

DATA ANALYSIS PORTFOLIO

Udemy Dataset



PROFESSIONAL BACKGROUND

I am a first class graduate of Accounting from Babcock University, Ogun State, Nigeria. I am a member of the Association of Accounting Technicians West Africa (AATWA) and of the Institute of Chartered Accountants in Nigeria (ICAN).

A major highlight of my career has been the opportunity to manage a team of 30 to conclude a quality assurance process for a client in the telecommunication industry within the agreed timeline. I have also collaborated with teams across Financial Services, Entertainment, Oil & Gas and telecommunication to mention a few.

Furthermore, I am skilled in utilizing Microsoft Office and Google Tools alongside Tableau. I am a great leader, collaborator and finance professional.

I opted for pursuing a Data Analyst Career as it will be a value add to my current skillset as a financial analyst and a means to challenge myself as a young professional.

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UDEMY PROJECT DESCRIPTION

- I have been assigned the role of data analyst at Udemy – an online learning platform that enables students, companies, and governments gain the skills they need to achieve their goals.
- My task is to analyze the available data and provide insights and recommendations that can be used to increase revenue, monitor course performances and identify growth areas for the company.

The Process

- I reviewed the data to check for and resolve inconsistencies in the dataset. Blank cells were deleted and a deep cleaning was done using google sheets. The data was analyzed to provide answers to the set out questions and visualizations were carried out using Google Sheets and Tableau.

Result

- An analysis of the data revealed that Web Development is the most popular of all the subjects and it generated the highest revenue of the 4 subjects.
- There are potential opportunities to increase revenue across all the subject areas through advertising and course reviews by subscribers.

THE PROBLEM

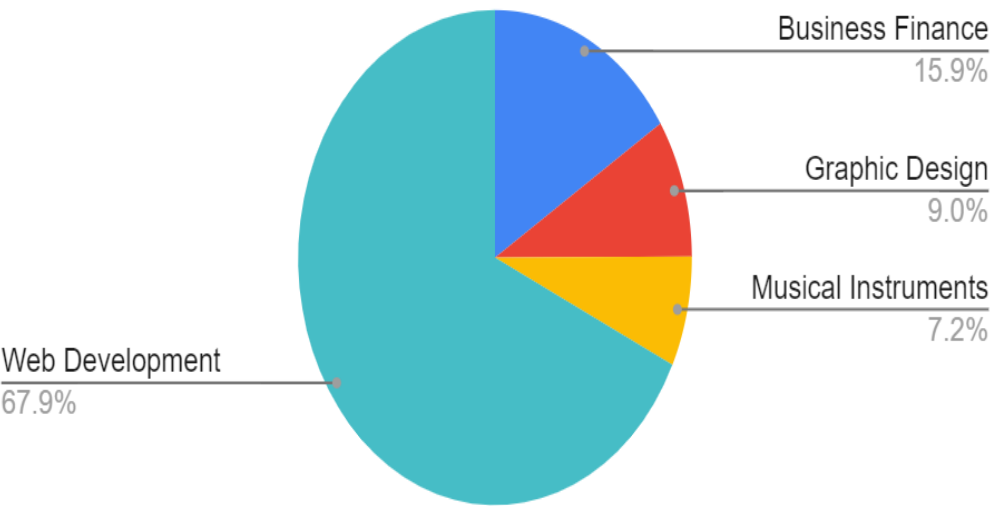
- The business problem is to measure the performance of the available courses on the Udemy platform to identify areas for improving revenue generation and also the most popular subject area subscribers enjoyed learning.
- Various tables, charts, and graphs were utilized in the analysis and visualization of the data.
- The analysis sought to understand the subject with the total number of subscribers, the subject with the highest price, and the subject with the highest subscription.

KEY QUESTIONS

1. What are the total numbers of subscribers in each subject?
2. How does the average content duration/price/number of students vary across different subjects?
3. How many courses are free and paid for each subject?
4. What is the average price of web development courses at different levels?
5. What are the 20 most popular courses? Also, include: their level, whether they are free or paid, whether any are free beginner courses and the duration of the courses.
6. Does content duration impact the price of the course?

FINDINGS – 1

Total Subscribers

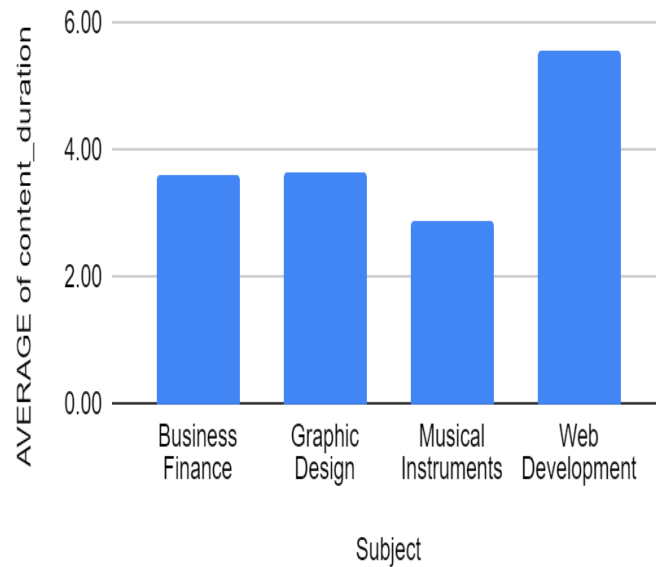


Subject	SUM of num_subscribers
Business Finance	1,868,711
Graphic Design	1,063,148
Musical Instruments	846,689
Web Development	7,981,935
Grand Total	11,760,483

