

Mehmet Utku Eray – Deniz Bozkurt – Yağız İsmet Uğur

Final – Project Evaluation

We are done with the project since we have analyzed our datasets and used 2 Machine Learning techniques for each of our hypothesis. Here is our Gist and Github pages for you to check out our project.

Github Link : <https://github.com/utkueray/CS210>

Gist Link : <https://gist.github.com/utkueray/e4f5e58803a8c8bce7b6f3c0991e92fc>

Here is our project evaluation:

– What were the difficulties you encountered during the project?

We decided our project topic before we have made enough research about databases on our topic therefore it limited our freedom. This wasn't a major problem since there were enough data in datasets that we have found which led us to complete our project without any major problems. One particular misfortune, was we were only able to find a dataset of trending videos on youtube, we would much rather work on generally any information about all the videos in between two time periods.

– If you were given sufficient amount of resources, what additional datasets would you utilize?

We would have liked to use a dataset that has every video information from youtube between two time periods according to our needs because our game and game sale datasets have almost every game in last 10-15 year but our youtube dataset only has ten to twenty trending videos from each day for the last 5 years. Therefore, we had a little problem interpreting data on a bigger timeline.

– Compare the machine learning algorithms you used, in terms of performance and applicability to your dataset.

Firstly we can observe that the Knn model results in a lower error rate compared to the decision tree model. As the Knn model is utilized for clustering, it is used in grouping similar instances of variables based on their properties, while the decision tree model is mostly utilized for classification where predefined labels are assigned to instances by features, we can expect the Knn model to perform better in our case and it does. As the conclusion we can conclude that Knn model performs better in terms of performance as well as applicability.

– What improvements could have been done in your project?

We could have written a better function to decide which videos from the youtube dataset belong to which gaming console since it was difficult to decide from tags of videos. Since checking name of the video or the description generally doesn't help with deciding the matching console, our best choice was to go for the tags. Since it could have been better to add additional filters to our checking function to improve our judgment on each video and some games can be published for more than one platform, therefore it could have been better to group platforms that have the same games but it would have taken too much effort and would have limited the size of our final data frame, therefore the result might not have any important effect on our hypothesis. Instead we know that if a game is on more than one console than its sure is on PC therefore we select those games as part of Microsoft since majority of those games were mostly sold and played on Microsoft consoles.

📅 19 Mayıs 2019 💬 yorum yap

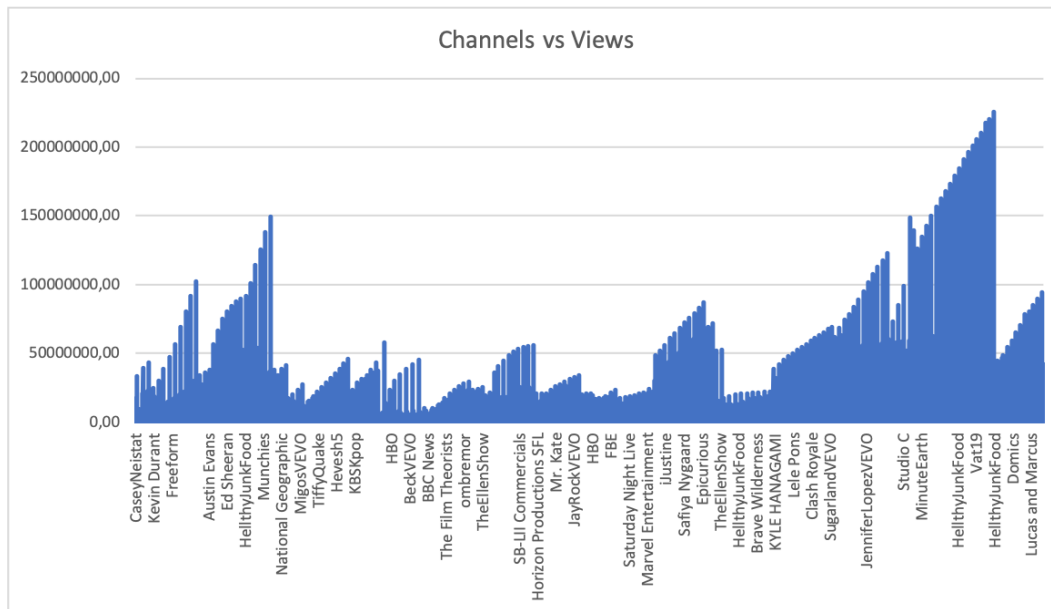
Proposal Updates (Restructured)

Updated parameters from only North America to North America and Europe to have more data in our datasets and to include more English speaking countries.

