DATA ANALYSIS PORTFOLIO

PREPARED BY

Professional Background

I hold a B.Sc (honors) degree in Computer Science from the Esep Le Berger University, Cotonou, Benin Republic with a CGPA of 4.21/5.00. Working with a successful computer networking company, Computer Warehouse Group, provided me with a transformative opportunity. As a computer science student, this experience opened my eyes to the vast possibilities in my field. Exploring various aspects of computing, I discovered a profound sense of fulfillment in analyzing data.

My journey into the world of data began when I transitioned into the data entry department at my workplace. Progressing from a data entry clerk to a data entry team lead, and eventually to a data analyst and manager, I found unparalleled satisfaction in my role. This progression has solidified my passion for leveraging data to make informed decisions.

The abundance of tools available for data analysis continues to captivate me. It fuels my desire to acquire comprehensive knowledge and expertise in the field of data analysis, as it enables me to contribute meaningfully and make a significant impact.

Portfolio Outline

Udemy Project Description

- In my role as a Data Analyst for Udemy, I was assigned the responsibility of analyzing data to gain insights into the pricing and subscriptions of Udemy courses across four different subjects. This involved identifying trends and patterns, devising targeted strategies to boost company revenue, and determining areas where additional courses should be developed.

Methodology

- To ensure data accuracy, the analysis involved removing data duplicates, eliminating blank cells, and utilizing Google Sheets to rectify any inconsistent data. Tableau was employed to generate essential visualizations that effectively examined consumer subscription trends across four subjects: Web Development, Graphic Design, Business Finance, and Musical Instruments. This analysis aimed to identify potential opportunities for revenue growth and assess performance in these key subject areas.

Result/Conclusion

- Web Development emerges as the most sought-after subject with nearly 68% of the subscribers, making it the most popular among all the subjects..
- Web Development courses exhibit approximately twice the content duration and attract four times the average number of subscribers compared to other subjects.
- Given its substantial market share, Web Development presents significant potential for revenue growth and opportunities.

The Problem

- The business objective is to assess and evaluate the performance of various courses offered on the Udemy website, identify potential avenues for revenue growth, and determine the most popular subject area that subscribers find appealing. The data analysis is expected to be completed within a timeframe of three (3) weeks.

- Datasets from Web Development, Graphic Design, Business Finance, and Musical Instruments are valuable in providing informative insights. The data is presented in descriptive, tabular, and visual formats to facilitate better understanding and interpretation.

- This analysis aims to determine the duration and pricing of the courses..

Data Design

To ensure the accuracy of the data, measures were taken to remove data duplicates and eliminate blank cells. Furthermore, Google Sheets was utilized to rectify any inconsistencies in the data. Thorough analysis of consumer subscription trends across four different subjects was conducted, leveraging Tableau to create informative visualizations.

The primary objective of this analysis is to identify potential opportunities for revenue growth and assess the performance pathways of four key subjects.

The four key subjects under consideration are Web Development, Graphic Design, Business Finance, and Musical Instruments..

The analysis revealed that Web Development generated the highest revenue and outperformed the other subject areas.

Tableau was employed for data visualization due to its suitability in handling large data sets and its ability to provide detailed analysis.

Findings

Finding 1

Table 1: Total Subscriptions by Subject

Based on the provided data, Web Development has the highest percentage of subscribers enrolled, accounting for 67.87%. The total number of subscribers across all courses amounts to 7,981,935.

subject	SUM of num_subscribers
Business Financ	1868711
Graphic Design	1063148
Musical Instrume	846689
Web Developme	7981935
Grand Total	**11760483**

