Games & Twitch

Group 6: Banke, Josh, Sam & Shan

Topic

Gaming and Streaming Industry

- Video games sales in N.A. and in the world
- Twitch
- Relationship between two industries

Questions

Is there any information in our datasets that affects game sales regionally and globally?

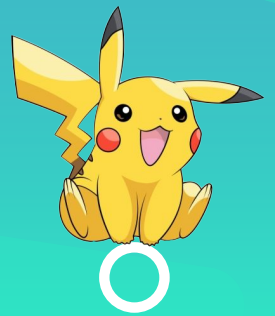
Hypothesis

Both positive ratings and high viewer/streamer count on Twitch have a positive effect on game sales

Data

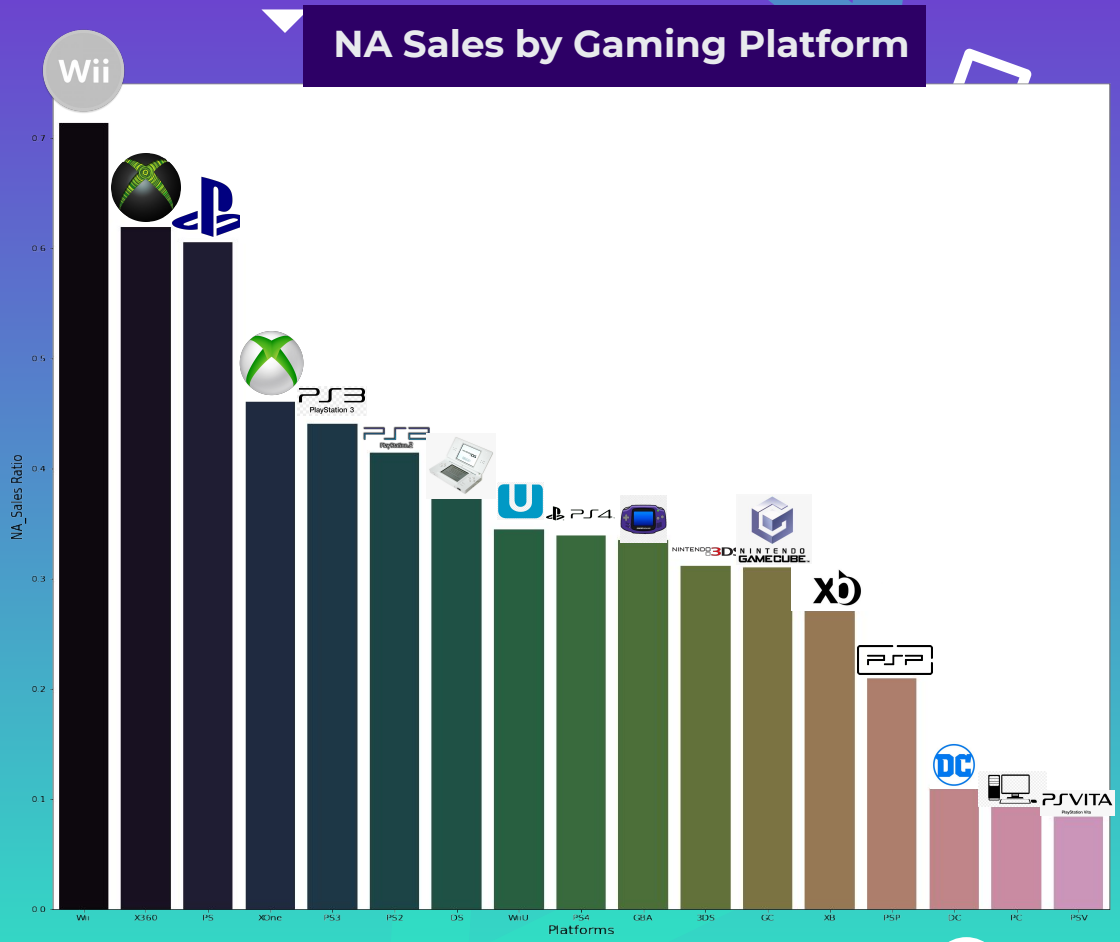
Datasets

- Video Game Sales with Ratings
  - Contains name, genre, platform, sales in millions, etc.
  - From 1980 to 2020
- Top Games on Twitch Data
  - Top 200 Games on Twitch
  - Contains viewer number and channel numbers, etc.
  - From 2016 to 2021

