

Captstone Two – Video Games Presentation

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Problem Statement

1 Context

Since all the other regions are having pretty good sales, we want to analyse the Europe region to see if we can make the sales better.

2 Criteria for success

Make EU's sales increase 5%

3 Scope of solution space

Find out what EU's preference for game and use different ways such as promotion or advertisement to increase the sales

4 Constraints within solution space

Not understanding different countries' culture, not knowing their taste

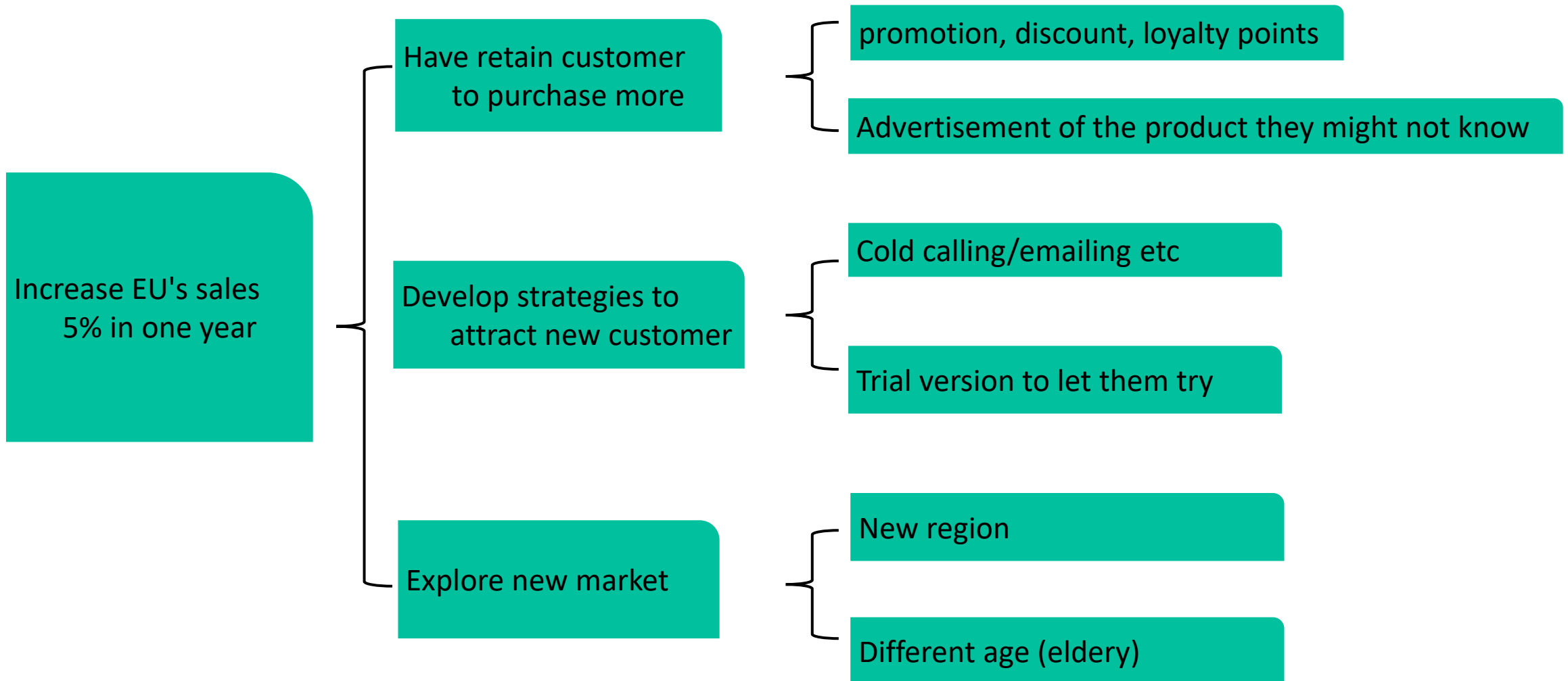
5 Stakeholders to provide key insight

Advertisement team, PR team
Sales team

6 Key data sources

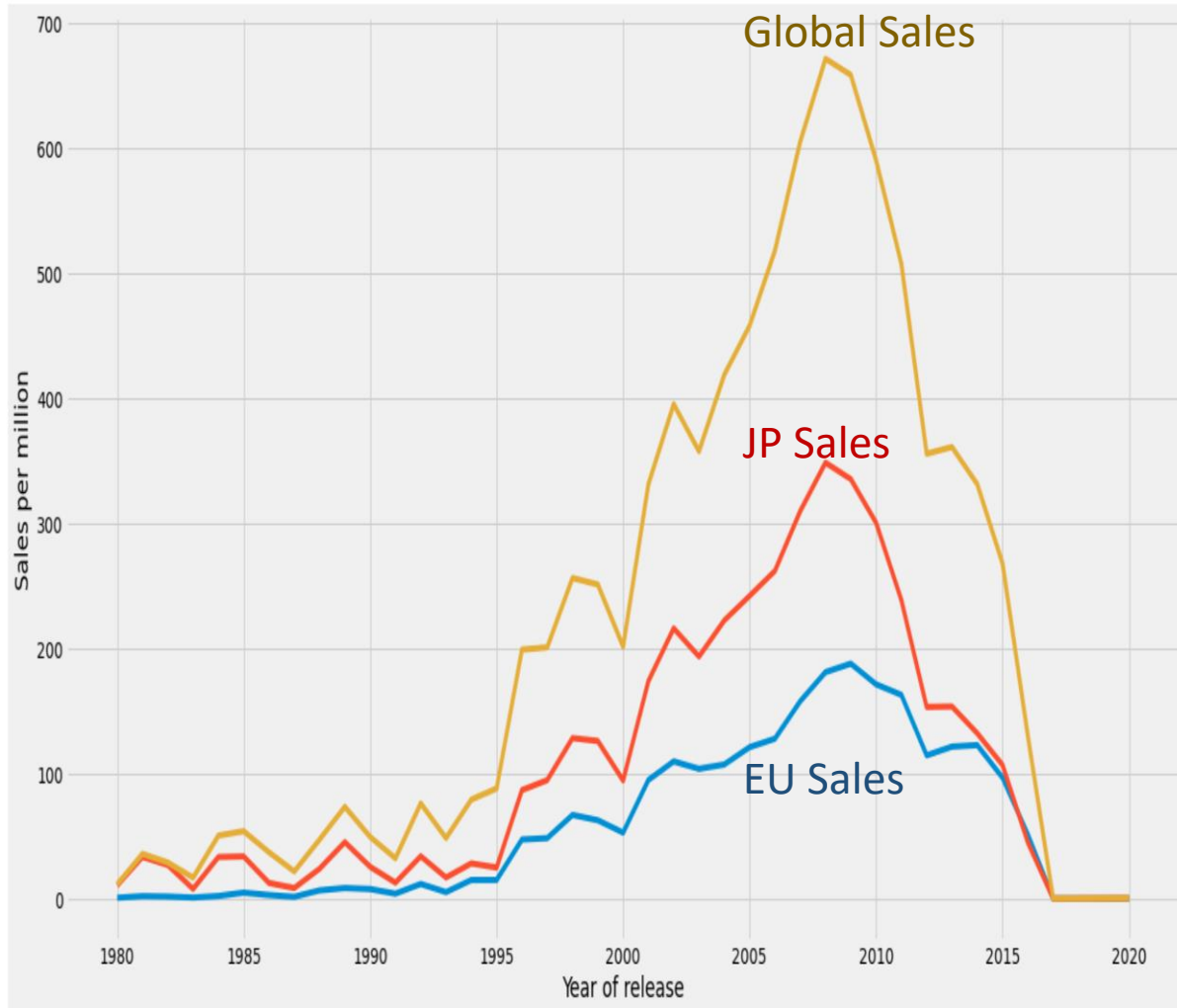
Sales Data, PR resources

Issue Tree

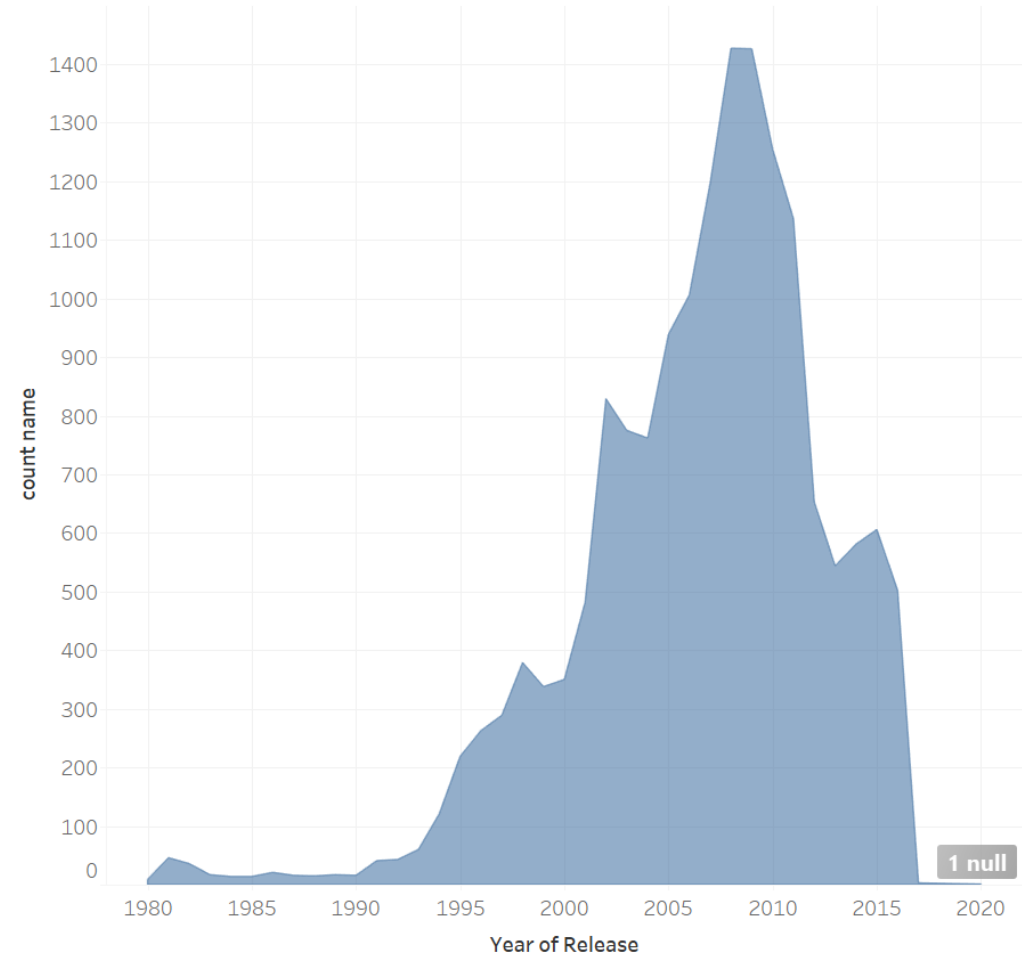


Overview