Finding 2

The result unveiled the average price, content duration, and number of students across the subjects.
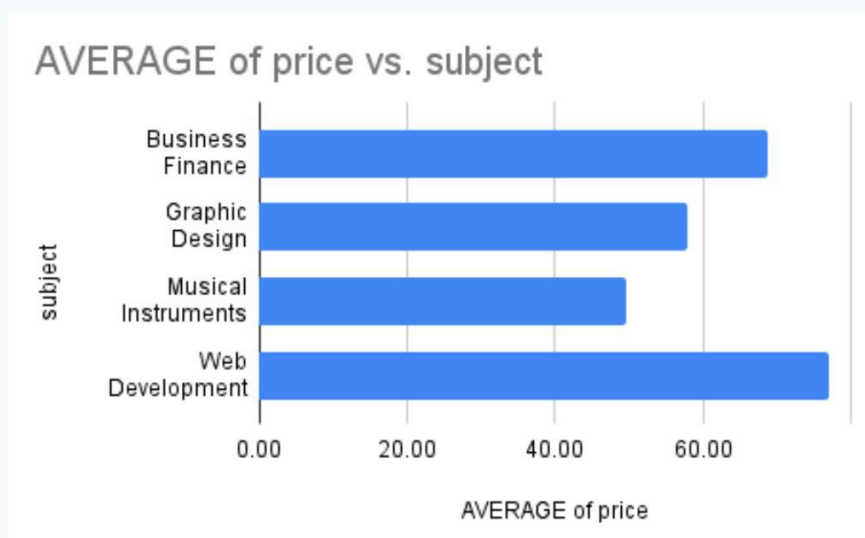
Figure 1: Average Review by Subject

AVERAGE of num_reviews vs. subject
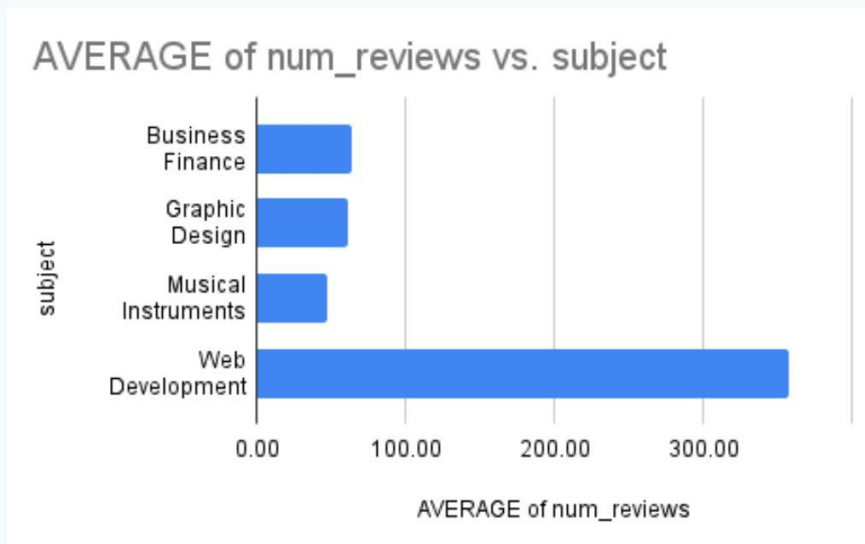
Finding 3