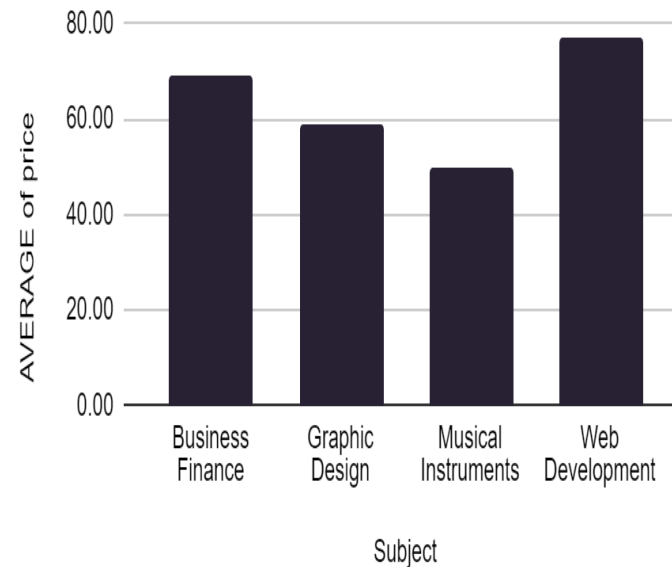
Web development has the highest number of subscribers compared to the 3 other courses. Musical Instruments has the least number of subscribers.

FINDINGS – 2

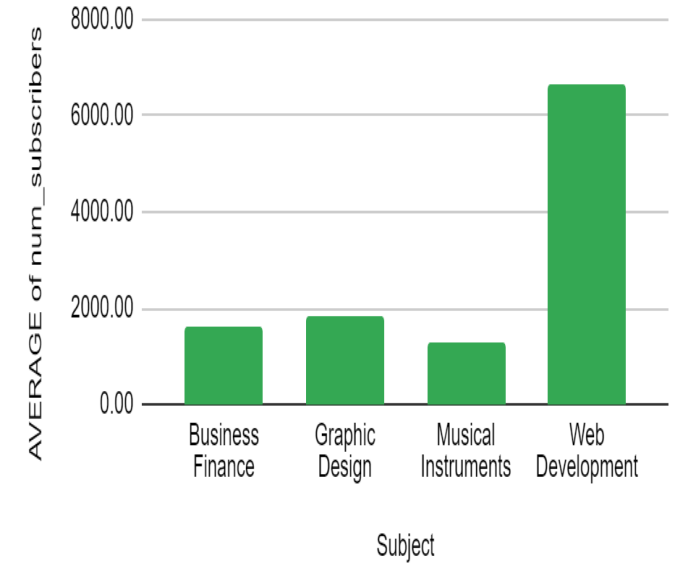
AVERAGE of content_duration vs Subject



AVERAGE of price vs Subject



AVERAGE of num_subscribers vs Subject

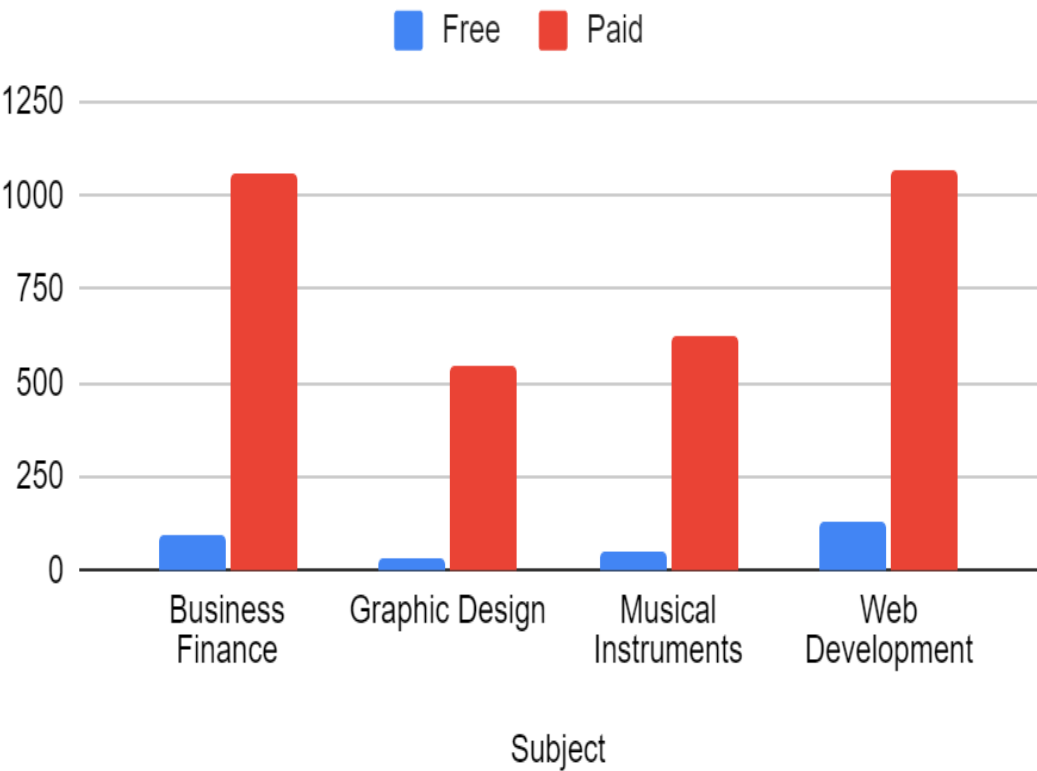


The charts give us clear insight that the average price, content duration and also the number of subscribers are the highest for web development.