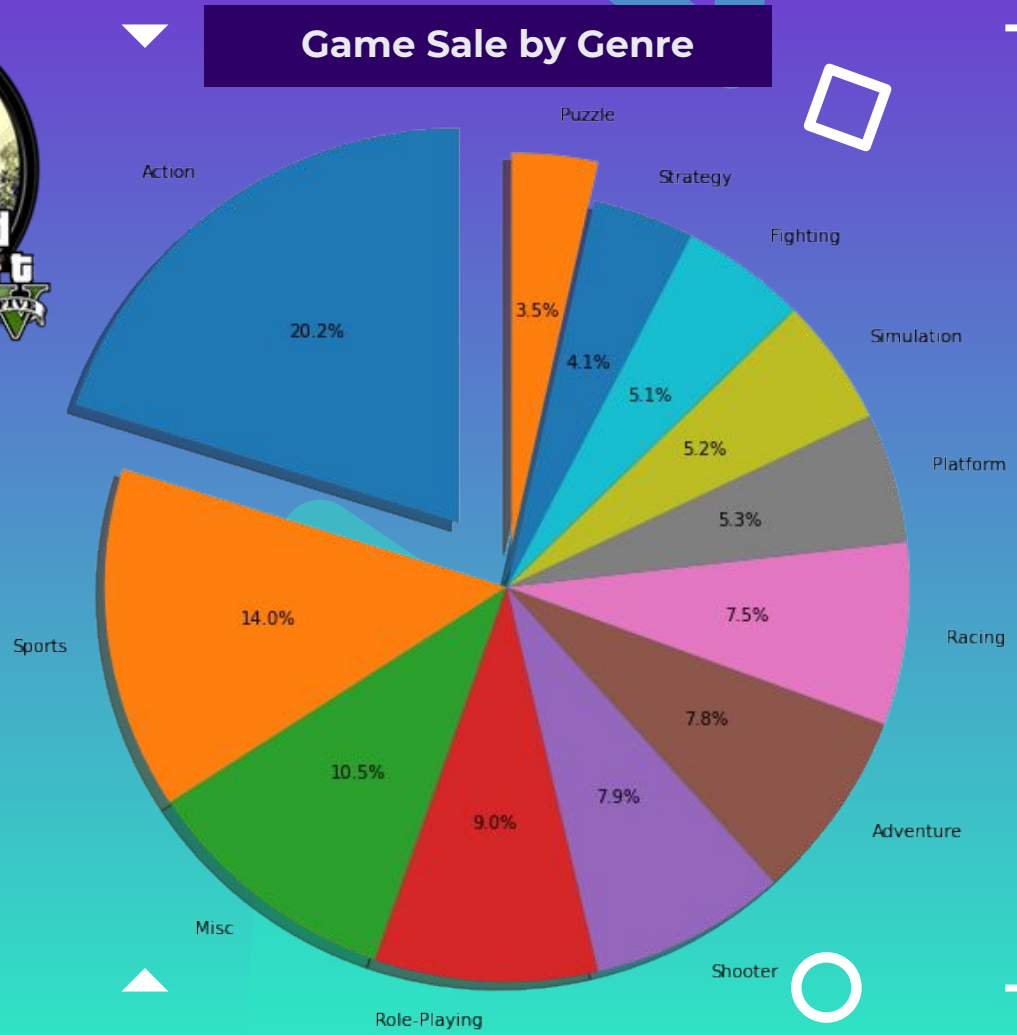


Video Game Sales Dataset

Most Popular Platform



Most Popular Genre