The analysis revealed that Web Development exhibits the highest average price among the other subjects.
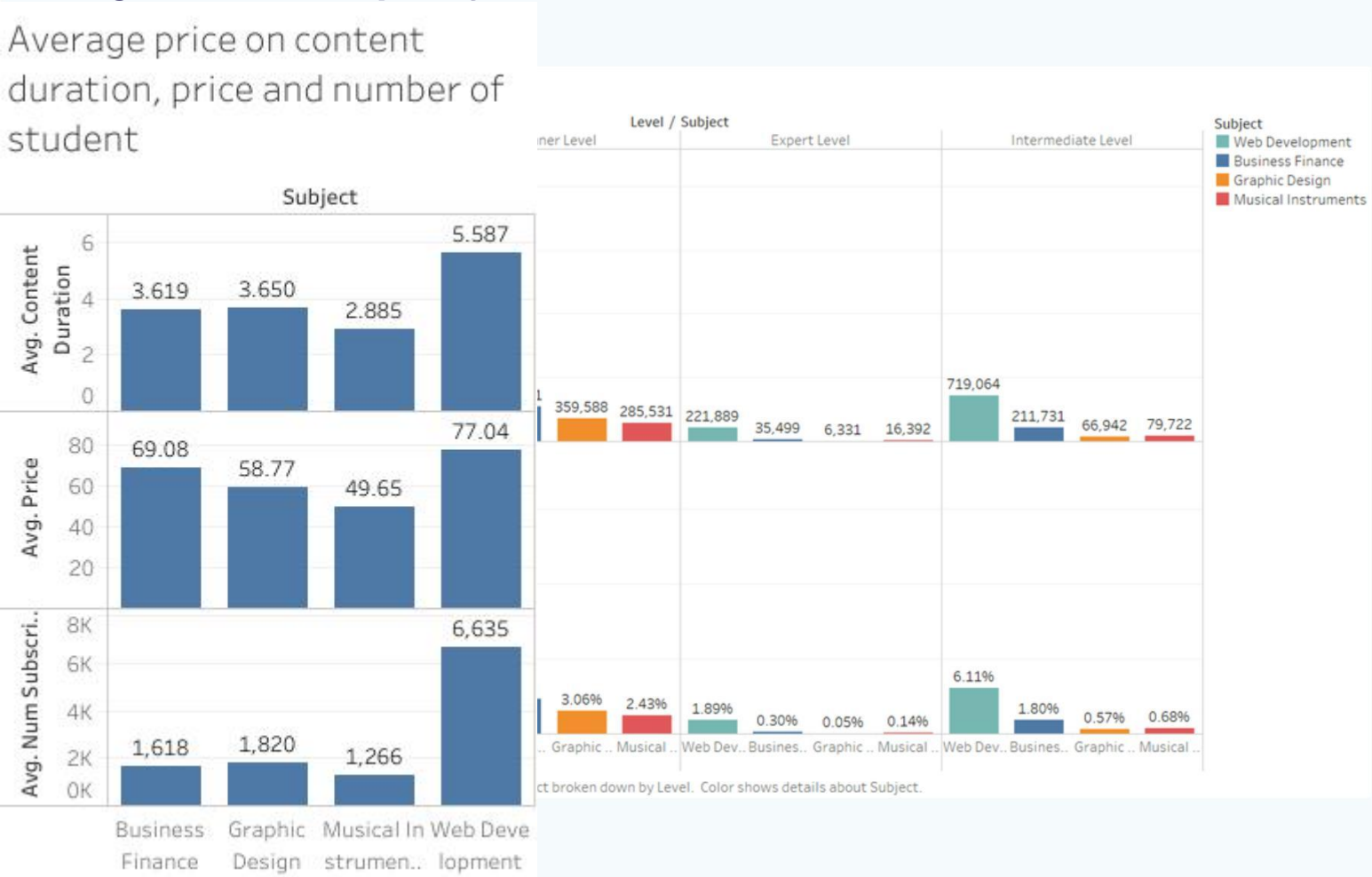
Figure 2: Average Price by Subject

AVERAGE of price vs. subject

Finding 4

The following table illustrates the distribution of different subjects among various skill levels. The table provides an overview of the distribution of skill levels across All Levels, Beginners Levels, Expert Levels, and Intermediate Levels.

Figure 3: Levels by Subject

Finding 5

According to the data presented in the table, Web Development exhibits the highest proportion of both free and paid courses, accounting for 47.52% and 20.35% respectively.

Figure 4: Free/Paid by Subject

Free/paid vs subject

Sum of Num Subscribers and % of Total Num Subscribers for each Subject. Color shows details about Free/Paid.

Analysis

Based on my initial analysis of data, I anticipate that web development will attract the highest number of subscribers among the various subject under consideration due to its widespread popularity

Based on my observations, I deduce that there could be a potential decrease in revenue as a result of the majority of free courses offered within the web development category. Additionally, the comparatively lower number of reviews for courses related to web development might pose a challenge in enticing subscribers to enroll in those courses.

The primary purpose of conducting a 5 why analysis is to identify the underlying cause of the identified problems and address them effectively. By asking a series of questions, the 5 why analysis enables us to uncover the root cause of the identified problem.

The analysis results suggested that there is an opportunity to increase sales across the different regions.

Analysis

Whys analysis

Conclusion

- Given its significant contribution to revenue generation from 2014 to 2017, web development presents promising prospects for further revenue growth.

