Portfolio

Data analysis

May 2023

Professional Background

I am a process-oriented data analyst with expertise in interpreting and analyzing data to drive key business decisions.

I started my career as a strategic finance professional with a passion for driving informed decision-making and facilitating long-term growth. With a wealth of experience in corporate finance, corporate strategy, analytics, and financial modeling tools, I have successfully supported clients in various industries in making sound and impactful finance and strategy decisions. Throughout my career, I have worked on numerous deals, providing financial advisory services.

With a bachelor's degree in Accounting and certifications in PMP (Project Management Professional) and ACCA (Association of Chartered Certified Accountants), I bring a strong educational foundation to complement my practical experience. I am dedicated to continuous learning and this has inspired my decision to deepen my knowledge in data and analytics

Overall, I am driven by the desire to make a tangible impact on organizations by providing data driven insights. My passion for data, coupled with my analytical mindset and excellent communication skills, positions me as a valuable asset in navigating the complexities of today's business environment

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Project 1 - Udemy

Project description

The Problem

As a data analyst, I was tasked by my manager to review, analyze and visualize data from an Ed-tech company, Udemy in order to understand customer preferences and devise opportunities for growth through trends and patterns

The reason for this analysis of Udemy's courses was to find ways to increase revenue and discover any trends that would be helpful for product development and marketing

The key questions I sought to answer with this data are outlined below:

- What are the total numbers of subscribers in each subject?
- How does the average content duration/price/number of students vary across different subjects?
- How many courses are free and paid for each subject?
- What is the average price of web development courses at different levels?
- What are the trends among the top 20 most popular courses?
- Does content duration impact the price of courses?

Data Design

I studied the course subscriptions, pricing, reviews, ratings and durations for multiple courses in four different subjects across 6 years.

I cleaned the data with google sheets, checking for duplicates, blanks and incomplete data. I also used google sheets together with Tableau for better visualization because it can handle more robust data sets

After cleaning the data, I used some analytical tools and formulas such as pivot tables, IF and VLOOKUP functions in order to generate more insights on the data

Findings

Finding 1

- The subject with the largest number of subscribers is Web development with about 68% of total subscribers
- Web development is the most popular subject as 85% of the top 20 subjects are web development