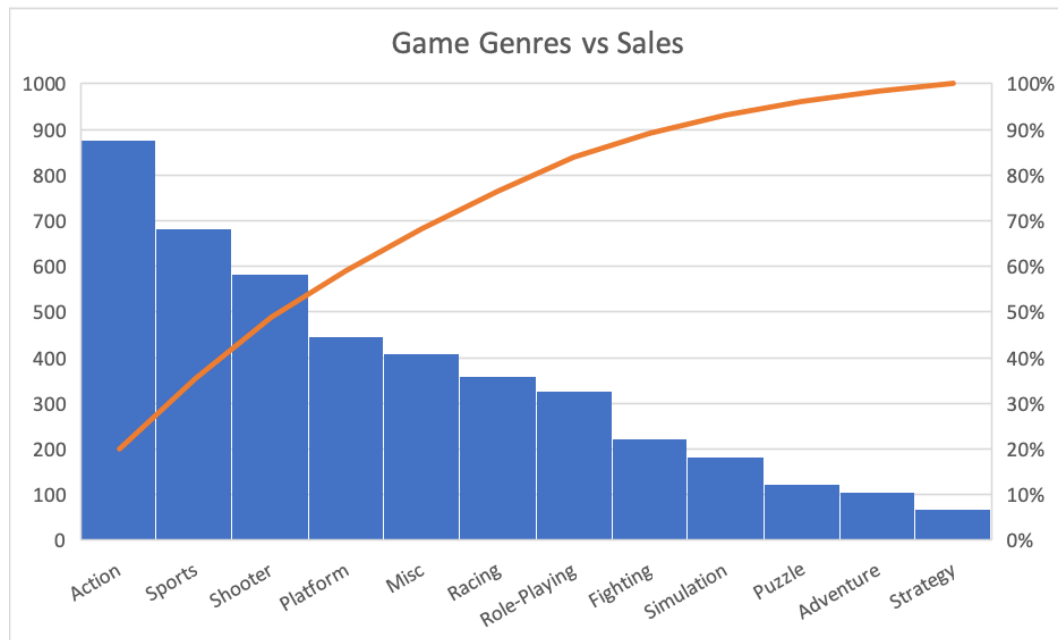
In this project, we will observe, examine and analyze the correlation between video game sales for different platforms vs trending Youtube videos and game user ratings in North America and Europe. There are various platform which mainly consists of PC and gaming consoles, we will be observing the sales different games of any genre and see if the number of trending Youtube videos increase the sales of games for its platform. The user ratings are also a very solid incentive for gamers to try out new games so effect of user ratings on sales is quite indicative as well.

Then we will also observe the relation of different video game genres and the respective trending Youtube videos to make a comparison between different video game genres and see if there are differences are subtle or quite large.

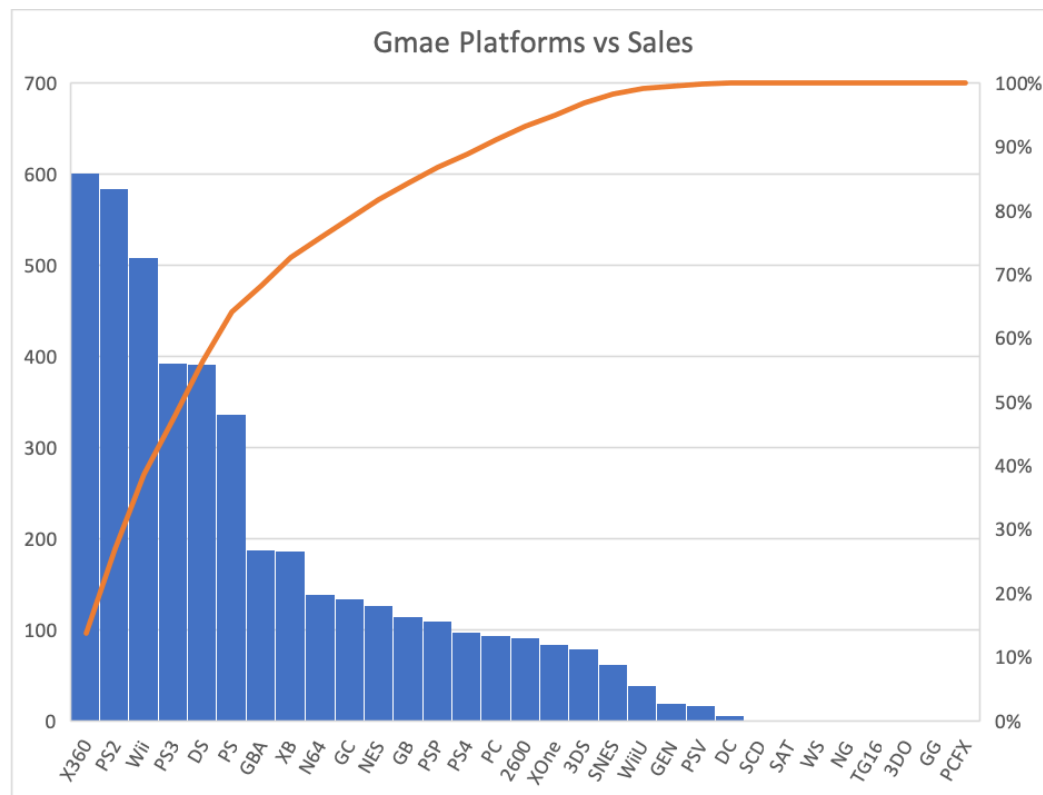
Lastly, as an another aspect of our project, we will be utilizing the analysis we made between video game sales for different platforms vs game user ratings in North America and Europe, we will conclude a relation between the user ratings of platform-specific games and the number of sales accumulated for that specific platform.