- It might be necessary to access the overall profitability in relations to the number of subscribers registered for various subject.
- The feedback received from diverse subscribers can serve as a valuable tool in promoting web development courses and enhancing revenue growth.
- Based on the provided data, it is evident that web development emerges as the most popular subject among all, generating the highest revenue as well.

Capstone Project Description

- Considering the possibility of imperfect data, I opted to analyze the available Video Games Sales data. After a preliminary assessment of the information, I identified certain issues and objectively speculated on their likely causes and potential impact on stakeholders. I then proceeded to analyze the provided data to validate or challenge my hypothesis, which involved examining the total number of game sales across different regions..

Methodology

- I conducted an analysis of user rankings for video game sales across different genres, focusing specifically on games that sold more than 100,000 copies. To ensure the accuracy of the data, duplicate records were removed, and any empty cells or inconsistent data were corrected using Google Sheets. Moreover, global sales records were adjusted to address any inconsistencies. The cleaned dataset was then subjected to further analysis using Tableau, enabling the creation of relevant data visualizations..

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Result/Conclusion
- The North American region exhibited the highest number of sales, while the Action genre emerged as the most popular and widely played genre of games.

- Nintendo emerges as the leading company with the highest number of game sales across all regions..

Data Design

I conducted an extensive analysis of user rankings across various video game genres, specifically focusing on sales records exceeding 100,000 copies. To ensure data accuracy, I meticulously removed duplicates, eliminated blank cells, and rectified inconsistent information using Google Sheets. The resulting clean dataset was then analyzed using Tableau, a powerful data visualization tool, to generate insightful visuals. The primary objectives of the study were to ascertain user rankings, evaluate sales performance in the video game industry, identify the regions contributing the highest revenue, and pinpoint potential opportunities for revenue growth.

Tableau was chosen as the preferred tool for data visualization due to its exceptional capability in handling large datasets and its ability to provide in-depth analysis and visualizations.
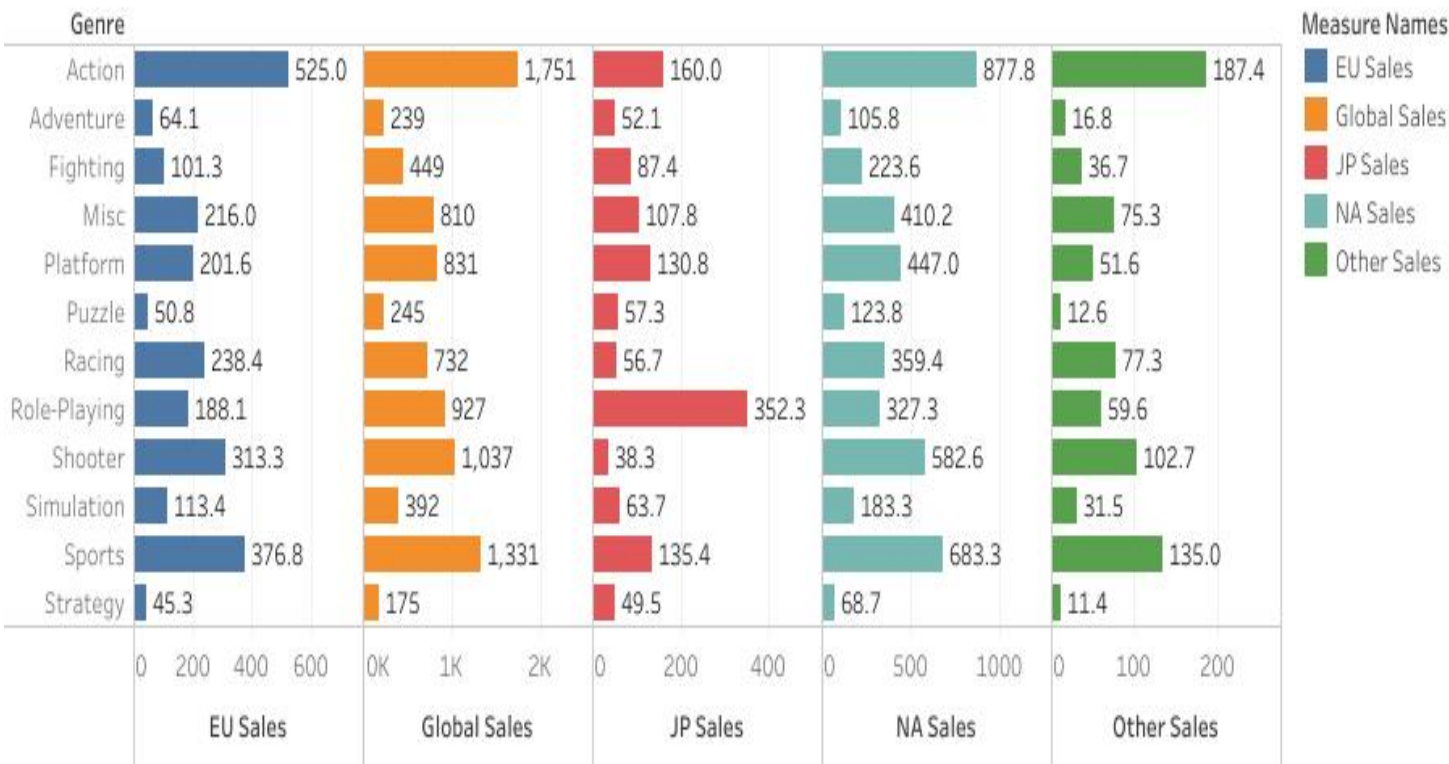
Findings