Huge increase since the 1995 - every spikes are the time when games are having new released.
The decline - there might because of the financial crisis, or with lack of new games to keep customer interested.
But for the Europe's sales, we can see it has always been at the button, so there must be a lot of improvement to make it better.



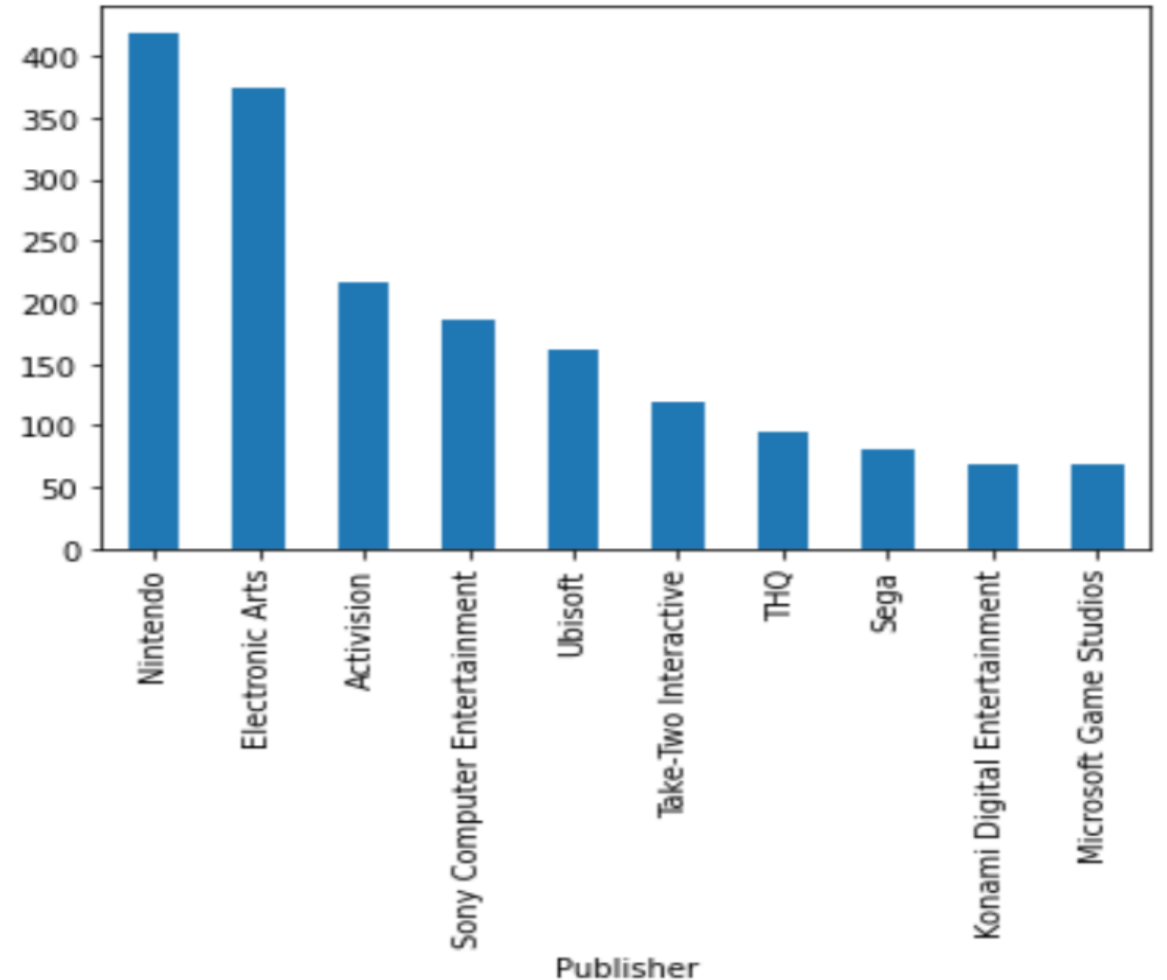
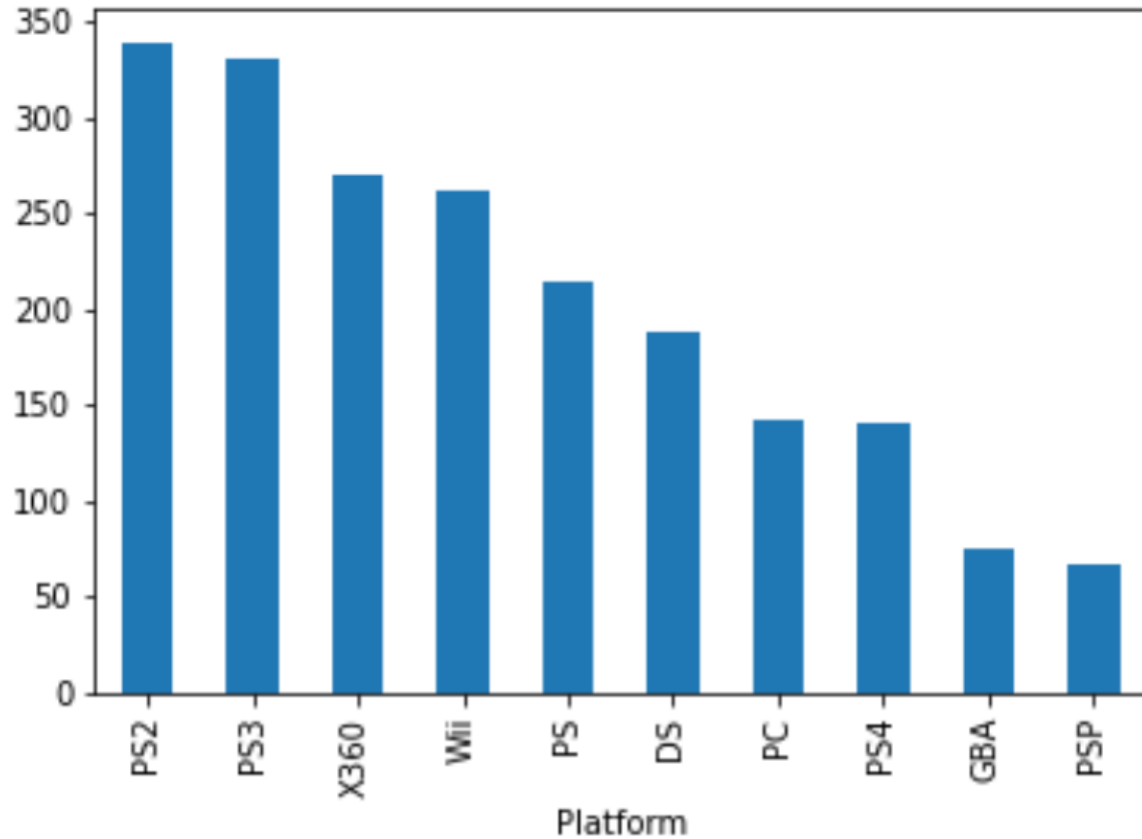
Year of release distribution