This graph shows the relation between top channels from Youtube and the amount of views they get while their videos are on trending. We can compare these values with video category to see what type of videos trend mostly and how does game videos do in Youtube trending.



We are comparing game genres and amount of sales each genre performs since some gaming consoles only allow one type of game genre or mostly they are known with one or two game genres. This way we can observe the relationship between console sales and genre sales.



In this graph we are comparing amount of games sold on game platforms. With the game database we can observe the relations between game sales from each platform and their ratings to see if exclusive games to each platform increases the chance of platform sales or how does multi-platform games affect to platform sales.

Data Sources:

Game Sales: <https://www.kaggle.com/gregorut/videogamesales>

Video Game Ratings: <https://www.kaggle.com/juttugarakesh/video-game-data>

List of Youtube Trends : <https://www.kaggle.com/datasnaek/youtube-new>

Group Members:

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Blog Page:<https://gameanalytics210.wordpress.com/>

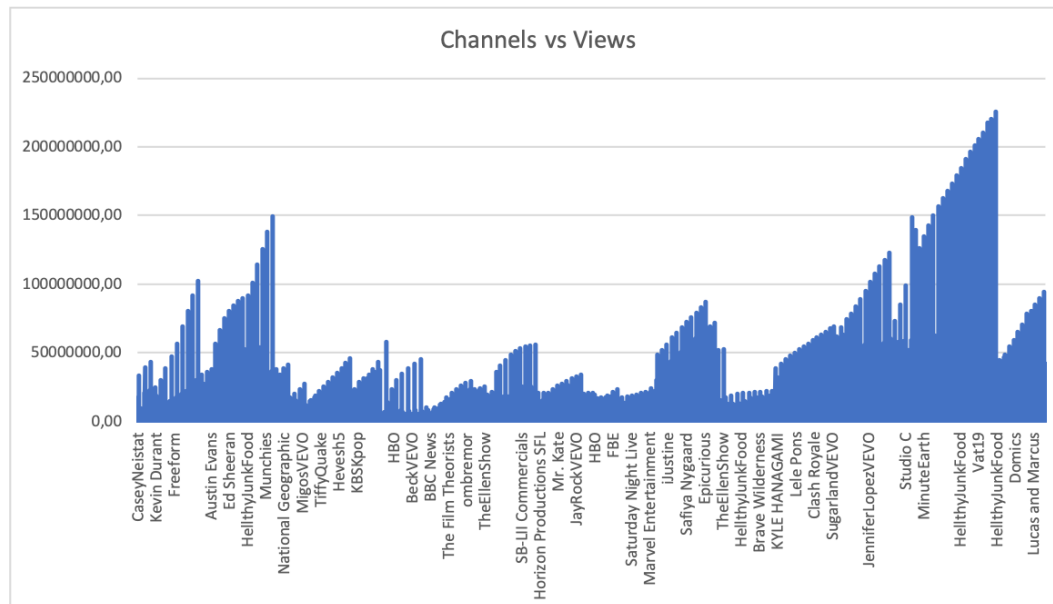
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CS 210 Project Proposal