FINDINGS – 3

COUNTA of Free or Paid	Free or Paid		
Subject	Free	Paid	Grand Total
Business Finance	96	1059	1155
Graphic Design	35	549	584
Musical Instruments	46	623	669
Web Development	134	1069	1203
Grand Total	311	3300	3611

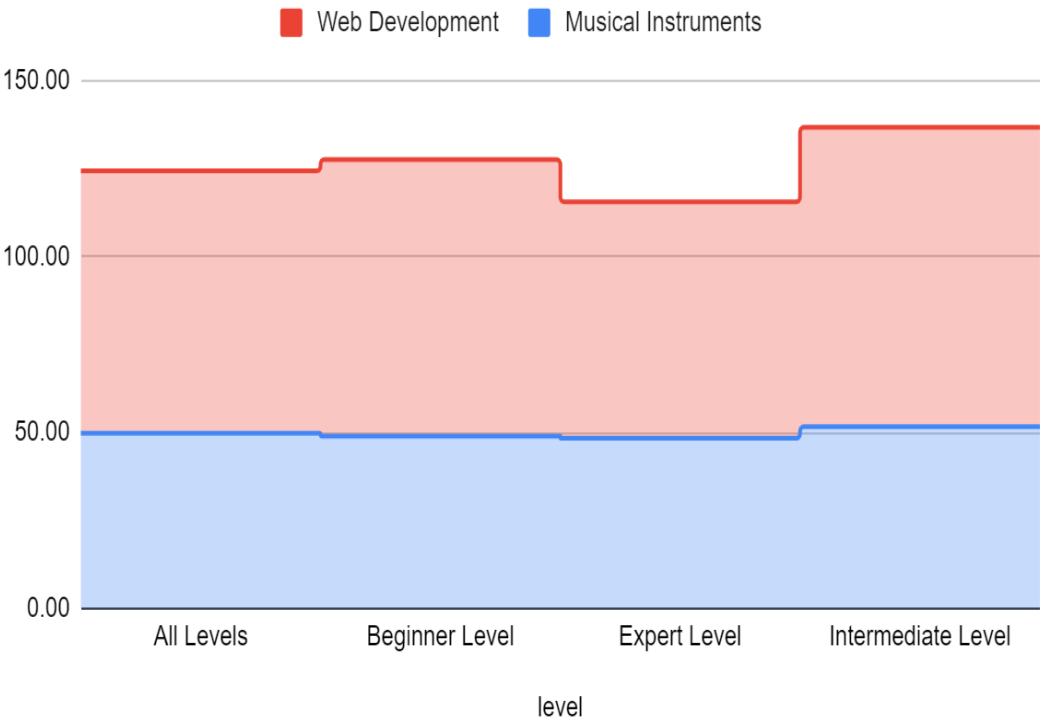
Free and Paid



Web development has the highest number of free and paid courses while Graphic design has the lowest number of free and paid courses.

FINDINGS – 4

Musical Instruments and Web Development

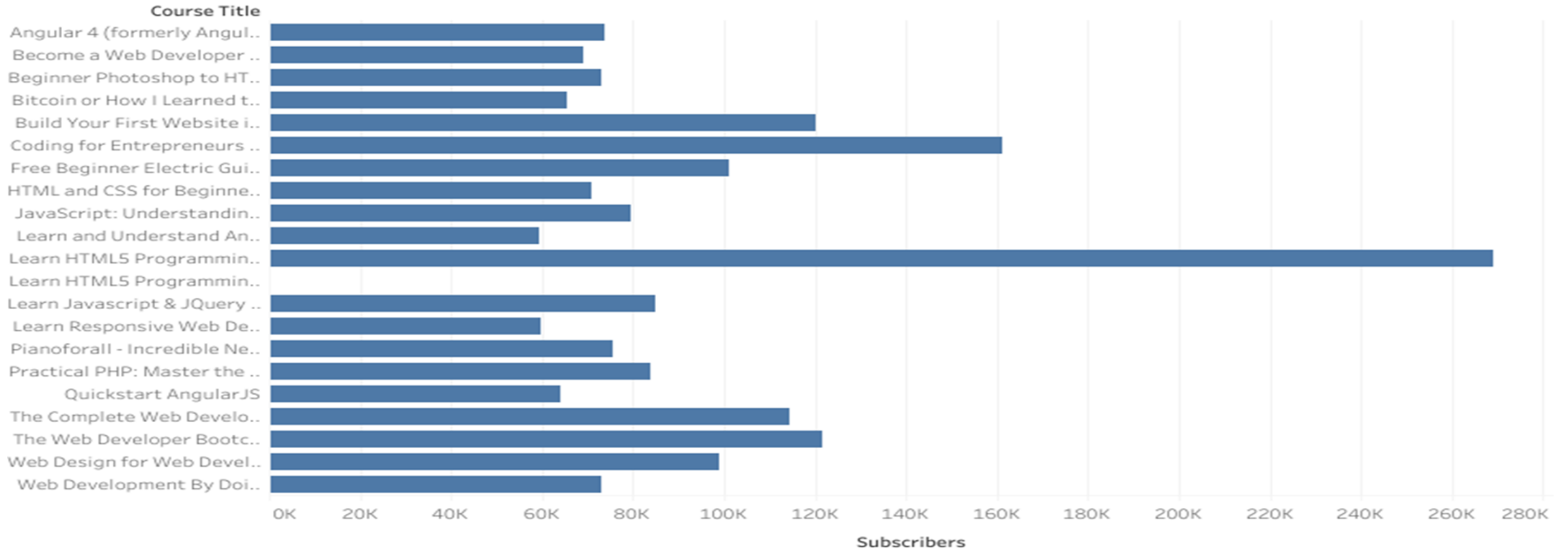


AVERAGE of			
Price	Subject		
Level	Musical	Web	Grand Total
	Instruments	Development	
All Levels	49.78	74.55	66.27
Beginner Level	48.97	78.54	67.24
Expert Level	48.33	67.14	58.46
Intermediate Level	51.60	85.07	72.76
Grand Total	49.65	77.04	67.25

At the different levels of the courses Web Development had the highest average price per level which is reflected by the upper level of price flow in the chart.