most popular video game consoles and Publisher in EU's sales

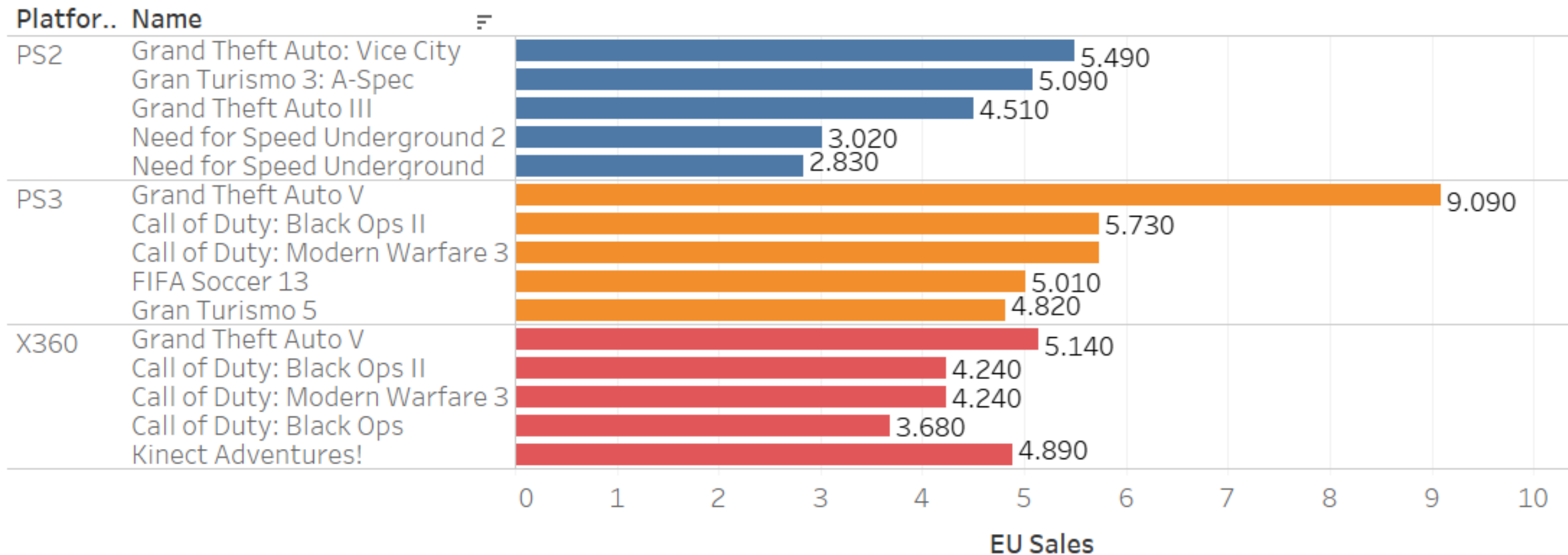
By platform - Promote PS2 more or try to advertise second/ third console

By Publisher - Promote Activision as there is a big gap , there will be lot of sales can improve