Chart 1: Total subscriptions by Subject

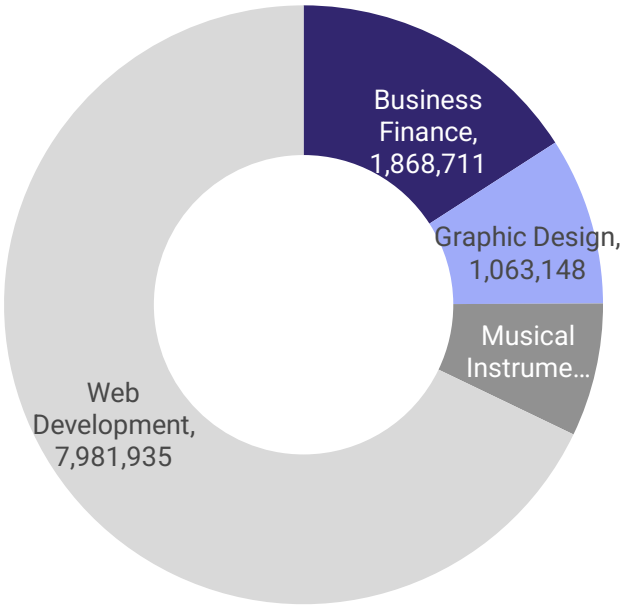
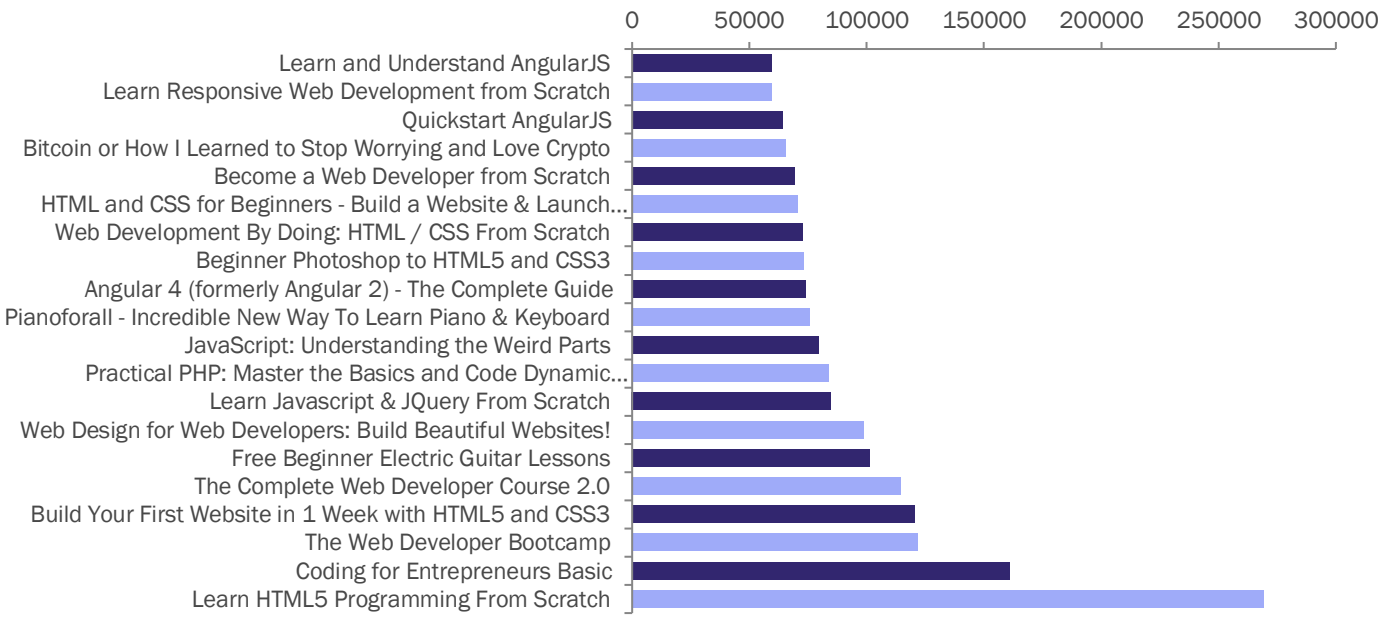


Chart 2: Top 20 most popular courses



Findings

Finding 2

- On average, web development is the most expensive subject, has the longest courses and most number of students
- On the flip side, Musical instruments has the least number of students, is the least expensive and has the shortest courses on average
- Business finance and Graphic design have the same content duration but vary in price and number of subscribers