Finding 6

Table 1: Total Sales by region

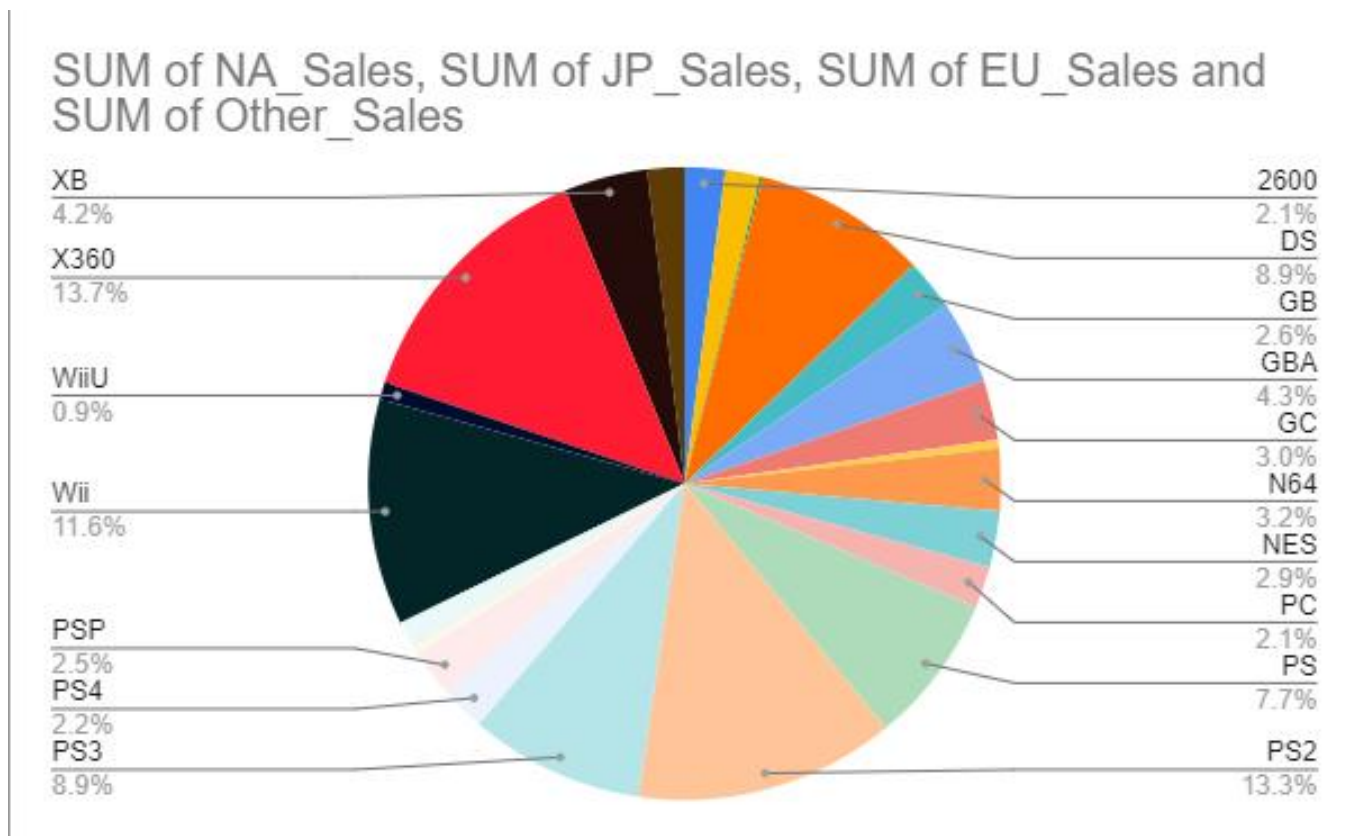The highest number of game sales was made in the northamerican region