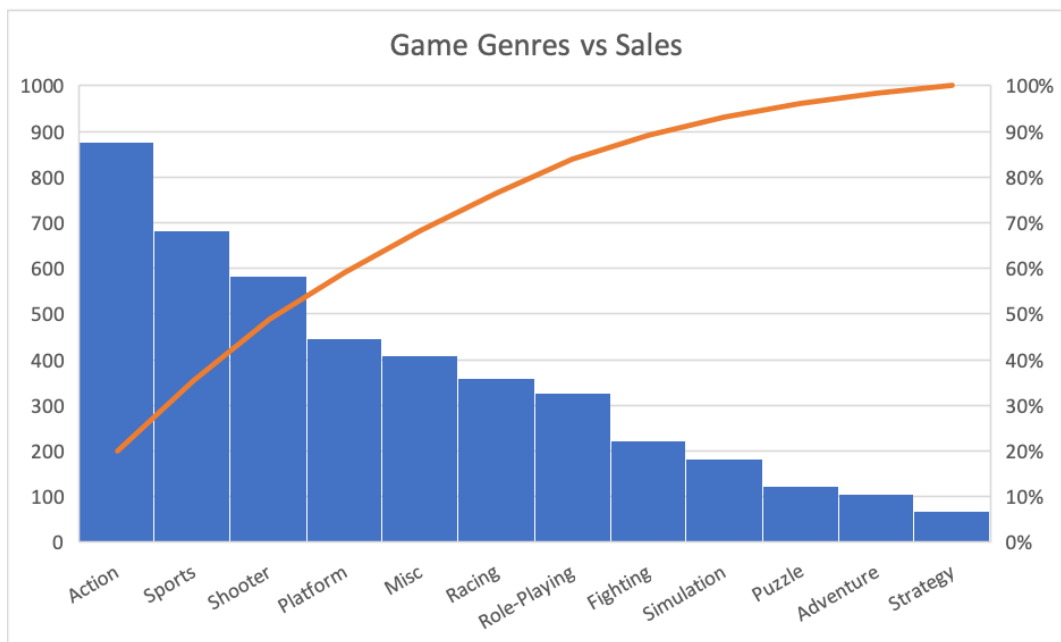
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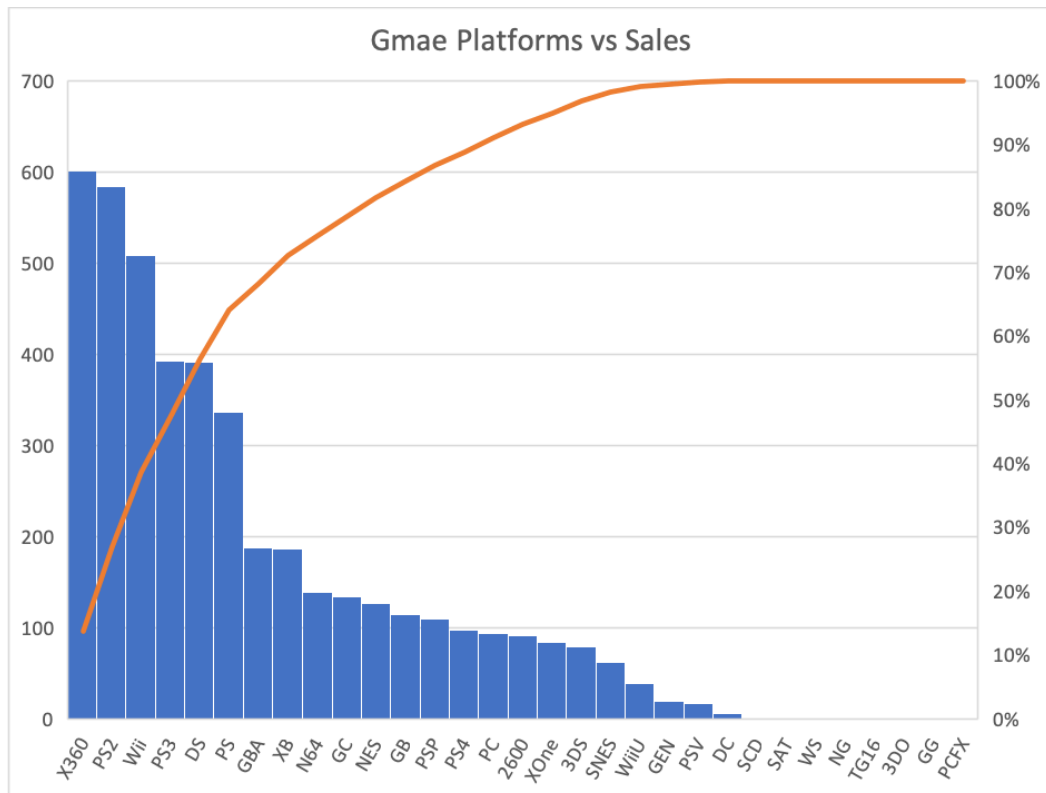
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WordPress.com'da Blog Oluşturun.