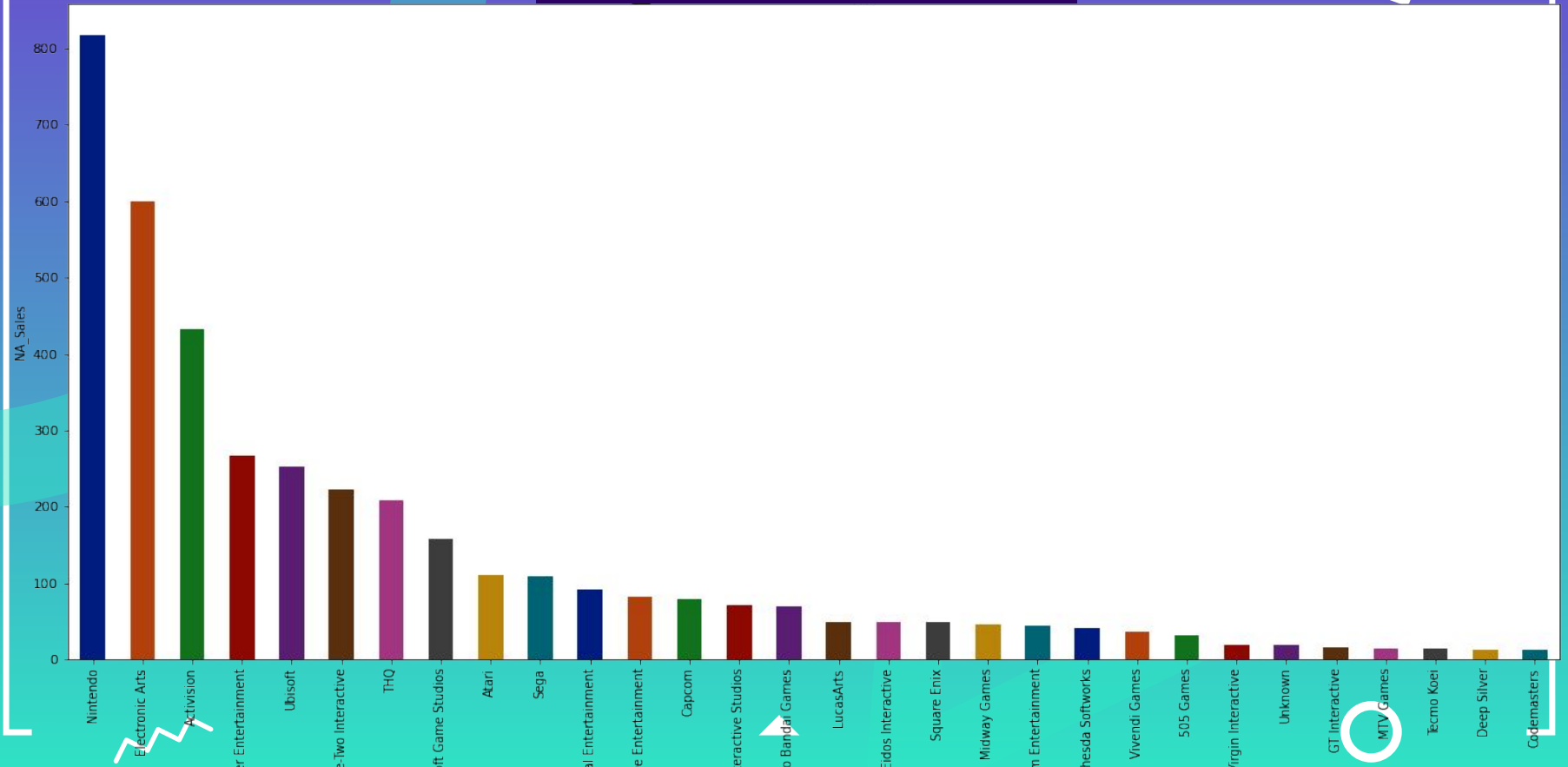
Most Popular Game

Wii Sports

Over 82 million units sold globally!!!