Sheet 1

Finding 7

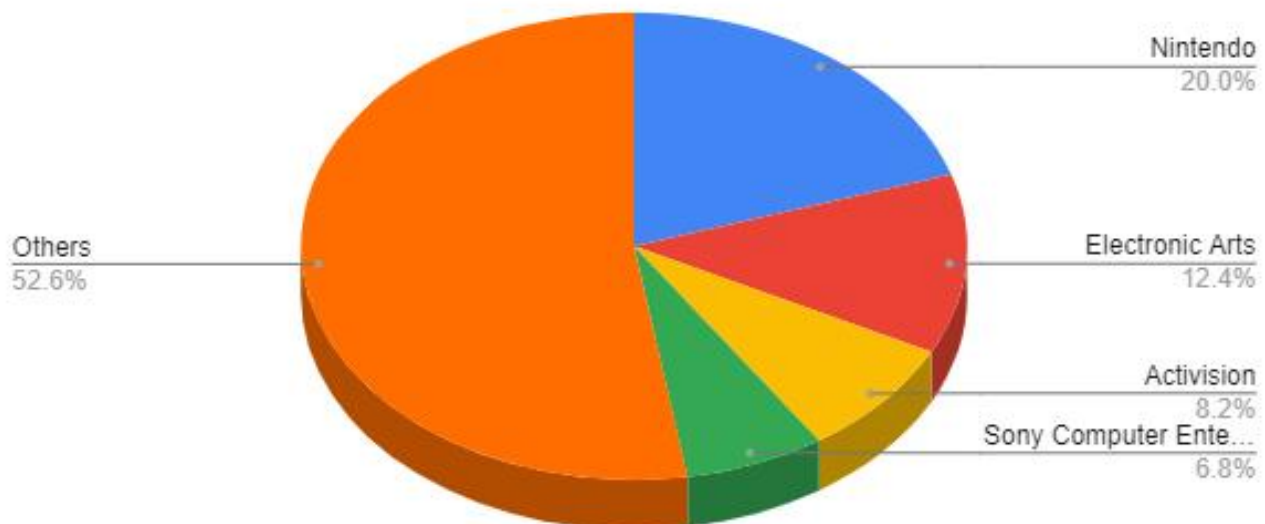The most used gaming platform across all genres.

The X360 platform stands out as the most widely utilized platform.

SUM of NA_Sales, SUM of JP_Sales, SUM of EU_Sales and SUM of Other_Sales

Platform	Percentage
XB	4.2%
X360	13.7%
WiiU	0.9%
Wii	11.6%
PSP	2.5%
PS4	2.2%
PS3	8.9%
2600	2.1%
DS	8.9%
GB	2.6%
GBA	4.3%
GC	3.0%
N64	3.2%
NES	2.9%
PC	2.1%
PS	7.7%
PS2	13.3%

