

MA 678 Midterm Project Proposal: Video Game Market Research

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Personal Statement

My short-term career goal is to pursue a role as a data analyst or data scientist within a software company, focusing on the fields of market and product analysis. Looking further ahead, my long-term objective is to collaborate with friends from different backgrounds to create an independent game.

Market analysis holds a crucial place in the success of companies, particularly in the context of the rapidly evolving software market. There is fierce competition in the software market. In contrast to industries like clothing or other manufacturing, where changes in fashion might last for several decades. Software trends shift quickly. To attract new customers and retain existing users, any product, no matter how old, needs to be updated often to catch the latest fashion. Video games are subject to this law as well. It might be the most complex field in the software competition since there are hundreds of thousands of games. Steam, the largest video game platform globally, hosts a vast array of games, ranging from AAA to indie creations. With almost 30,000 games in its store, Steam's store leaderboard essentially reflects the current trends in the global gaming industry. This Steam game EDA looked at the video game industry. It's a sound method of conducting market research.

Research Objective

1. What's the most popular game type these days?
2. Predict characteristics the next hot game might have.
3. What's the reasonable price interval for a typical type of game?

Data Source

The data is downloaded on Kaggle:

<https://www.kaggle.com/datasets/nikatomashvili/steam-games-dataset/data>.

The data was gathered by scraping the rolling page of the Steam search site in early September. The process began with scraping the Steam video game platform utilizing a rolling page, where games were continuously loaded through scrolling until completion. During the initial scraping phase, the team acquired game data, specifically the name, price,

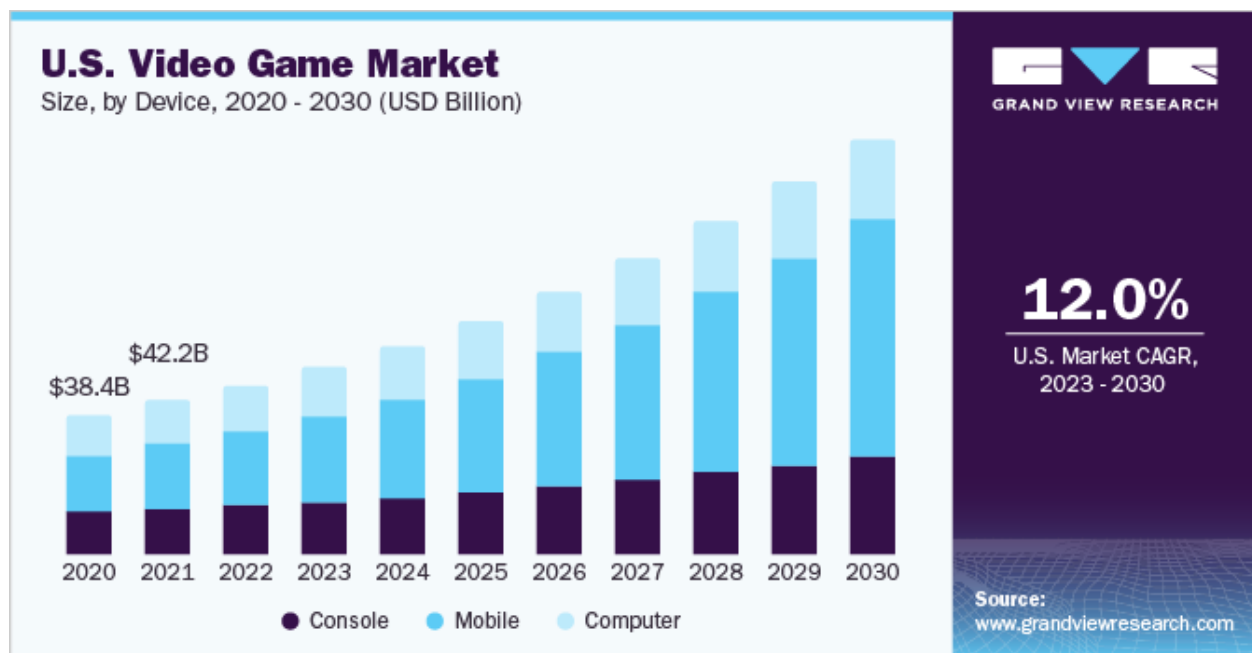
discounted price, release date, and link. Subsequently, leveraging the links, they expanded the dataset and extracted additional information for each game. The two datasets were then merged into a single file.

(Steam Search site:

[https://store.steampowered.com/search/?category1=998&ndl=1&ignore_preferences=1. \)](https://store.steampowered.com/search/?category1=998&ndl=1&ignore_preferences=1.)

Literature Review

These days more and more people are willing to pay for digital content. Consumer's willingness to pay is a key factor that drives the size of the game market to grow. The global video game market size was estimated at USD 217.06 billion in 2022 and is expected to grow at a compound annual growth rate (CAGR) of 13.4% from 2023 to 2030. (Grand View Research. 2021). As the industry is growing, the pricing of video games become more and more important. Reasonable game price functions not just as a signal of a game's value but also as a sign of a game's legitimacy or its lack in the eyes of developers and the larger game industry (Consalvo and Paul 2014).



(Grand View Research. 2021)

Initial EDA:

The initial EDA is only focused on price since the data of game features needs further cleaning.

The price interval of games:

$[0, 50)$	$[50, 100)$	$[100, 150)$	$[150, 200)$	$[200, 250)$	$[250, 300)$	$[300, 350)$	$[350, 400)$	$[400, 1e+04)$
71414	157	19	23	4	19	8	6	34

Most games cost less than \$50.

Then I counted the number of games that cost more than \$50 in the top 100 popular games.

$[0, 50)$	$[50, 100)$	$[100, 150)$
90	10	0

It shows prices of popular games are all less than \$100. And most of them are even less than \$50. Maybe price can be considered as a factor in the popularity of the game.

References:

- Consalvo, Mia, and Christopher A. Paul. 2015. Paying to play: the evolving structure of game pricing and industry legitimacy.
<https://spir.aoir.org/ojs/index.php/spir/article/view/8780/6991>
- Grand View Research. 2021. Video Game Market Size, Share & Trends Analysis Report By Device (Console, Mobile, Computer), By Type (Online, Offline), By Region (Asia Pacific, North America, Europe), And Segment Forecasts, 2023 – 2030.
<https://www.grandviewresearch.com/industry-analysis/video-game-market#>