Microsoft vs. Nintendo vs. Sony

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Abstract

To help Microsoft compete against Nintendo and Sony in the gaming world, several data analysis algorithms and data science techniques can be employed. Through exploratory data analysis of game sales and ratings, focus areas were selected depending on the preference for diversification of game availability or improvement of the current gaming niche. Further work such as clustering games into categories, making predictions from time series analysis, and using natural language processing to hunt for truths should be conducted as well.

The data in this analysis is from Kaggle and data exploration/visualization was performed in Google Sheets and Tableau.

Design

Microsoft, Nintendo, and Sony are the biggest competitors in the gaming world. Each has had success with their various consoles and video games. However, in terms of console sales, Microsoft has never really “won” any of the console wars. They’ve also sold less games than Nintendo or Sony. Thus, Microsoft could benefit from data science techniques to find ways of improving their game sales rate and overall net profit, so they can keep up with the competition.

Data

The dataset is from Kaggle and includes information about games sold on various consoles. Each row in the table is a game on a specific platform and includes game stats such as game genre, sales, critic scores, and ratings.

Algorithms

After collecting the data from Kaggle, I performed preliminary cleaning and exploratory data analysis in Google Sheets, then I created graphics using Tableau. Future work could include using unsupervised machine learning to cluster games into categories for special treatment, using time series analysis to predict the growth rate of different game categories, and using natural language processing to discover what people like or don’t like about specific games and consoles.

Tools

- Google Sheets
- Tableau

Communication

Aimed at searching for some advantage over Nintendo and Sony, Microsoft can choose to either improve current popular games or increase the diversity of games available. Ideally, either of these options would lead to a higher rate of net profit increase (accounting for inflation) by increasing the number of people playing Xbox and the rate at which people are making game purchases. If game diversification is the goal, Microsoft should focus on platform games, puzzle

games, racing games, simulation games, sports games, games rated for everyone, and games rated for teens. The risk is losing the niche gaming audience that Microsoft has developed. If game specialization is the goal, Microsoft should focus on continued improvement of role-playing games, shooter games, games rated for adults only, and games rated for mature audiences. The risk is that Microsoft will be greatly left behind when other game categories become more popular. However, all these statements assume that focusing on game improvement will draw customers more than focusing on console (or other types of) improvements.