Finding 8

The Publisher with the largest market share

Market share

Nintendo
20.0%

Electronic Arts
12.4%

Activision
8.2%

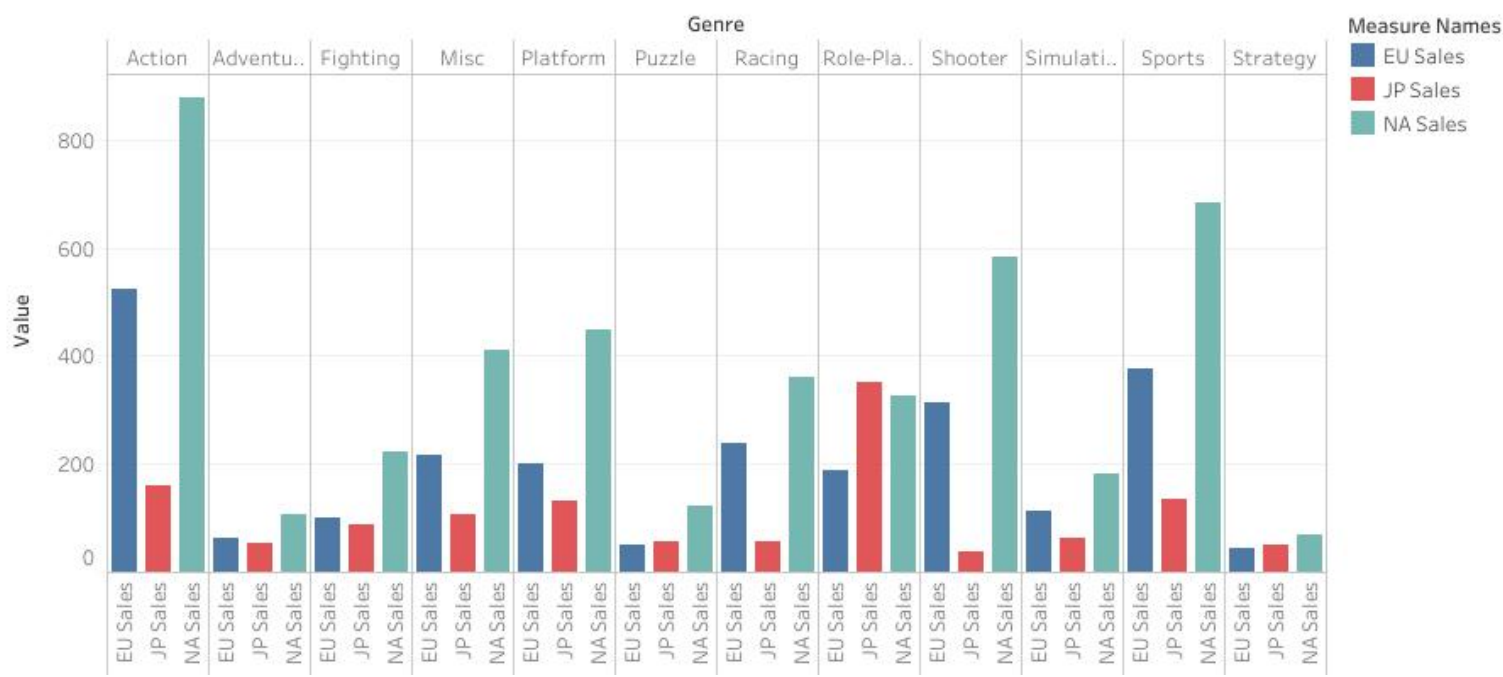Sony Computer Ente...
6.8%

Others
52.6%

Finding 9

The highest number of games sold identified by their region.

This visualization present North American region with the highest number of games sold across all regions