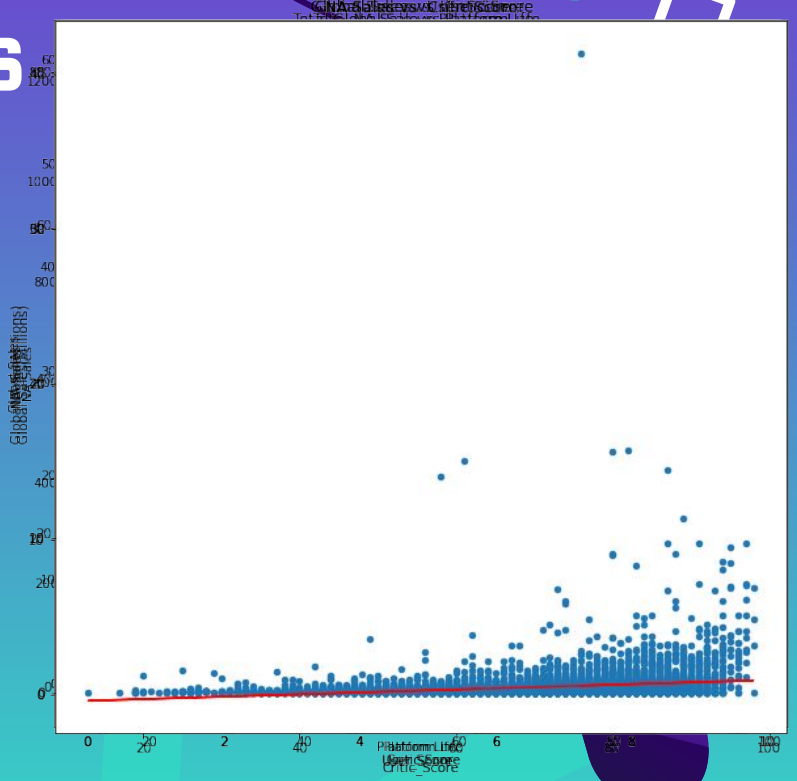
Most Popular Publisher

NA Sales by Gaming Platform



Finding Correlations

- User Rating vs Sales
- Critics Rating vs Sales
- Platform life vs Sales



Result

Low Correlation between sales and rating and platform life

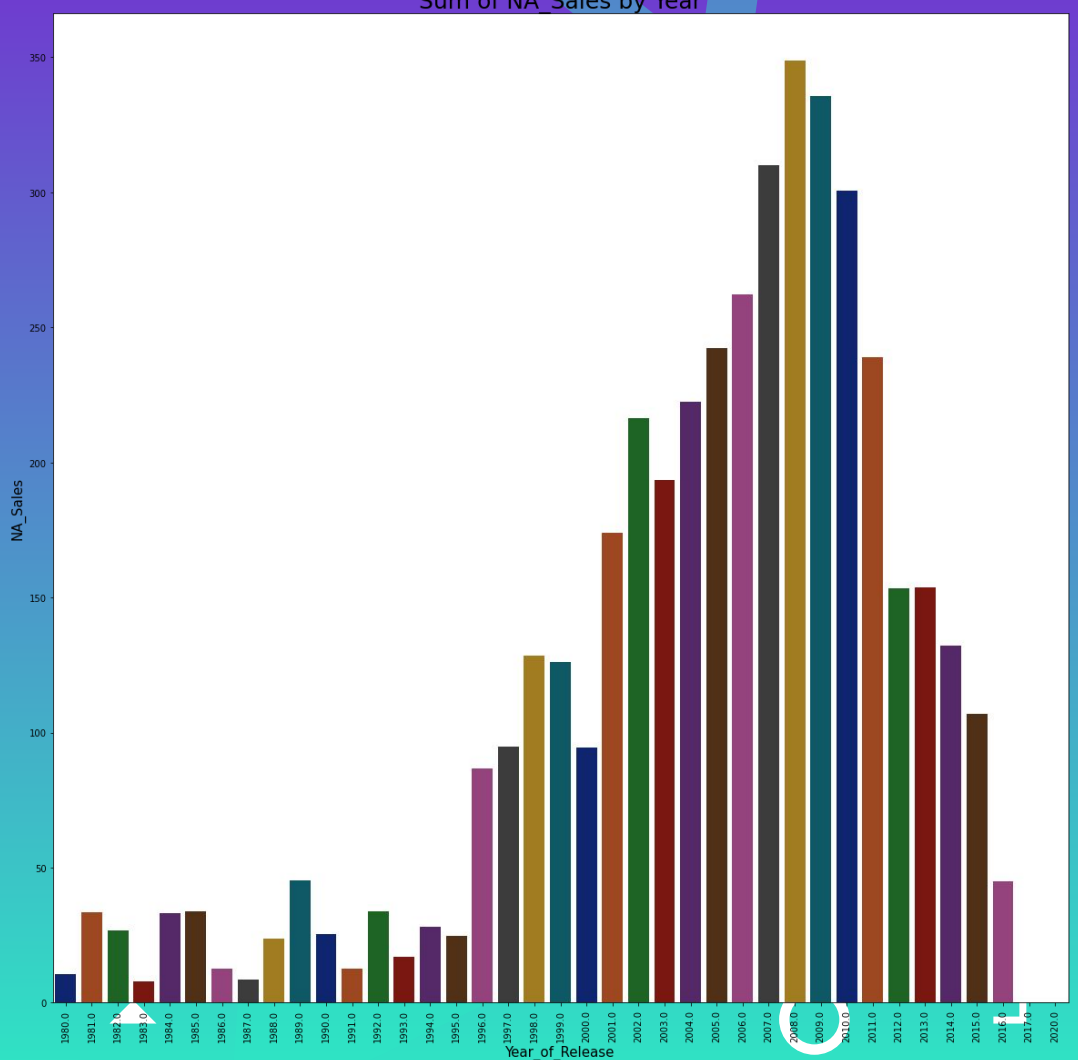
Potential Reasons

- There are many other aspects that impact the Gaming industry, so one factor cannot dictate sales
- Reviews are often subjective

Genre	NA_Sales	Global_Sales	NA_Percentage
Shooter	584.83	1041.83	56.13%
Platform	444.44	825.86	53.82%
Sports	671.20	1310.39	51.22%
Puzzle	121.13	240.33	50.40%
Misc	394.01	783.19	50.31%
Action	863.17	1717.62	50.25%
Fighting	220.51	442.63	49.82%
Racing	356.86	723.69	49.31%
Simulation	180.67	388.22	46.54%
Adventure	101.39	233.25	43.47%
Strategy	67.69	172.69	39.20%
Role-Playing	330.04	930.90	35.45%