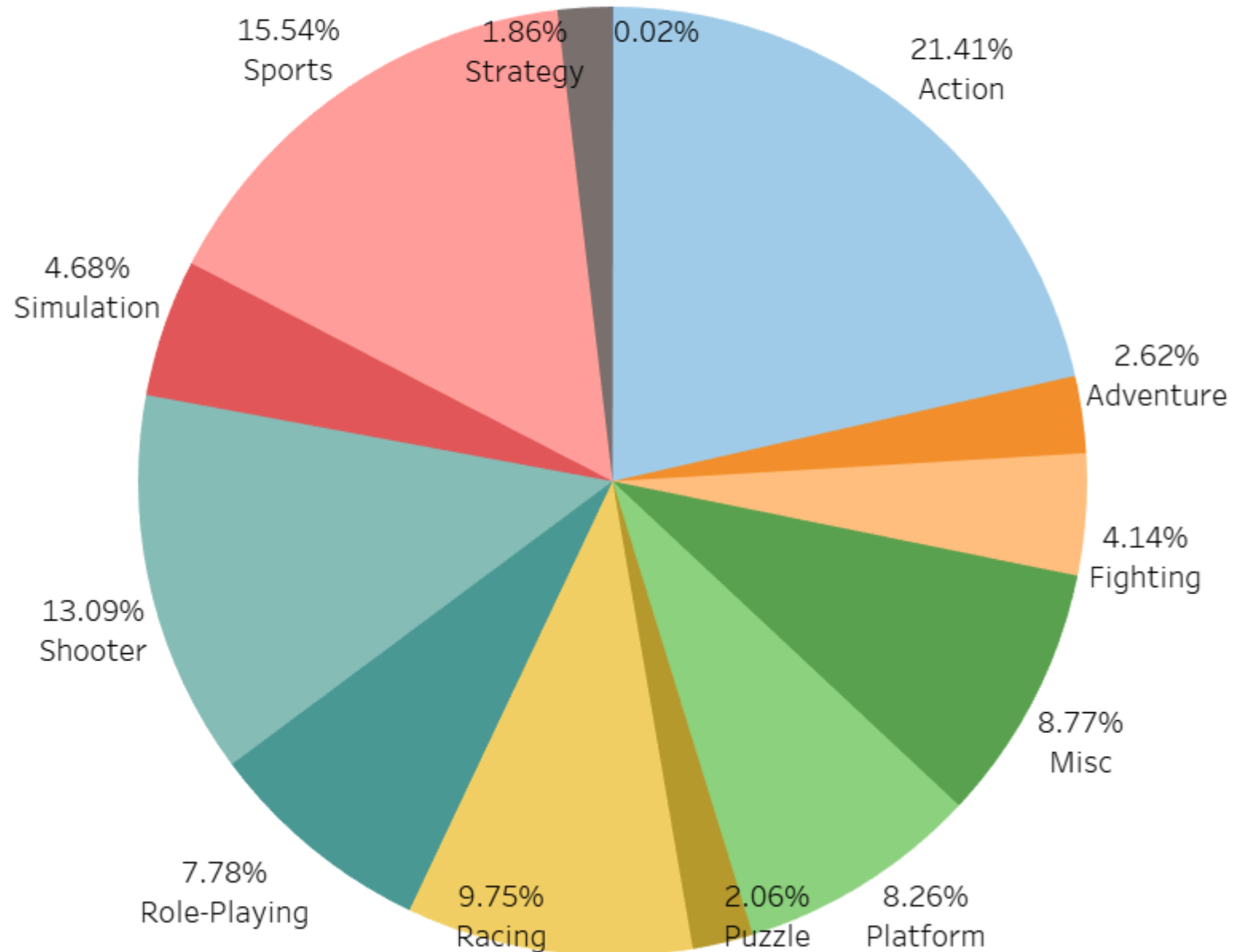
Best selling games in each platform

Three video games are dominating the sales on these platform, and PS3 are completely dominated by Grand Theft Auto