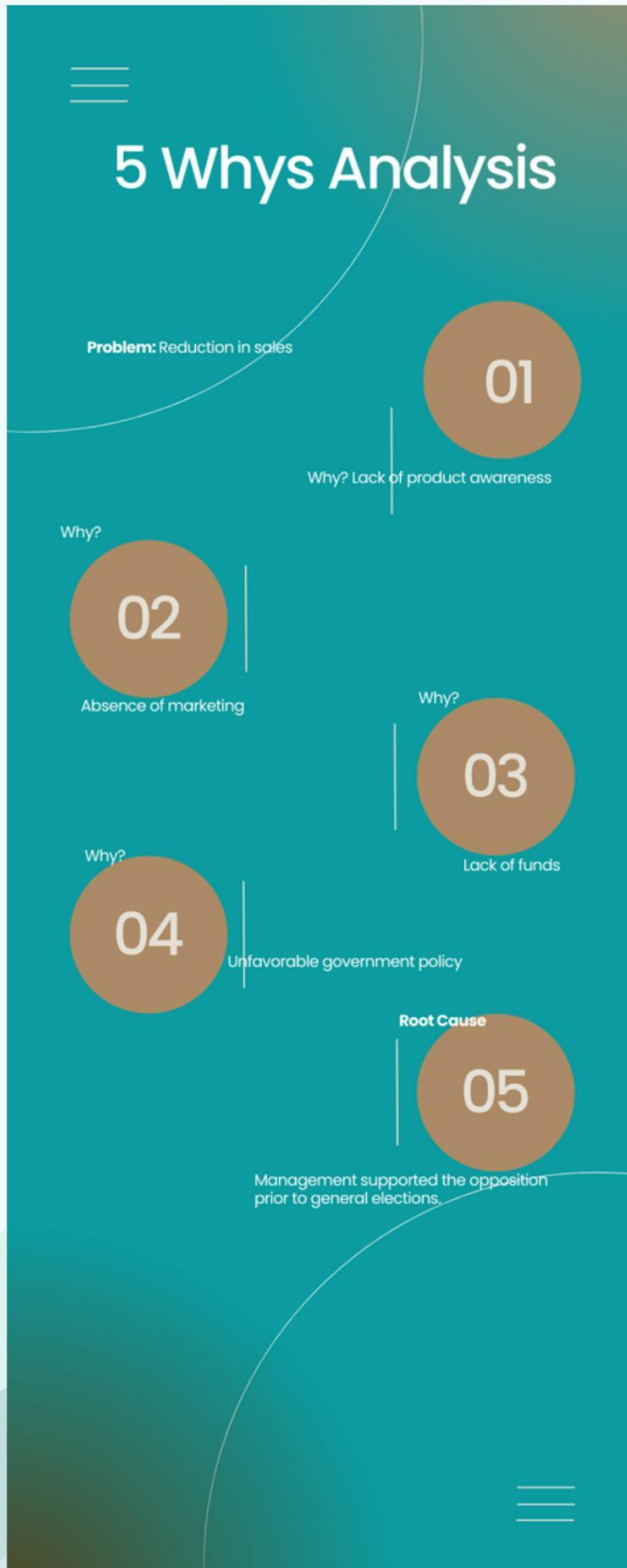2. What is the highest number of games sold identified by their region

Analysis

There is a notable opportunity to enhance sales across different regions. The available data suggests that video game sales might be declining due to factors like high initial costs, insufficient marketing efforts, and inadequate support centers. These issues can lead to reduced revenue, lack of feedback, and inadequate after-sales support.

To tackle these challenges effectively, conducting a comprehensive "5 why" analysis is recommended to identify the root causes underlying these issues. It is crucial to expand the number of questions asked beyond just five, ensuring a thorough examination. Once the root causes are determined, appropriate actions can be implemented to address the identified issues and enhance overall sales.

Despite the obstacles, there remains significant potential for increasing sales across various regions, offering a profitable opportunity for the business.

Analysis

Five (5) whys analysis

5 Whys Analysis

Problem: Reduction in sales

01

Why? Lack of product awareness

Why?

02

Absence of marketing

Why?

03

Lack of funds

Why?

04

Unfavorable government policy

Root Cause

05

Management supported the opposition prior to general elections.

Conclusion

- Nintendo has a remarkable history of propelling potential video game sales, as demonstrated by 89.19% of the top 20 games being published by them. This substantiates Nintendo's capacity to increase sales, making it advisable to consider them for future video game publishing endeavors.

- There is a significant opportunity to enhance sales across different regions.

- The North American region witnessed the highest number of sales, and the Action genre emerged as the most widely played game genre.

Appendix

Google Sheets Data Set for Udemy Project

https://docs.google.com/spreadsheets/d/1b9s6MKfxE90X
9zky-0UVVvMnA0NB9ztaGG1R-isnXrE/edit?usp=sharing