Discovery

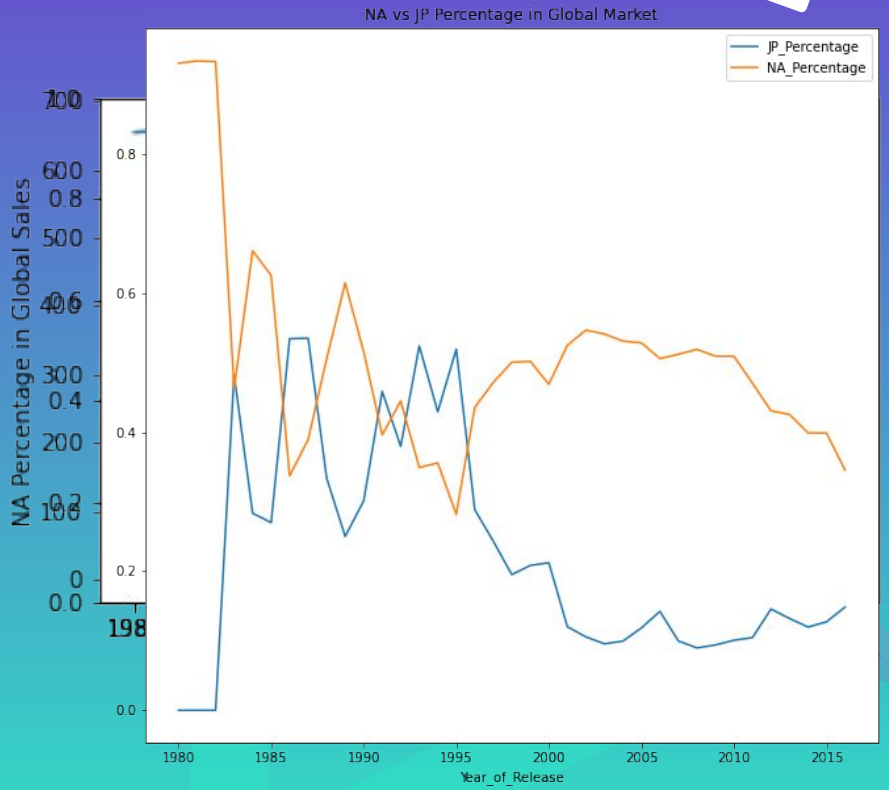
- Sales peaked in 2008
- Decline after 2008