Chart 3: Average content duration

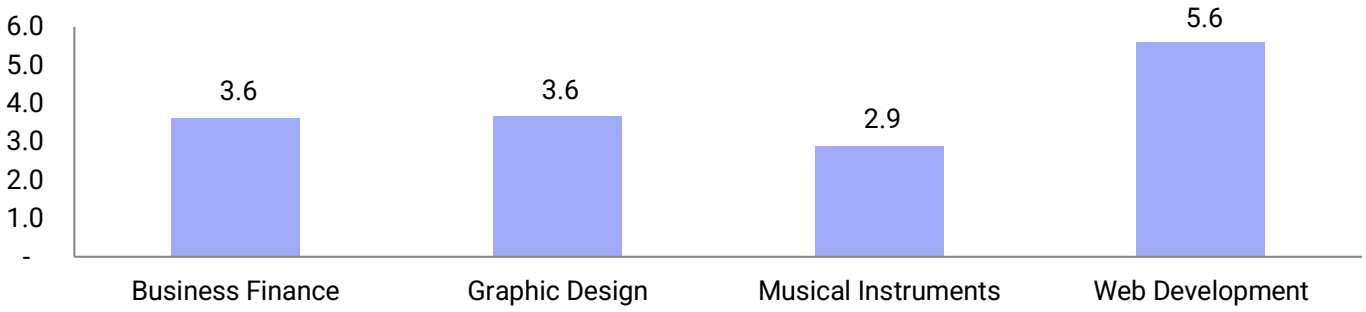


Chart 4: Average price

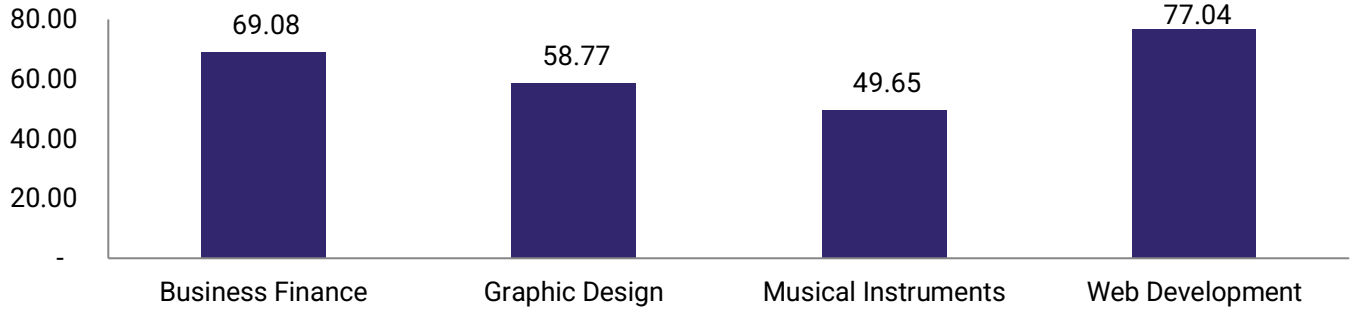
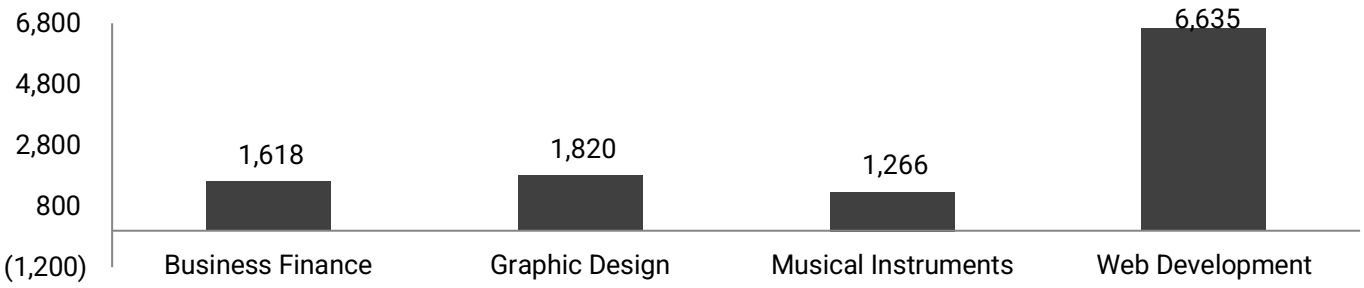