FINDINGS – 5

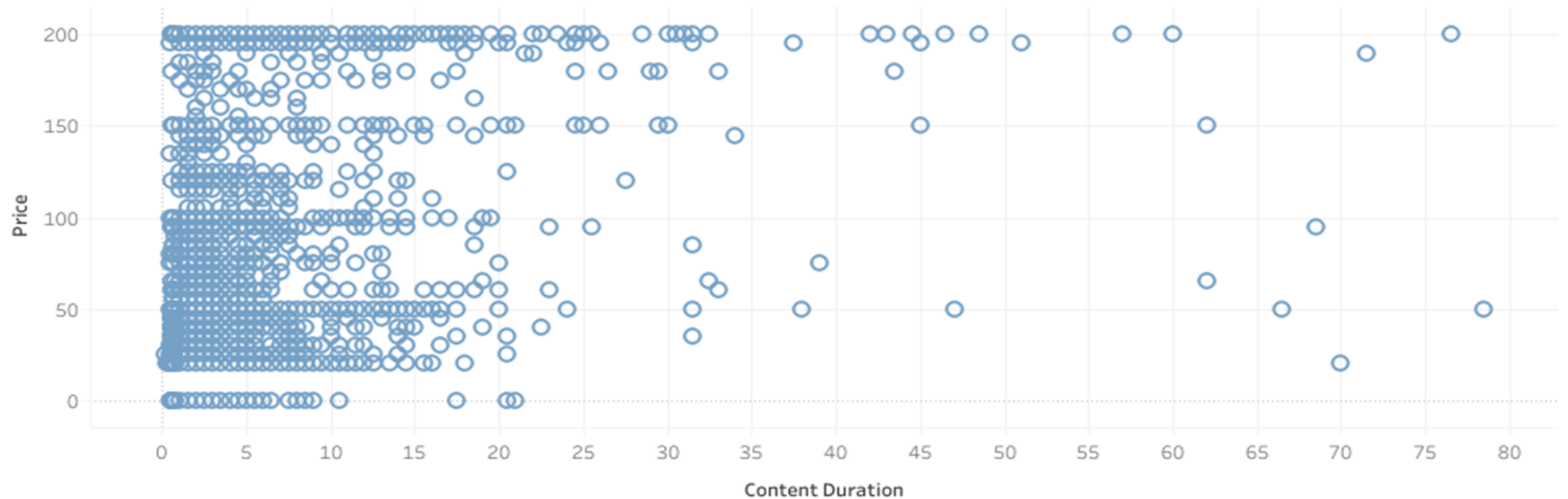
Courses Vs Subscribers



- Learn HTML5 Programming From Scratch was the most popular course of the top 20 most popular courses.

FINDINGS – 6

Price Vs Content Duration



The scatter plot shows that content duration does not necessarily affect the price of the courses. It however shows that a lot of courses have a duration of under 20 hours. Fewer courses are longer than 20 hours.

SUMMARY OF FINDINGS

- It may be possible to still increase revenue for web development as it was the most in-demand subject for the analyzed period.
- Web development has the highest number of free and paid courses while Graphic design has the lowest number of free and paid courses.
- Learn HTML5 Programming From Scratch was the most popular course of the top 20 most popular courses.
- A why analysis into the performances of each of the courses may also reveal a major reason why some have lower subscribers and revenue than others.

ACTIONS AND RECOMMENDATIONS

- A 5 why analysis should be run on Business Finance, Musical Instruments and Graphic design to determine why they are not making as much sales as Web Development.
- More advertising should be done on Web Development to increase sales.
- A course review feature can be included with loyalty points attached to it to encourage subscribers to provide feedback that can aid revenue increase.

A close-up photograph of a wooden pencil with a sharpened lead tip, resting diagonally across a document. The document features a line graph with a grid. The y-axis has labels for 50 and 100. The x-axis has some faint, illegible text. The pencil is positioned over the graph, with its tip pointing towards the bottom right. The background is a light, textured surface.

CAPSTONE REPORT

Video Game Sales Dataset

CAPSTONE PROJECT DESCRIPTION

- The project involved the selection of a dataset to implement prior learnt principles on it. I selected a dataset that contains a list of video games with sales greater than 100,000 copies over 4 decades. I reviewed the data to aid the framing of the questions/problems that the analysis would seek to resolve.

The Process

- A close look at the dataset helped to identify some inconsistencies and I did a deep cleaning to ensure the data was in a good state for analysis. Google Sheets and Tableau were utilized in the analysis and visualization of the data.
- I had set out some questions about the highest selling genre of games, trends of sales over the years, sales across different publishers and platforms etc. The report provides the necessary insights and visualization to aid decision making on whether to increase or decrease sales of Video Games across the different regions. It also provides insights on possible solutions to the highlighted problems

Results

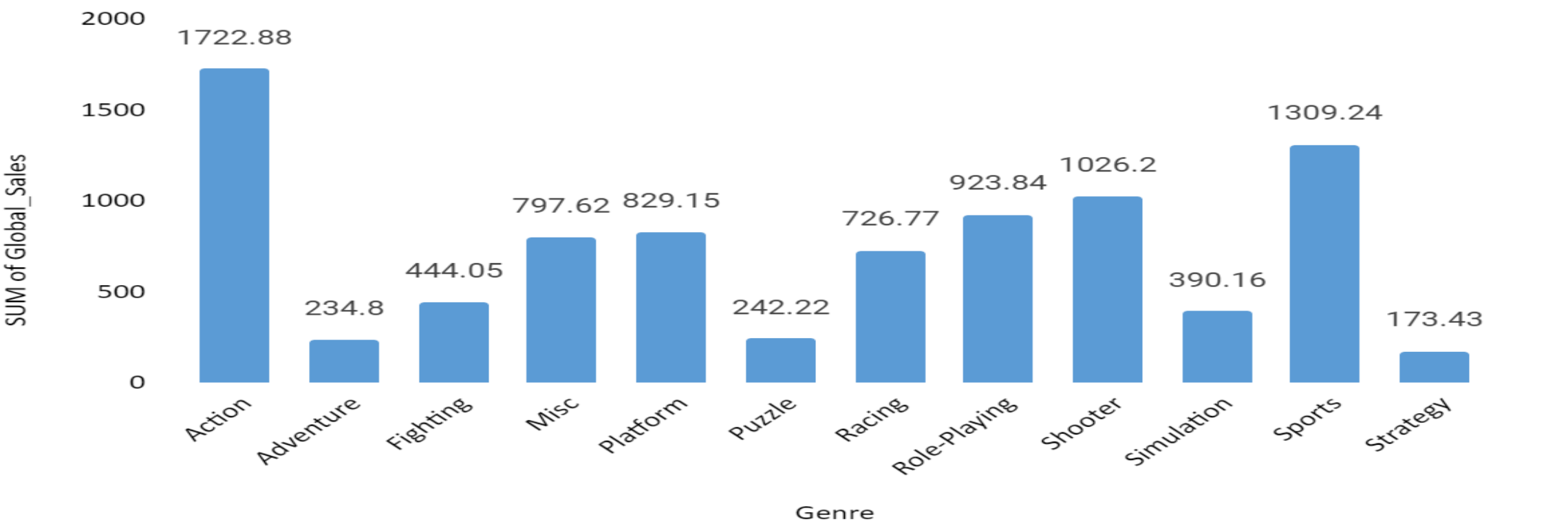
- Recommendations were made on how to drive sales and better customer experience.