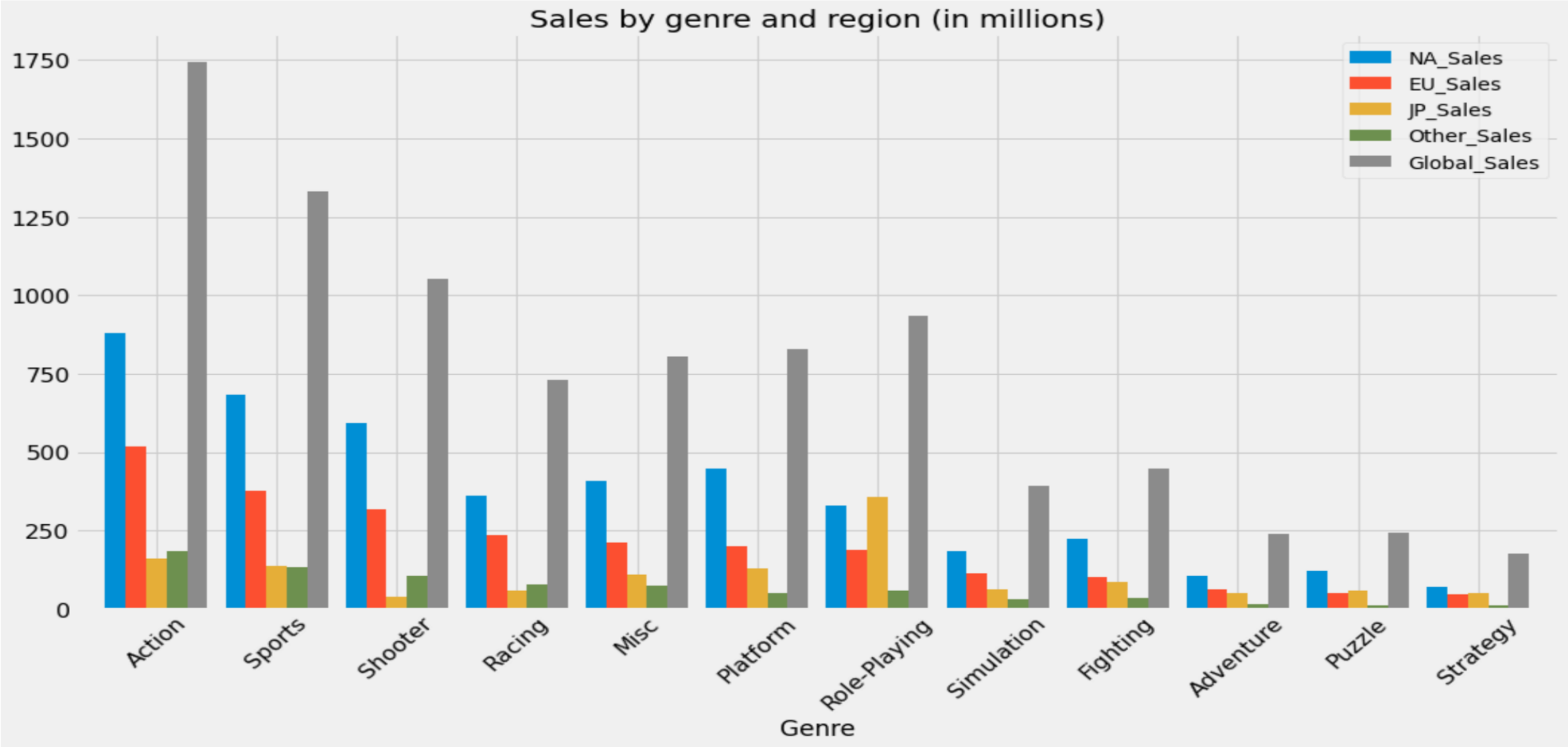
Most Popular Genres in Video Games

This pie chart shows that Action genres are the most popular one, base on previous slides, the popular games are all actions category too, so we can know that the Action, Sports and Shooter are the popular Genre.