Chart 5: Average number of students

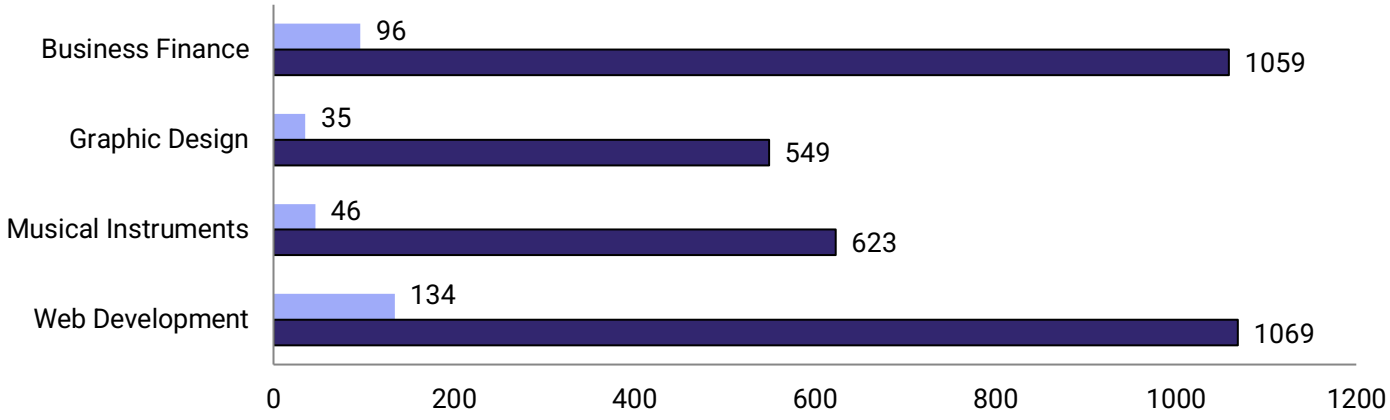


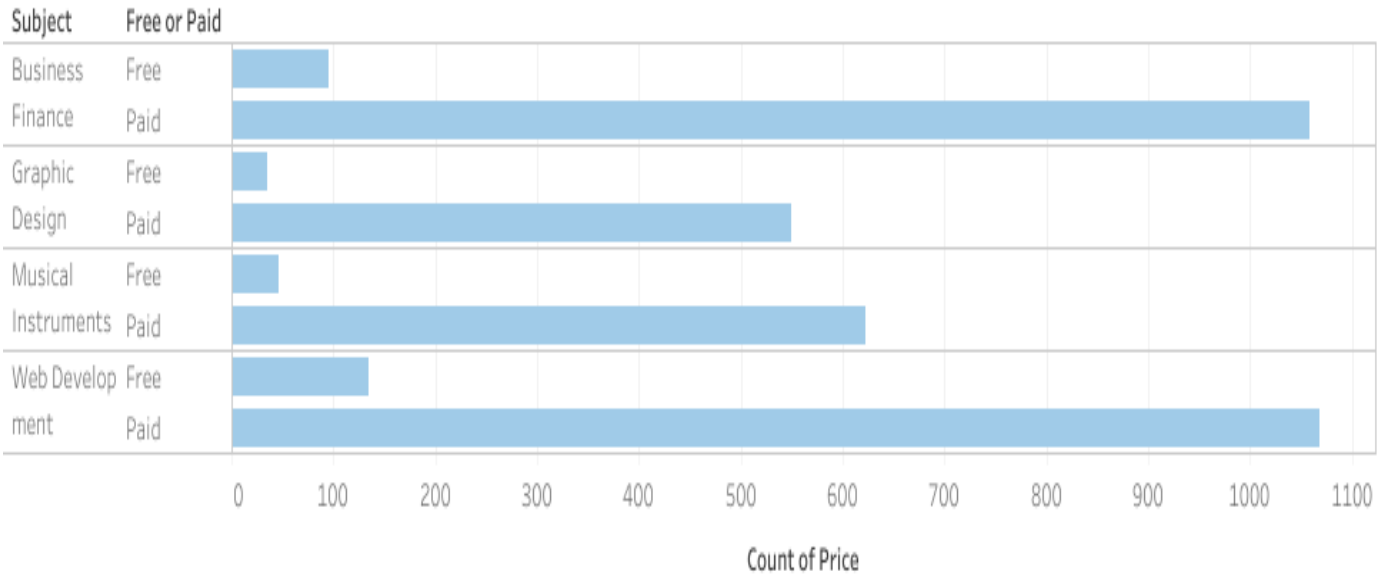
Findings

Finding 3

- All subjects have free courses ranging from 6%-11% of total courses per subject
- Graphic design has the least proportion of free to total courses at 6% while web development has the highest proportion at 11% of total courses