KEY QUESTIONS

1. What is the total number of sales in each genre?
2. How does the average sales per genre vary across the regions?
3. What was the average global sales by genre?
4. What was the highest selling year?
5. What are the top 20 most sold games? Include their genre, platform, publisher and Global Sales.
6. Who was the most frequent publisher of the top 20 most sold games?
7. What was the highest selling platform?

FINDINGS – 1

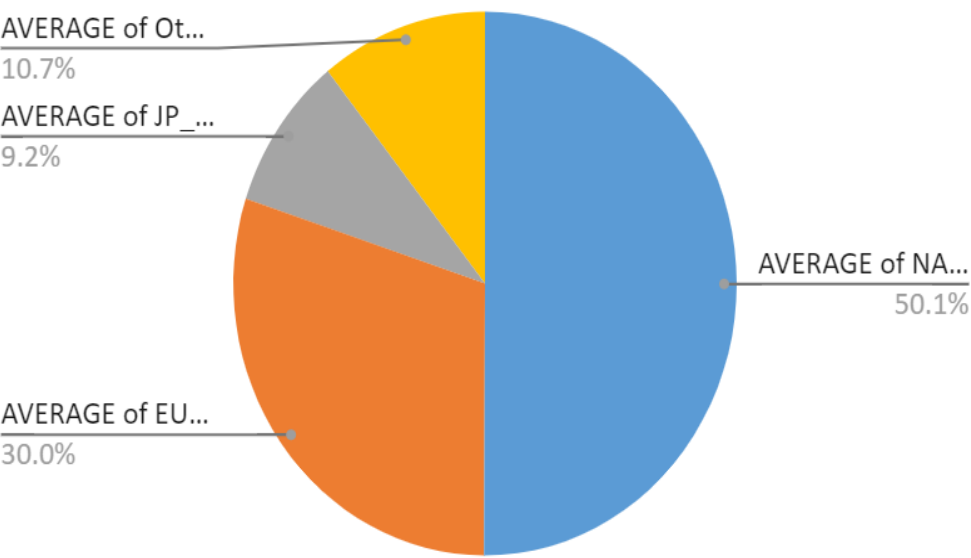
Global Sales vs Genre



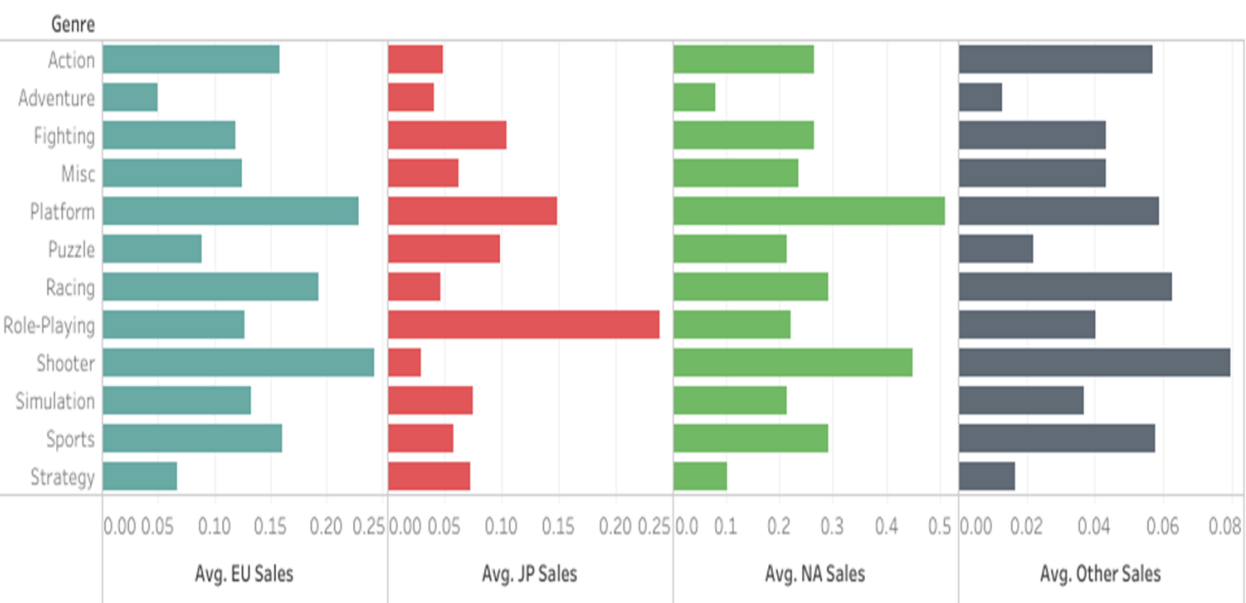
NOTE: The bar chart shows the total sales across the genres with Action games being the highest selling genre globally amongst all other genres and Strategy games being the least sold genre.