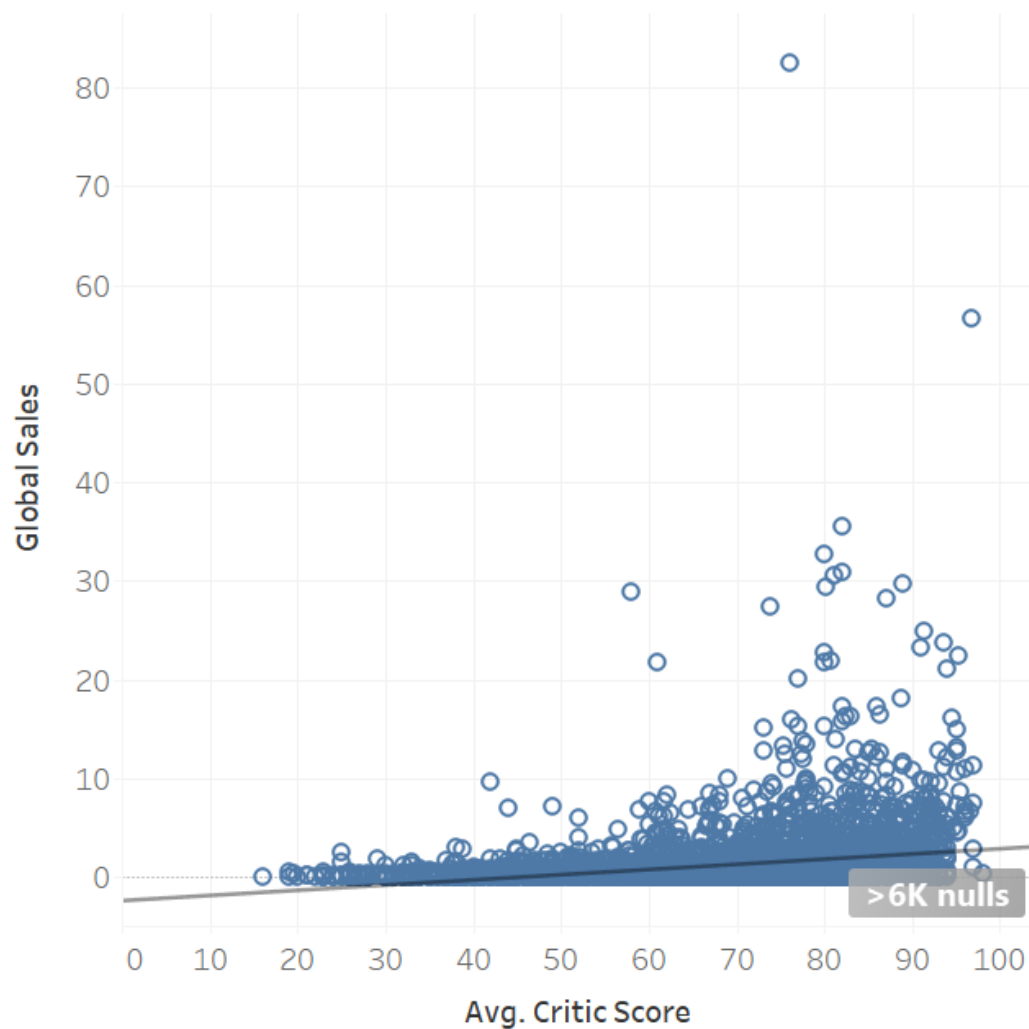
Genre by regions

EU's popular Genre are Action, Sports and Shooter.

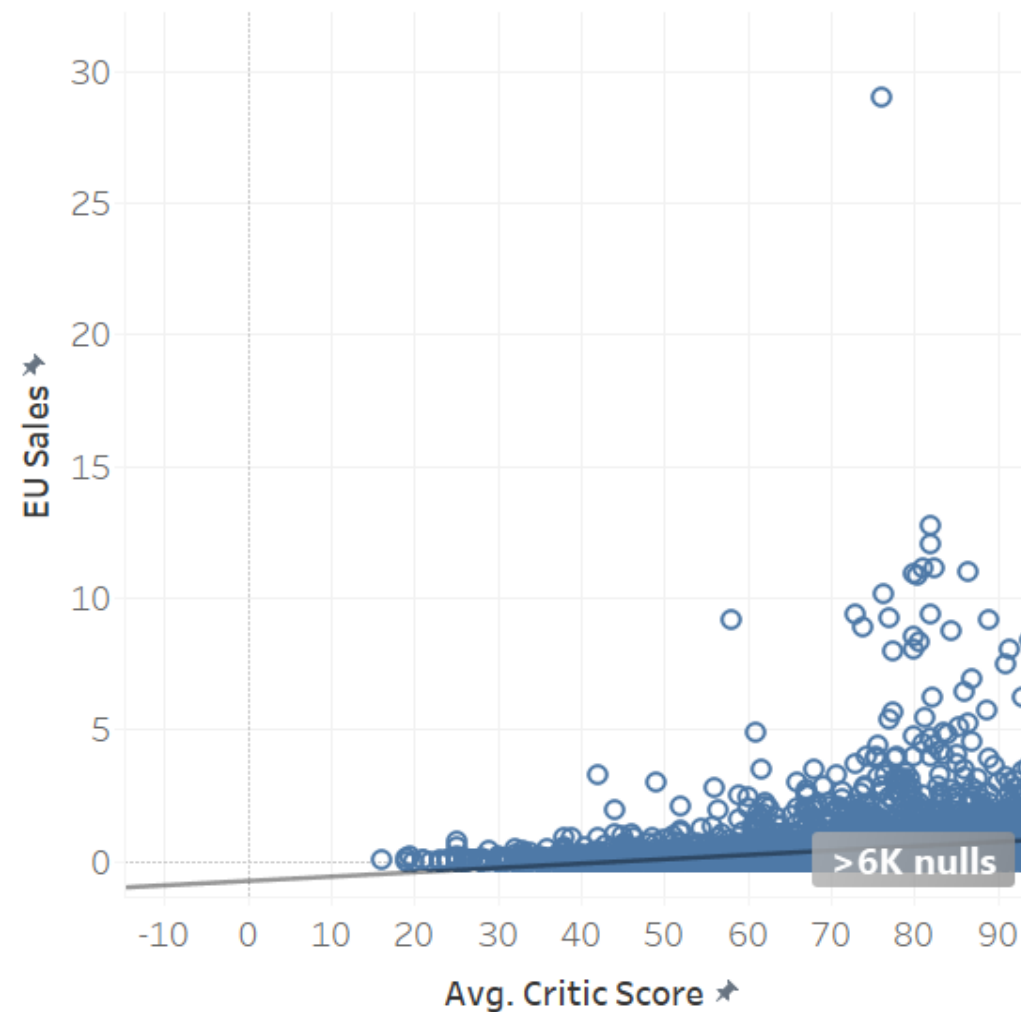


The higher critic score the game have, the more sales it make.