Chart 6: Free and paid courses by Subject



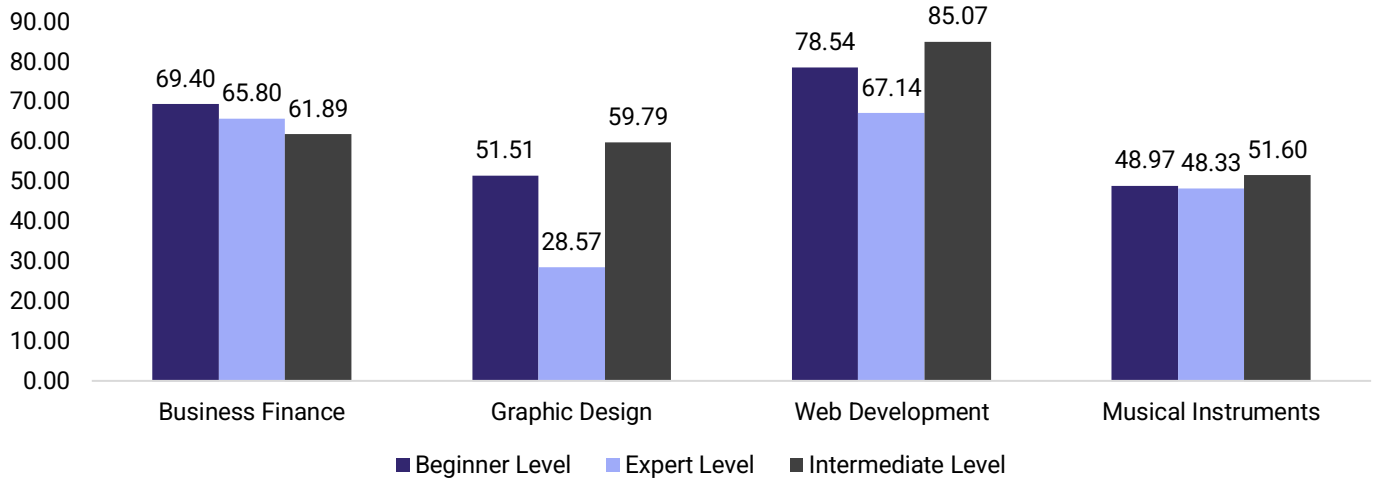


Findings

Finding 4

- From our data, we see that the prices of courses across subjects do not increase with respective levels

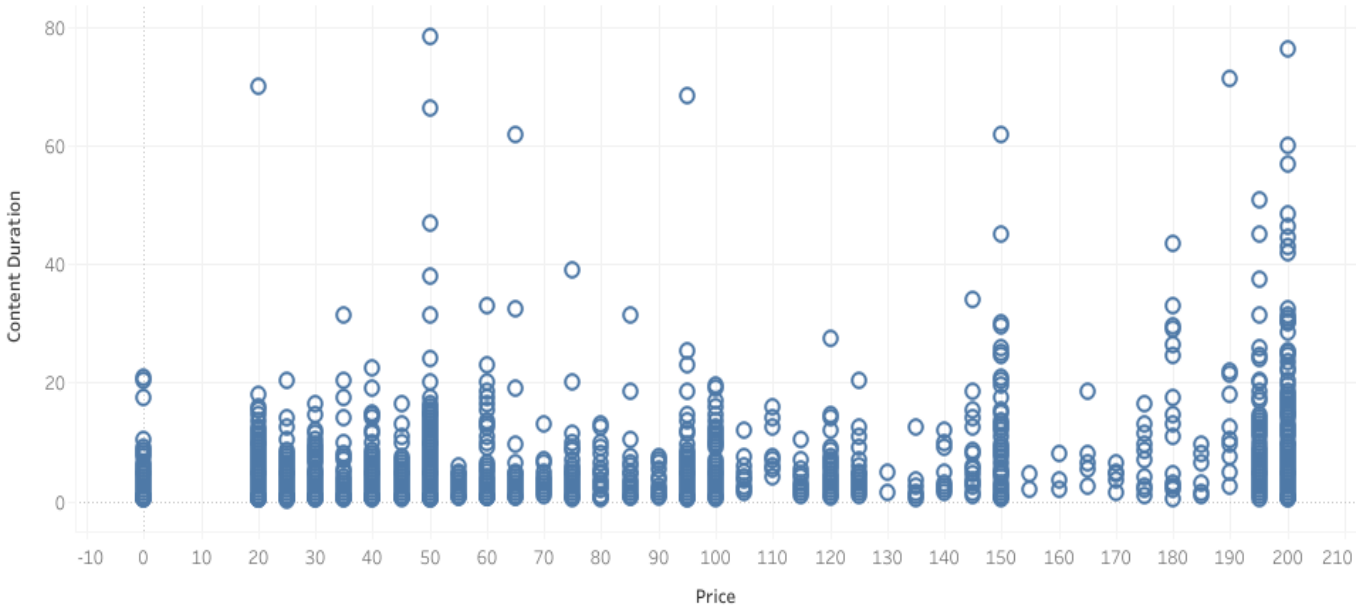
Chart 7: Average prices per subject at each level



Finding 5

- From my data, content duration does not affect the price of the course. I notice varying prices across different courses with varying content duration