FINDINGS – 2

Genre Vs Average Sales



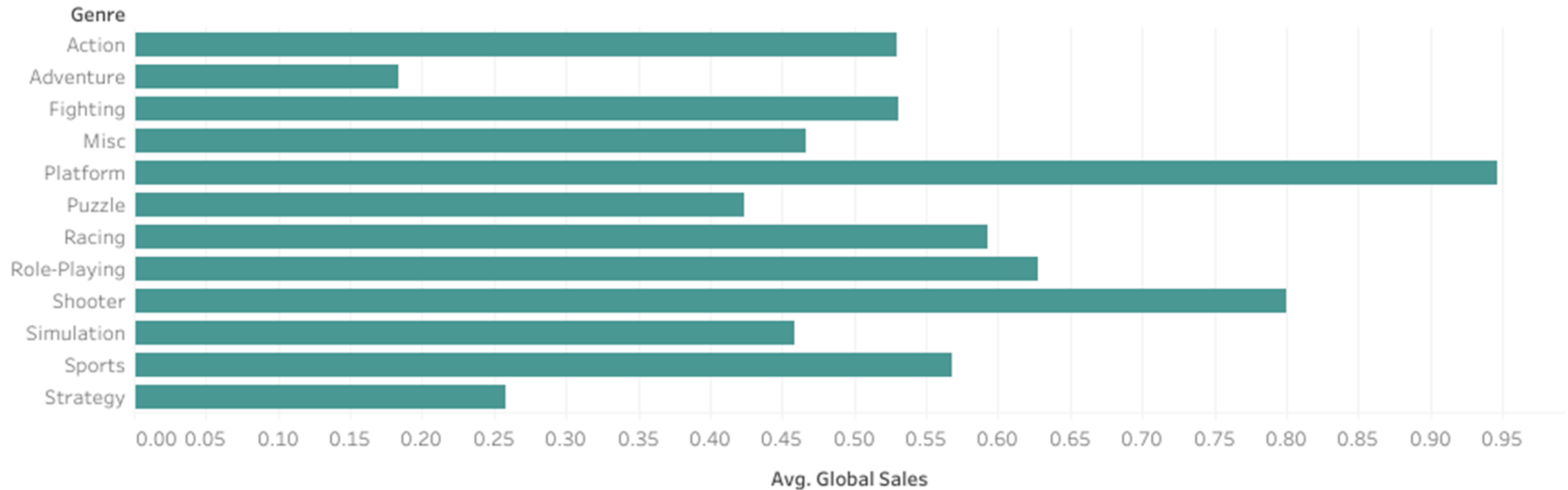
Genre Vs Avg Regional Sales



NOTE: The charts show that North America had the highest average sales across the regions. In addition, Genre "Platform" had the highest value for Average North America Sales while Average Japan Sales were the lowest of all the regions.

FINDINGS – 3

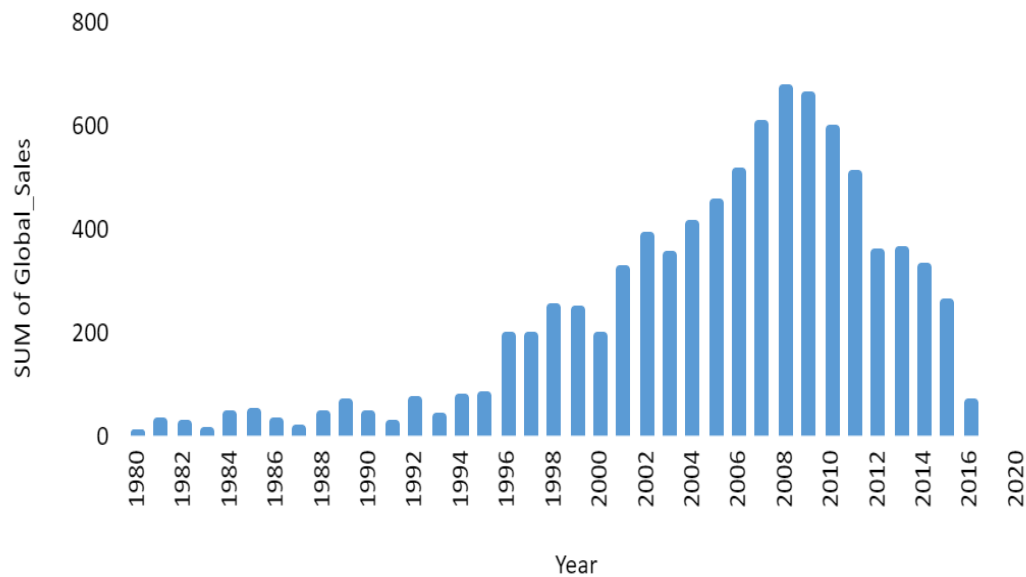
Genre vs Avg Global Sales



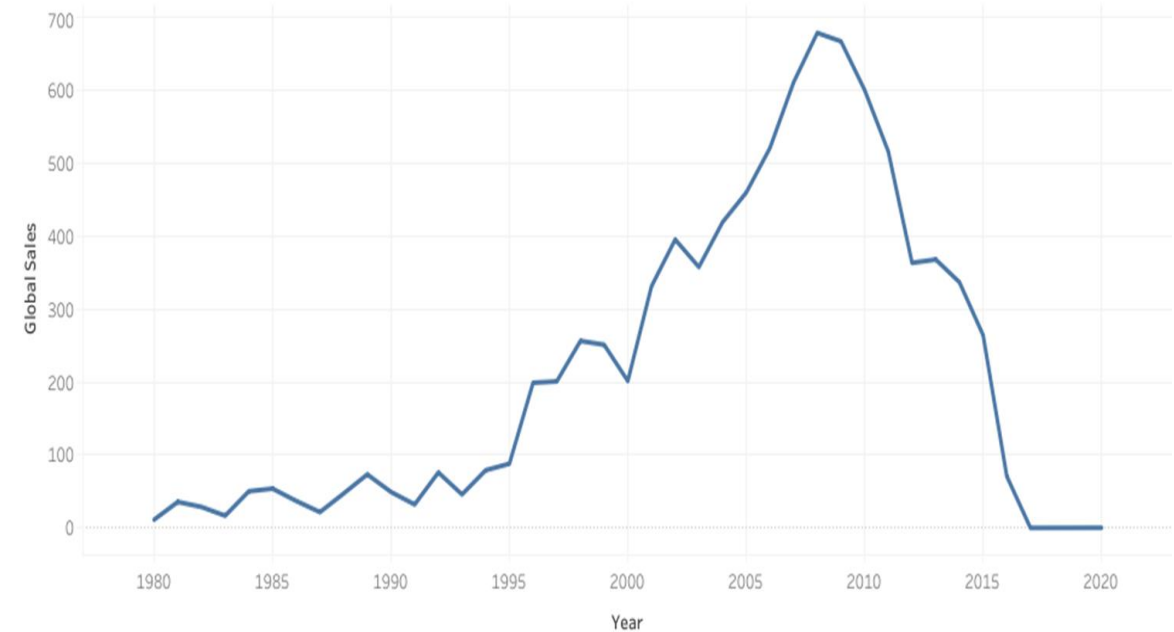
NOTE: Across the different genres, Platform had the highest Average Global Sales and this shows that there is a high interest of people in Platform games hence, the higher purchases.