Discovery

- Strong correlation between NA Sales and Global Sales

- NA Percentage vs JP Percentage in the gaming market



Part II

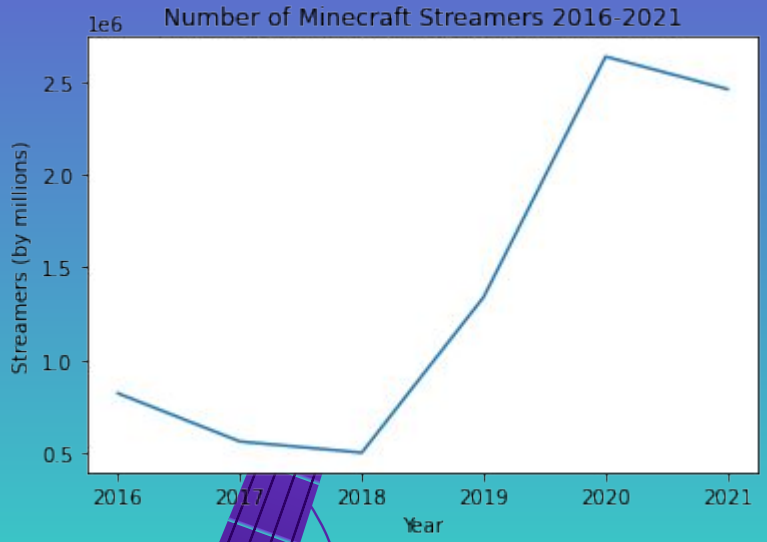
Twitch

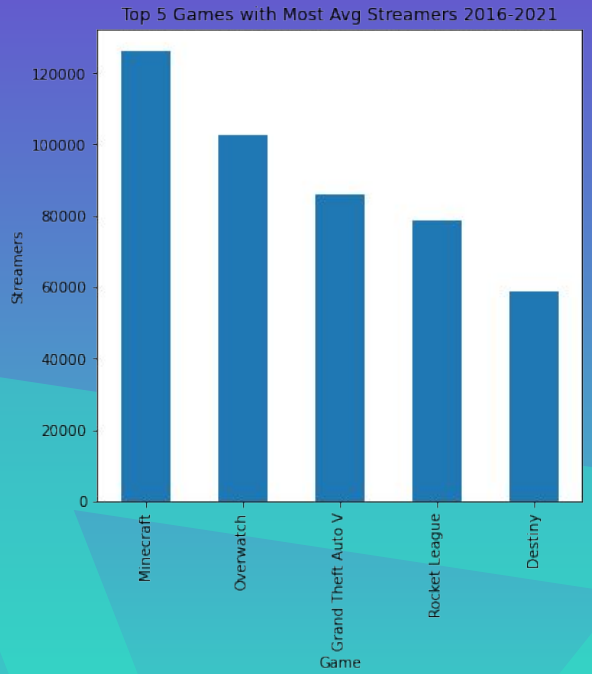
Background Information

- Live streaming service
  - Focus on video games
- Bought by Amazon in 2014 for $970 million
- Peak Statistics:
  - 6,500,000+ viewers
  - 200,000+ active channels

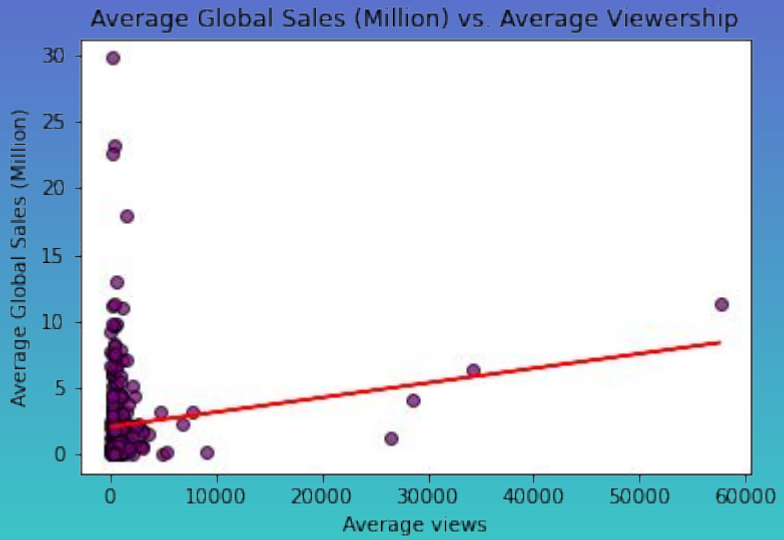
Source: https://streammentor.com/who-owns-twitch/

Twitch

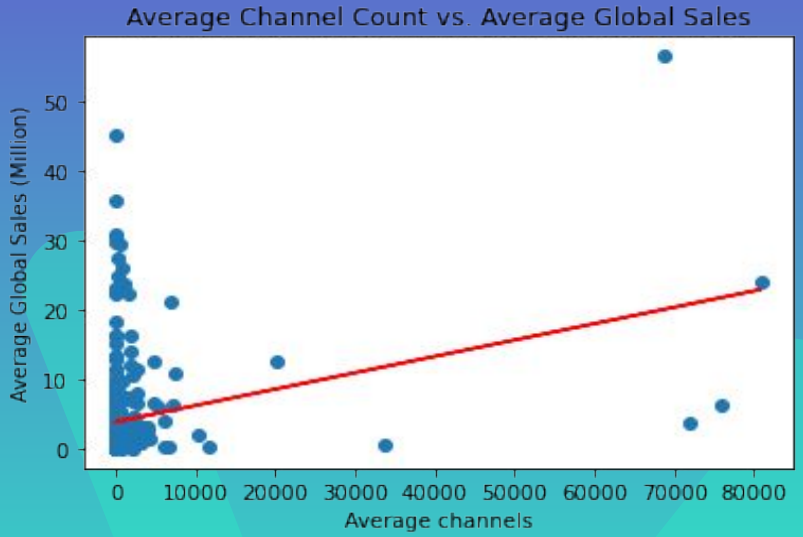

Number of Minecraft Streamers 2016-2021
1e6
Streamers (by millions)
2.5
2.0
1.5
1.0
0.5
2016
2017
2018
2019
2020
2021
Year