Chart 8 (using Tableau): Content duration vs price per subject



Summary of findings

- **Top 5 courses:**
    - Almost 68% of subscribers come from Web Development and the top 5 courses are for Web development as well
- **Business Finance vs Web Development:**
    - Business Finance and web development have almost equal number of total courses (1155 vs 1203), but web development course are almost 2x in content duration and have 4x the average subscribers
- **Course Pricing:**
    - Pricing does not seem to affect course subscription because Web development has the highest number of subscribers even with the highest price

Actions and Recommendations

Product recommendations:

- Focus on getting more paid courses by creators in web development as this seems to be the most popular subject

Marketing recommendations:

- Findings indicate that web development courses are the most popular and people are willing to pay for them. Marketing and advertising campaigns should therefore be focused on showcasing more web development courses

Project 2 – Video games

Project description

The Problem

For this project, I decided to analyze data on video game sales across different regions of the world

The reason for this analysis of video games sales was to better understand the preferences and behaviors of global video game buyers and users and identify trends and patterns

Some key questions I sought to answer with this data are outlined below:

- What are the most popular game genres, platforms, and publishers?
- What type of game genres should be prioritized in certain regions?
- What type of games should be produced and marketed in different regions?

Data Design

I studied the trends of video game sales across four different regions in the world (North America, Europe, Japan, and the rest of the world) across four decades

I cleaned the data with google sheets, checking for duplicates, blanks, and incomplete data. I also used google sheets together with Tableau for better visualization because it can handle more robust data sets

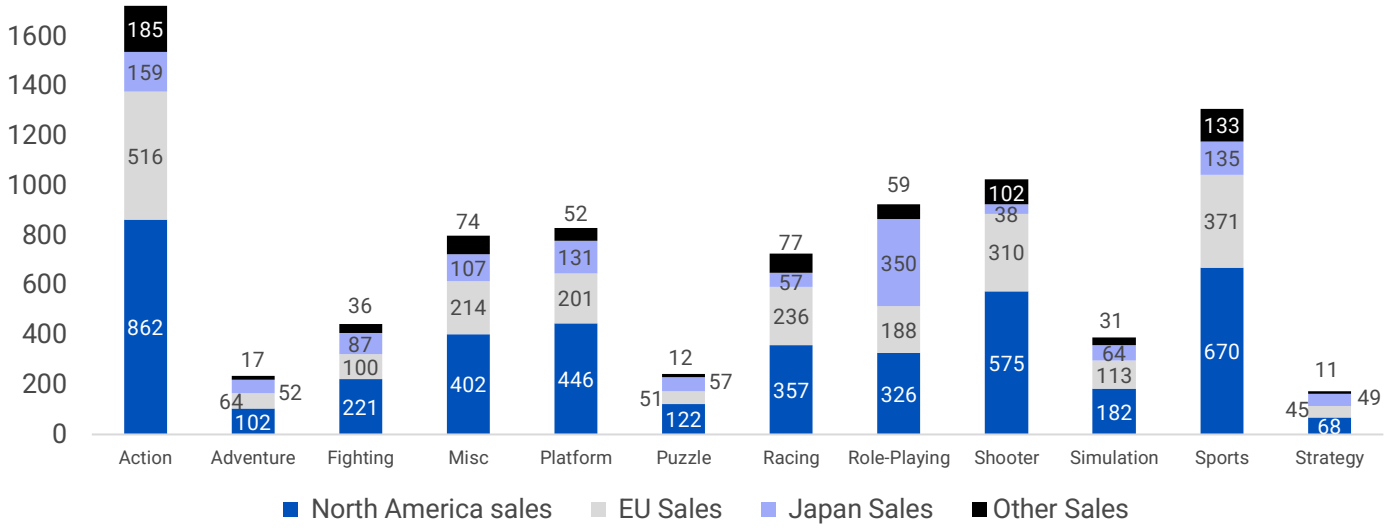
After cleaning the data, I used some analytical tools and formulas such as pivot tables, INDEX, and MATCH functions in order to generate more insights into the data

Findings

Finding 1

- My analysis shows that Action games are the most popular genre among gamers worldwide, followed by Sport and Shooter games.
- On the flip side, the least popular genre according to global sales in Strategy