FINDINGS – 4

Global_Sales Between 1980 - 2020



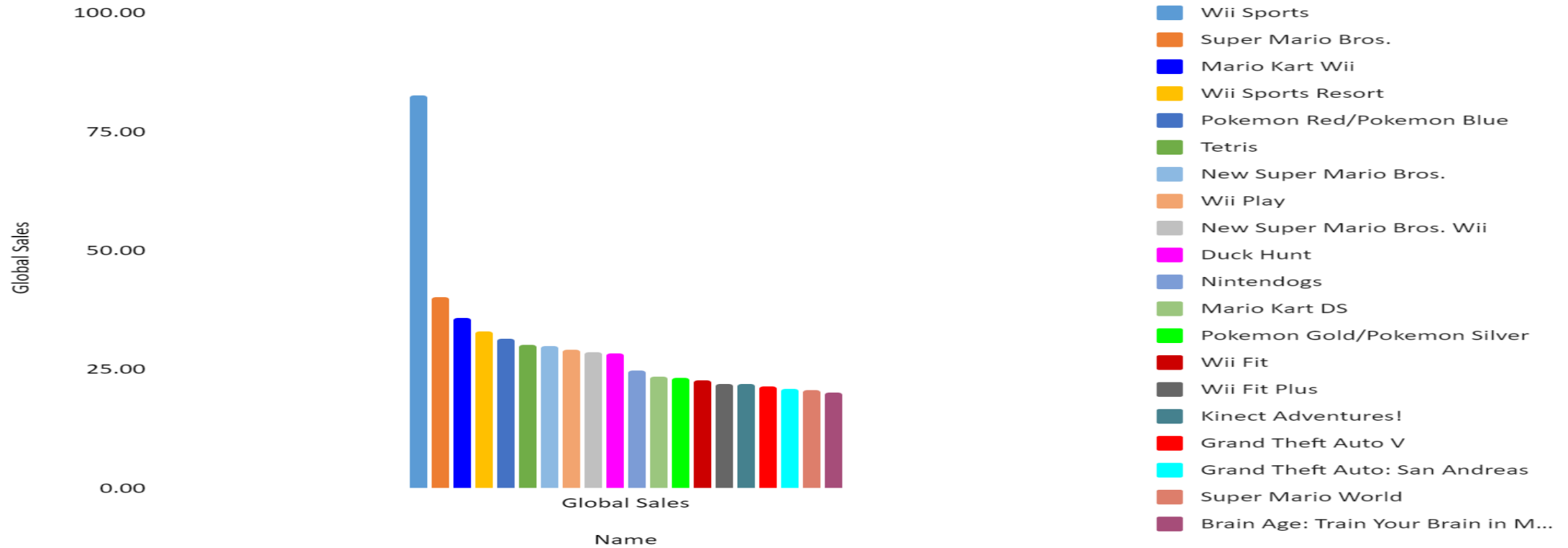
Global Sales Between 1980-2020



The chart shows the trend in global sales between 1980 and 2020. There is some variability in annual sales with 2008 recording the highest sales. It was observed that sales were barely recorded in 2017 and 2020.

FINDINGS – 5

Top 20 Games vs Global Sales

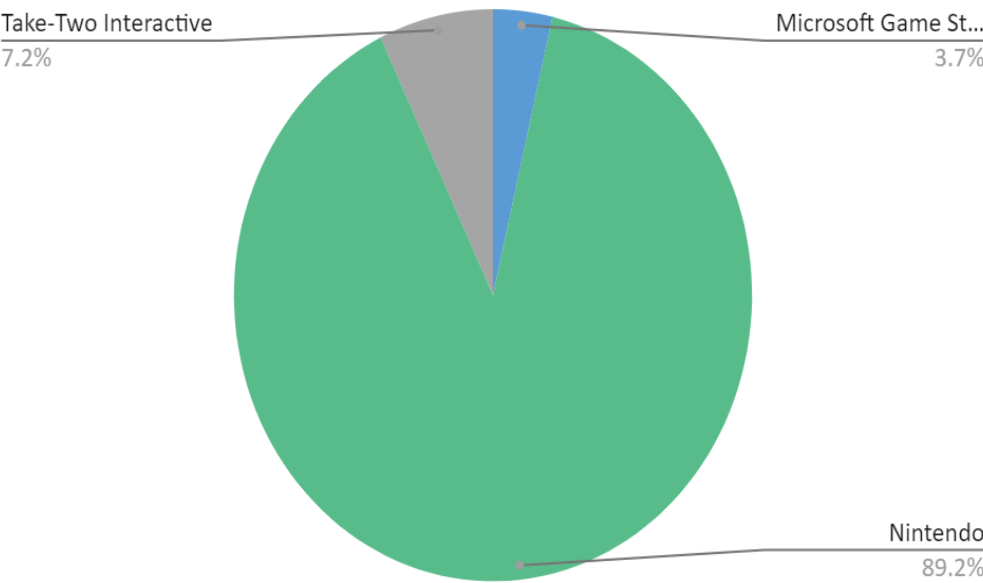


- Wii Sports was the highest selling game. A deeper dive would help determine if the sales were due to high prices or higher quantity demanded from gamers.