Critic score vs. Global sales



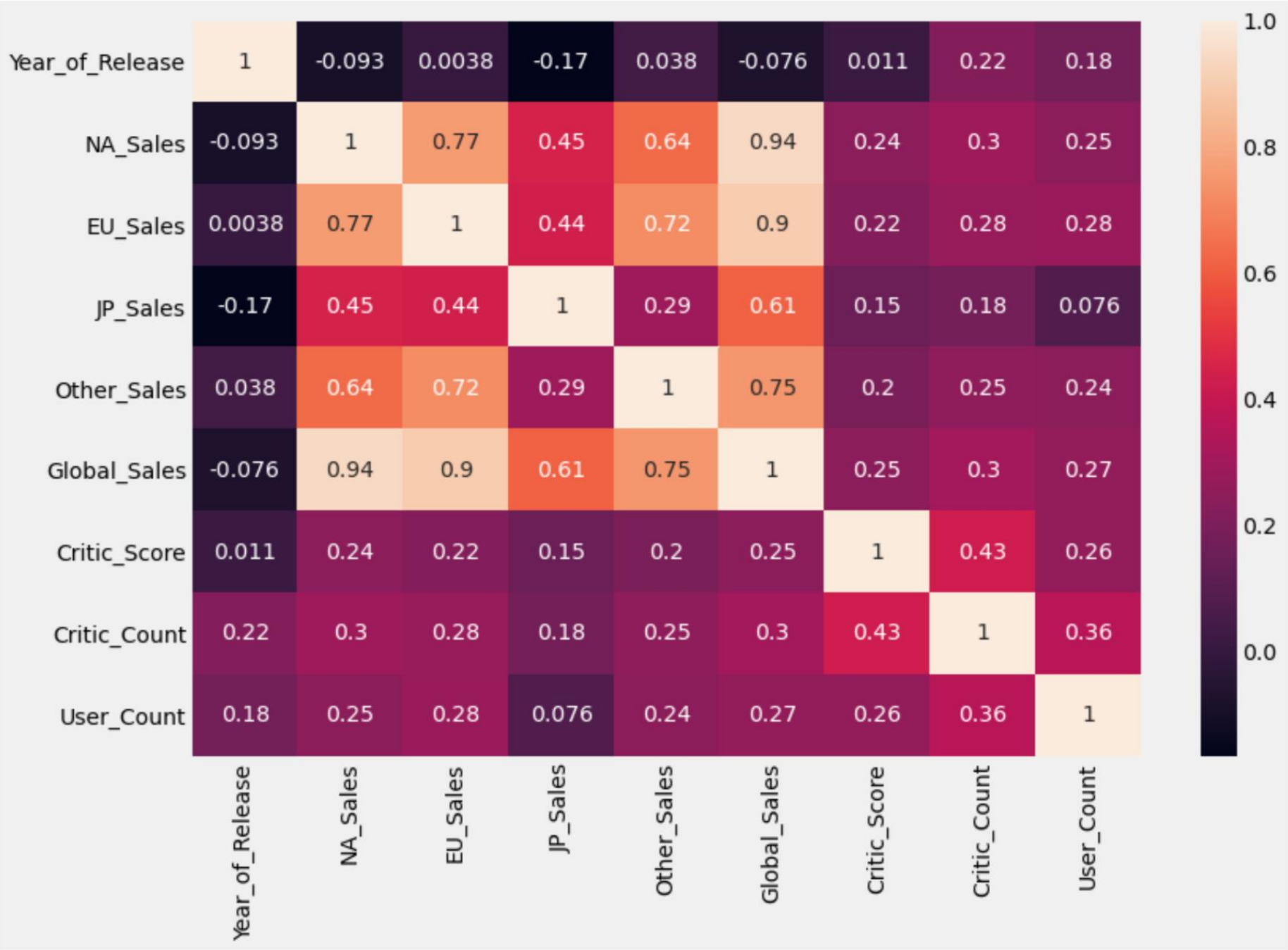
Critic score vs. EU sales



Correlation Heatmap

EU sales is pretty highly related to Other_sales region, so we should copy how Other sales region's way of promotion and advertisement etc,

Increase EU sales,
increase NA sales



Regression Analysis

As already filtered the P value to < 0.05, those are highly related to EU sales:

JP_Sales, Other_Sales, Ceitic_Score and Critic_Count are having negative relationship, meaning that if EU sales goes up, those are going down

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                        OLS Regression Results
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Dep. Variable:          EU_Sales      R-squared:                0.896
Model:                  OLS           Adj. R-squared:           0.895
Method:                 Least Squares  F-statistic:              9746.
Date:                  Sun, 25 Apr 2021  Prob (F-statistic):       0.00
Time:                  21:09:31        Log-Likelihood:           585.14
No. Observations:      6825           AIC:                     -1156.
Df Residuals:          6818           BIC:                     -1108.
Df Model:               6
Covariance Type:       nonrobust
=====
                        coef      std err      t      P>|t|      [0.025      0.975]
-----
const                0.0336      0.014      2.348      0.019      0.006      0.062
JP_Sales             -0.2569      0.012     -21.069      0.000     -0.281     -0.233
Other_Sales          -0.3637      0.017     -21.209      0.000     -0.397     -0.330
Global_Sales         0.3911      0.003     139.805      0.000      0.386      0.397
Critic_Score         -0.0007      0.000     -3.116      0.002     -0.001     -0.000
Critic_Count         -0.0006      0.000     -3.450      0.001     -0.001     -0.000
User_Count          4.653e-05   5.07e-06      9.171      0.000   3.66e-05   5.65e-05
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Omnibus:              4563.434      Durbin-Watson:           2.127
Prob(Omnibus):        0.000      Jarque-Bera (JB):        1635526.233
Skew:                 2.014      Prob(JB):                 0.00
Kurtosis:             78.730      Cond. No.                 4.02e+03
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Notes:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

[2] The condition number is large, 4.02e+03. This might indicate that there are strong multicollinearity or other numerical problems.

Conclusion

Although the data is only up to 2016, there are quite few years data missing till now, we can still try to look for similar economic environment and learn from that timing.

For EU sales, there are definitely a lot of space can be improved, base on all the analysis I created, I believe we already have some direction to go and focus to increase EU's sales.