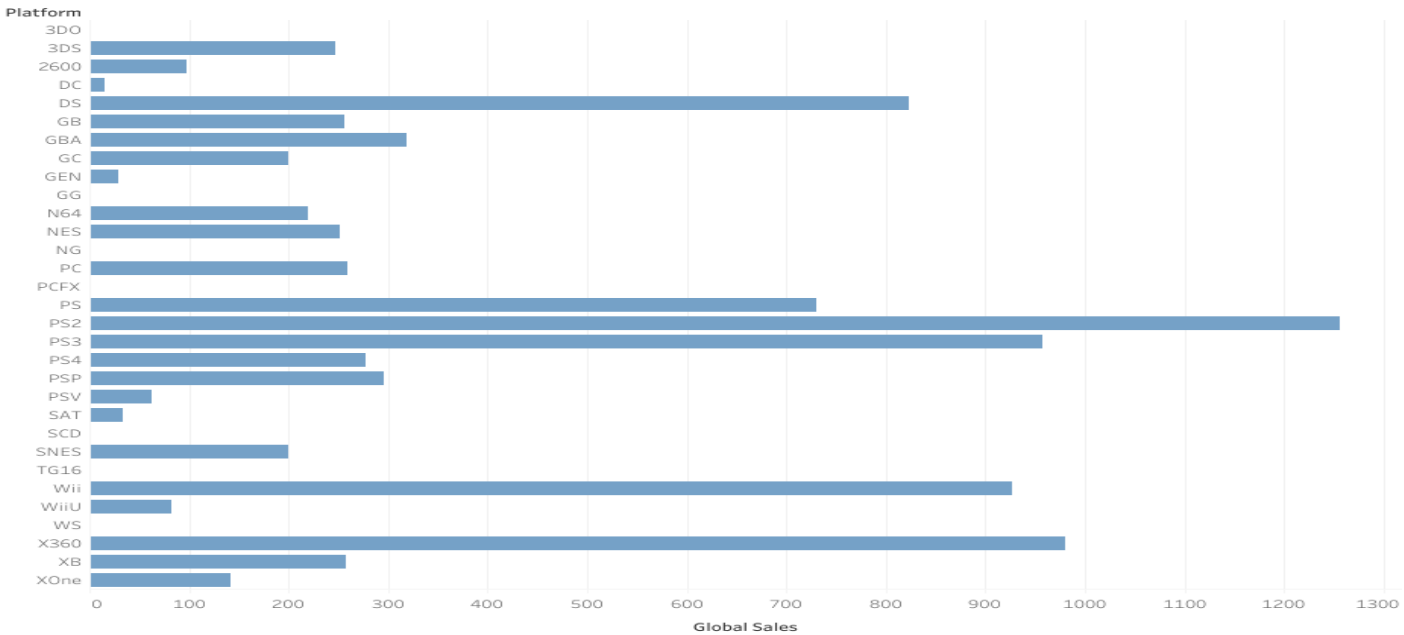
Chart 8: Games genres by popularity (million sales)



Finding 2

- From my analysis, the most popular game platform is Playstation 2 with 14% of global video game sales being on this platform