FINDINGS – 6

Publisher	SUM of Global Sales
Microsoft Game Studios	21.82
Nintendo	526.22
Take-Two Interactive	42.21
Grand Total	590.25

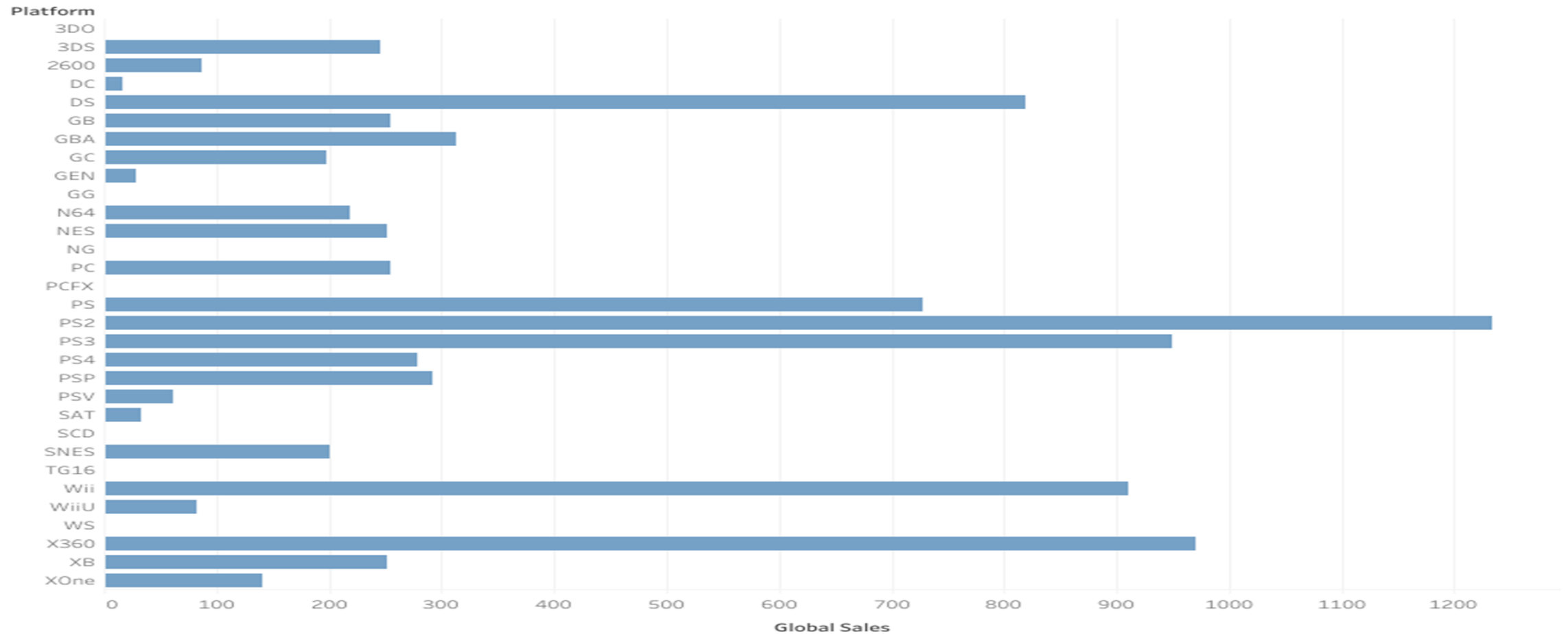
Top Publisher of the 20 Most Sold Games



NOTE: The most frequent publisher for the top 20 most sold games was Nintendo.

FINDINGS – 7

Global Sales Vs Platform



NOTE: The data showed that the PS 2 Platform made the highest global sales of all the platforms.

SUMMARY OF FINDINGS

- The analysis of the data showed the sales trends and some variability in annual sales with 2008 recording the highest sales of all the years. It also revealed a decline in general video games sales with 2017 and 2020 barely recording any sales.
- Action games was the highest selling genre globally amongst all other genres and Strategy games was the least sold genre. This signals that there was more interest and hence, demand for Action games than other games. Across the different genres, Platform had the highest Average Global Sales and this shows that on average, people have a high interest in Platform games hence, the higher purchases.
- North America had the highest average sales across the regions while Average Japan Sales were the lowest of all the regions.
- Wii Sports was the highest selling game. A deeper dive would help determine if the sales were due to higher prices or higher demand from gamers.
- The most frequent publisher for the top 20 most sold games was Nintendo.
- Finally, the data showed that the PS 2 Platform made the highest global sales of all the platforms.

ACTIONS AND RECOMMENDATIONS

- A 5 why analysis should be carried out on the lower sales region to determine if sales are low due to less demand, lower prices or lesser quantities of games sold.
- Nintendo was the major publisher of the top 20 most sold games and this signals that more publishing through Nintendo may drive sales up for the other games.
- More games should be released on the PS 2 platform as it had the highest sales across all platforms.
- Overall, the company should consider carrying out more marketing and advertising to drive sales. The use of a survey or product review initiative can also aid in generating more information on consumer behavior and how to improve user experiences with the games.

APPENDIX

- **Google Sheets Data Set for Udemy Project**

<https://docs.google.com/spreadsheets/d/1V2ZzqmB8Yc5nBUjwHyr32nRTARPf1TflcBl3kcC-F5Y/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/1IXUYaxszE8dN78NIBZ7ImQPyCwqxIbcgrYZHiprjrVY/edit?usp=sharing>

- **Tableau Data Visualization For Video Game Sales Project**