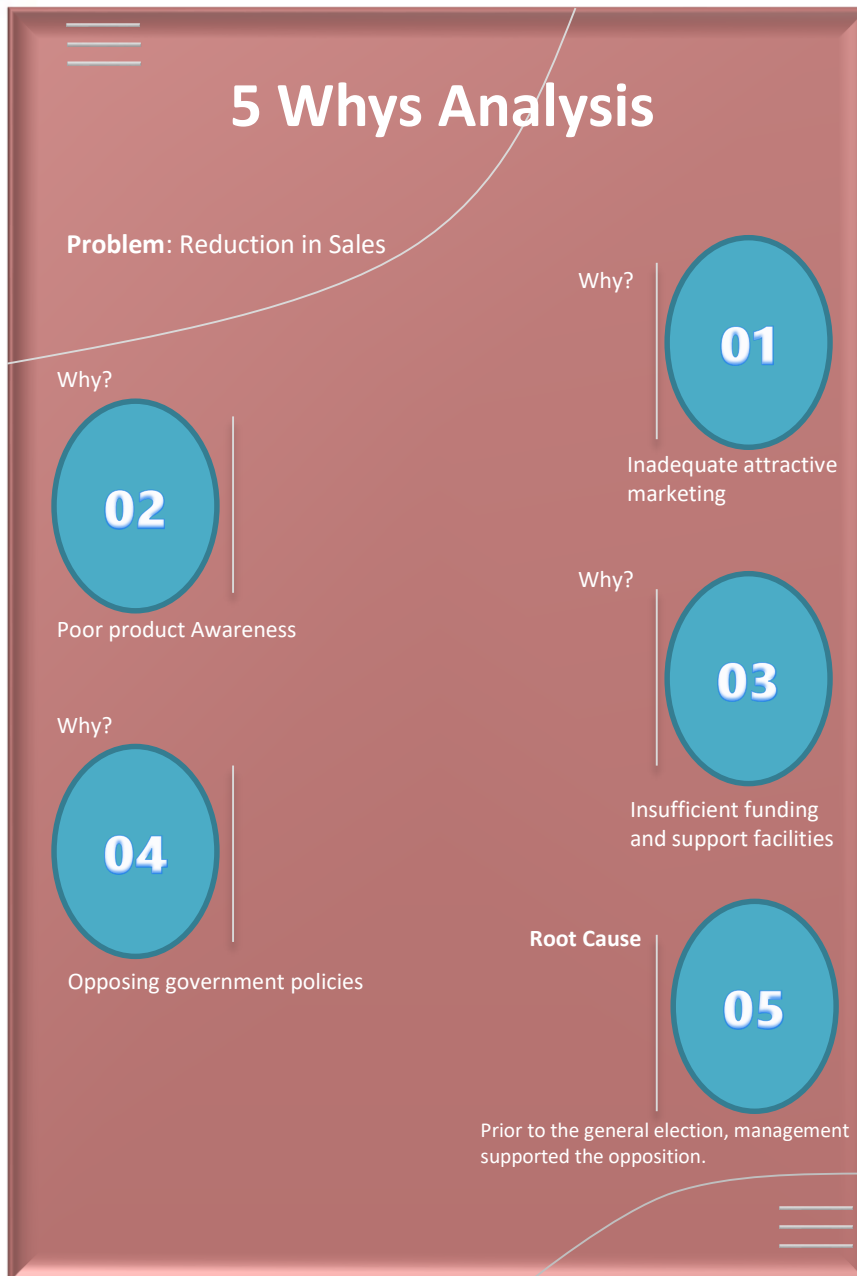
My research revealed things like diminishing sales, a lack of feedback, poor post-purchase assistance, etc.

Finding the root cause of the problems that have been identified and fixing them is the main goal of the five-why analysis. It is important to ask up to five (5) questions in order to identify the true cause of the issue.

There is a possibility of growing sales across all regions.

Analysis

Whys Analysis



Conclusion



- In particular, for the genres of video games that have shown to be appealing to the market after resolving outstanding difficulties with the government, attractive marketing and endorsements from celebrities may assist in increasing sales.
- Since 526.2 million dollars' worth of the top 20 games were published by Nintendo, it increases the likelihood that video game sales will increase. Nintendo appears to have the potential to increase sales. Therefore, it is advised that future video game publishing be done using them.
- It is critical to resolve outstanding concerns with the current government and avoid unfavorable press.
- The amount of video games sold globally has decreased.
- There is a possibility of boosting sales in many geographical areas.



Appendix

Google Sheets Data Set for Udemy Project

<https://docs.google.com/spreadsheets/d/1UZRuDienzVk4unoTvuAMSPgvapYSgu4MoyUXFczaM-A/edit?usp=sharing>

Tableau Data Visualization for Udemy Project

Google Sheets Data Set for Video Game Sales Capstone Project

<https://docs.google.com/spreadsheets/d/1TAqtZPG2csY1g-Lpkce7AyUdvKxqpxgP2FL6MaeokUA/edit?usp=sharing>

Tableau Data Visualization for Video Game Sales Project