Chart 9 (using Tableau): Global sales by platform

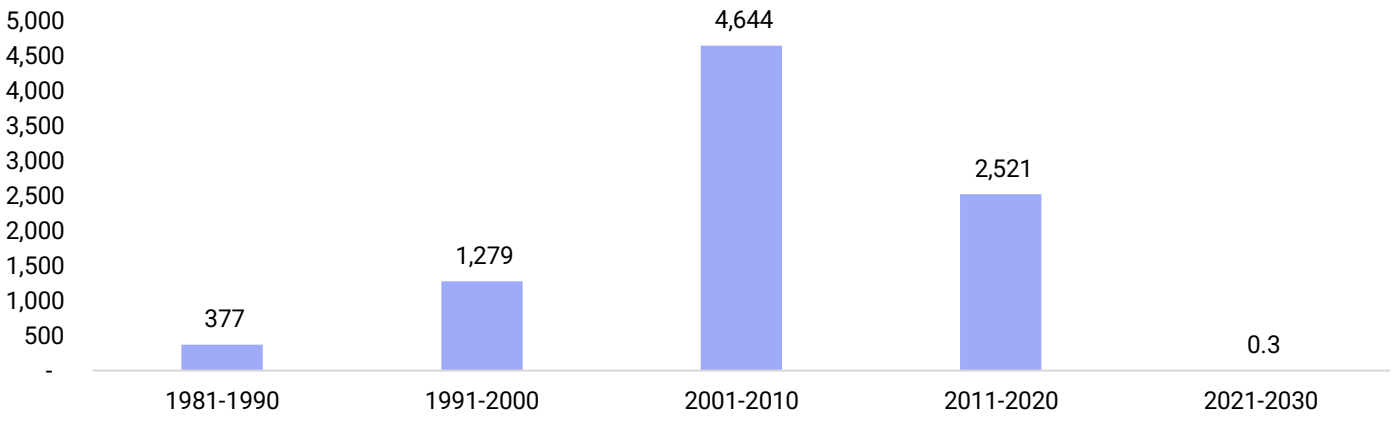


Findings

Finding 3

- According to available data, video games released between 2001 and 2010 had the highest level of popularity among consumers worldwide.
- In fact, the data suggests that games released during this decade accounted for more than half of total global video game sales. This trend emphasizes the significance of this time period in the video game industry and the enduring appeal of these games to a wide audience.

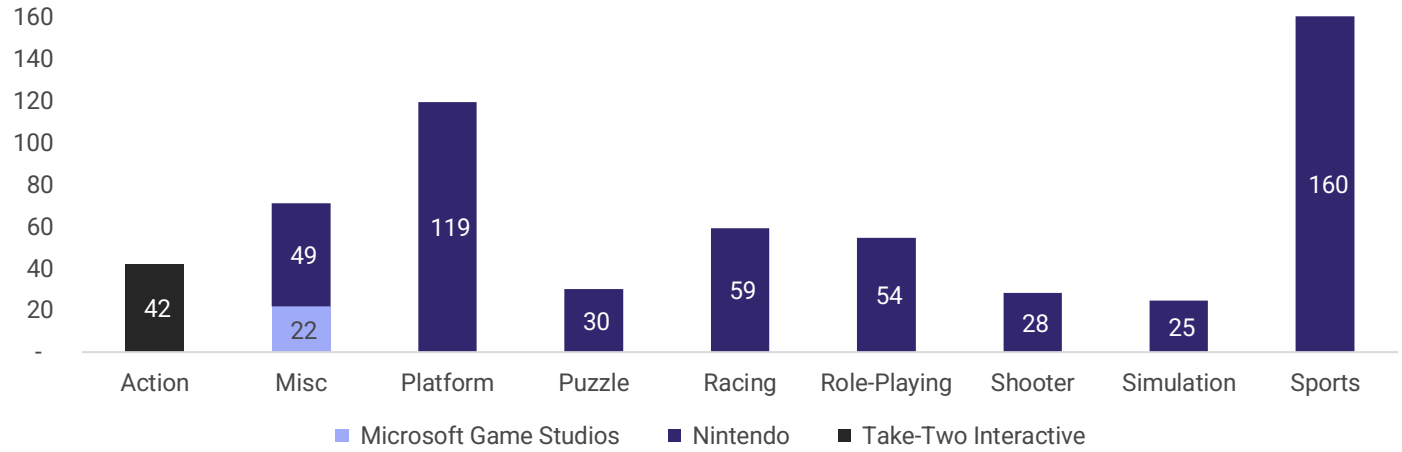
Chart 10: Global sales by decade release



Finding 4

- Nintendo is the most popular game publisher among the top 20 video games
- In contrast to the overall sample, Sports games emerged as the top-selling category among the top 20 video games, constituting 27% of the total global sales.

Chart 11: Top 20 games by genre and publisher



Summary of findings

- **Top 20 video games:**
    - Sports games generated the most sales out of the top 20 video games at 20%.
    - The most popular publisher for the top 20 games is Nintendo with 89%

- **Video game popularity by different parameters**
    - **Genre**: From my analysis, Action is the most popular genre at 20% of global sales closely followed by Sports with 15%
    - **Decade:** Games released in 2001 – 2010 had the most sales at 53% of global sales
    - **Region:** Action is the most popular genre in North America, EU, and the rest of the world. However, Role-playing is the most popular genre in Japan
    - **Platform:** The most popular platform is Playstation 2 with 14% of global video game sales

Actions and Recommendations

Product recommendations:

- Our data tells us that our action games are most popular across most regions. Companies should focus on developing action games and marketing existing games to the target market.
- There seems to be a decline in video games sales in later years. This highlights the opportunity for growth in the video games industry