Top 5 Games with Most Avg Streamers 2016-2021
Streamers
120000
100000
80000
60000
40000
20000
0
Minecraft
Overwatch
Grand Theft Auto V
Rocket League
Destiny
Game

Correlation



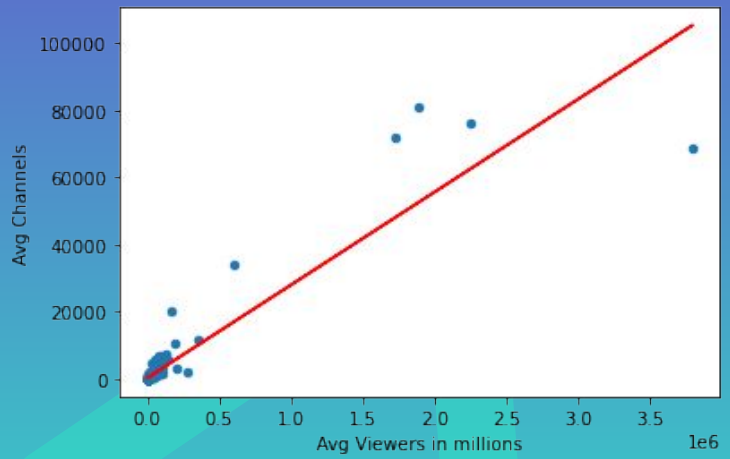
R value ≈ 0.14



R value ≈ 0.28

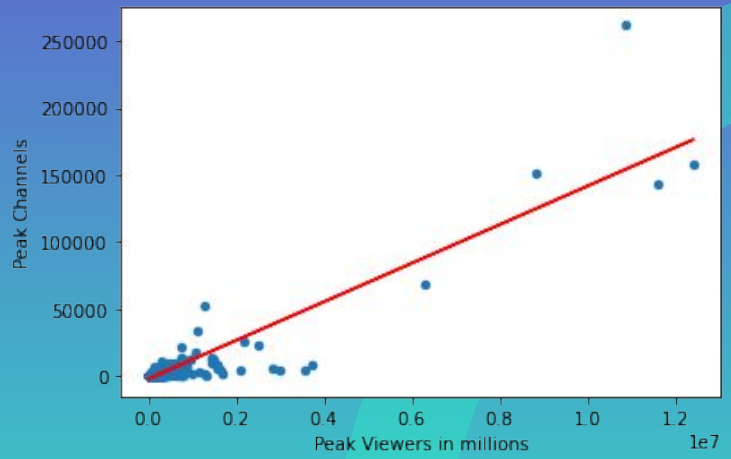
Strong Correlation Between Number of Channels and Views

Avg. Channels vs Avg. Viewers (Millions)



R-value: 0.92

Peak Channels vs Peak Viewers (Millions)



R-value: 0.91

Strong Correlation Between Number of Channels and Views (Cont.)

Possible Reasons:

- More channels for one game could imply:
  - Higher output and demand
  - More accumulated viewers
- High views and channel counts do not mean these the streams and streamers are promoted
  - Twitch's algorithm promotes streams and channels based on personal preference

Main Findings

04

There is a strong correlation between Twitch viewership and channel numbers.

01

No correlation between channel/viewer counts and game sales

02

No correlation between ratings and game sales.

03

There is a strong correlation between NA and global sales.

Limitations

- Given project time
- Outdated timeframe on Game Sale dataset
- Twitch's API is only for integrating streams into applications and web-pages but not for statistics about the service

02

Future Exploration

What about future research?

Useful Resources for Further Investigation

https://gamasutra.com/

https://www.pricecharting.com/api-documentation

For additional Gaming data!

https://dev.twitch.tv/docs/api/

For additional Twitch data!

Thank you!

Kaggle, Anthony & Mark, & the whole cohort!

Q&A