GAME RECOMMENDATION SYSTEM

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Education:

2024
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Non Formal Education – Data Science

2019
University College of Aviation Malaysia
Associate Degree – Flight Operations Management

Working experience:

2021 – 2023,
Operation Officer & Helideck Inspector
Oryx Aviation Services LLC. Abu Dhabi, UAE

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Content Analyst
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Skills:

Python, SQL, Google Looker Studio,
Tableu, Data Analysis,
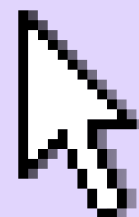**Machine Learning**

01.

DATA UNDERSTANDING

DATA UNDERSTANDING

Obtained through kaggle this dataset is about the games that are available on steam. It consist of 27075 rows with 18 columns. The target is to get a game recomendation according to the ones we recently played.

1 appid = ID of the game
2 name = Name of the game
3 release_date = Release date of the game
4 english = If the games are in English or not
5 developer = Company that creates the game
6 publisher = Company that publishes the game
7 platforms = Platforms the game are available on
8 required_age = Required age to play the game
9 categories = Category of the game
10 genres = Genre of the game
11 steamspy_tags = Multiple genre of the game
12 achievements = Whether the game has achievements or not
13 positive_ratings
14 negative_ratings
15 average_playtime
16 median_playtime
17 owners = Number of owner
18 price = Price of the game

02.
EXPLORATORY DATA ANALYSIS & DATA PREPROCESSING

EXPLORATORY DATA ANALYSIS & DATA PREPROCESSING

In this section did basic data cleaning such as checking the missing values and duplicated values, and the results are none! Next I feature engineer a few things to make easier analysis, such as creating a new column called overall reviews and free.

```
appid               0
name                0
release_date        0
english             0
developer           0
publisher           0
platforms           0
required_age        0
categories          0
genres              0
steamspy_tags       0
achievements        0
positive_ratings    0
negative_ratings    0
average_playtime    0
median_playtime     0
owners              0
price               0
dtype: int64
```

EXPLORATORY DATA ANALYSIS & DATA PREPROCESSING

NON-ENGLISH
1.9%

ENGLISH
98.1%
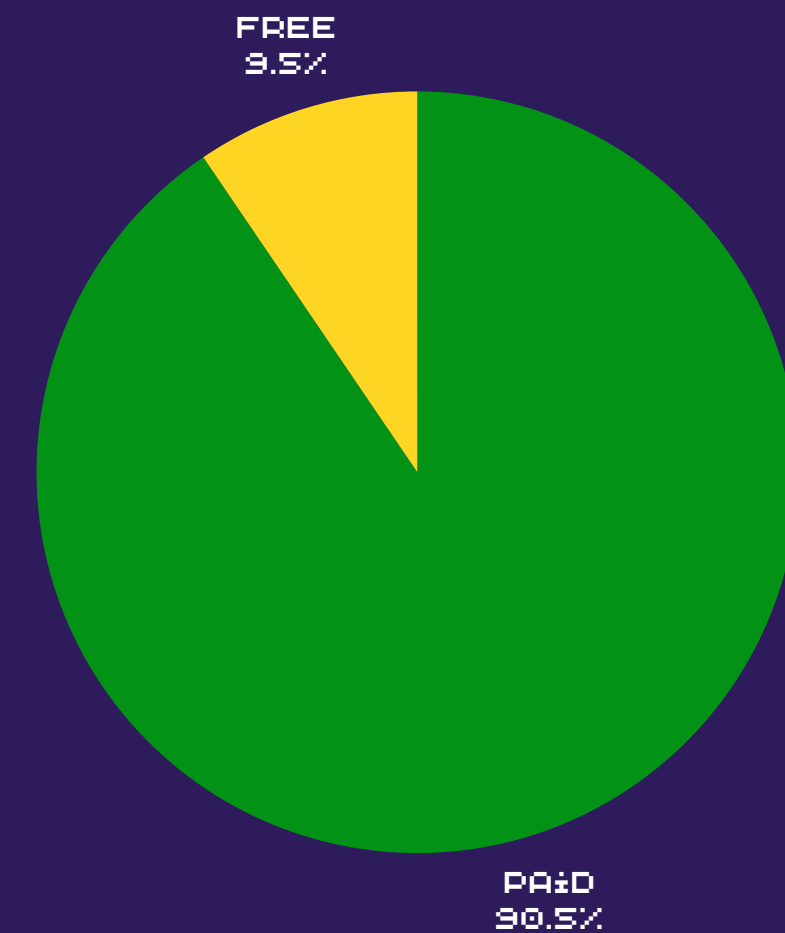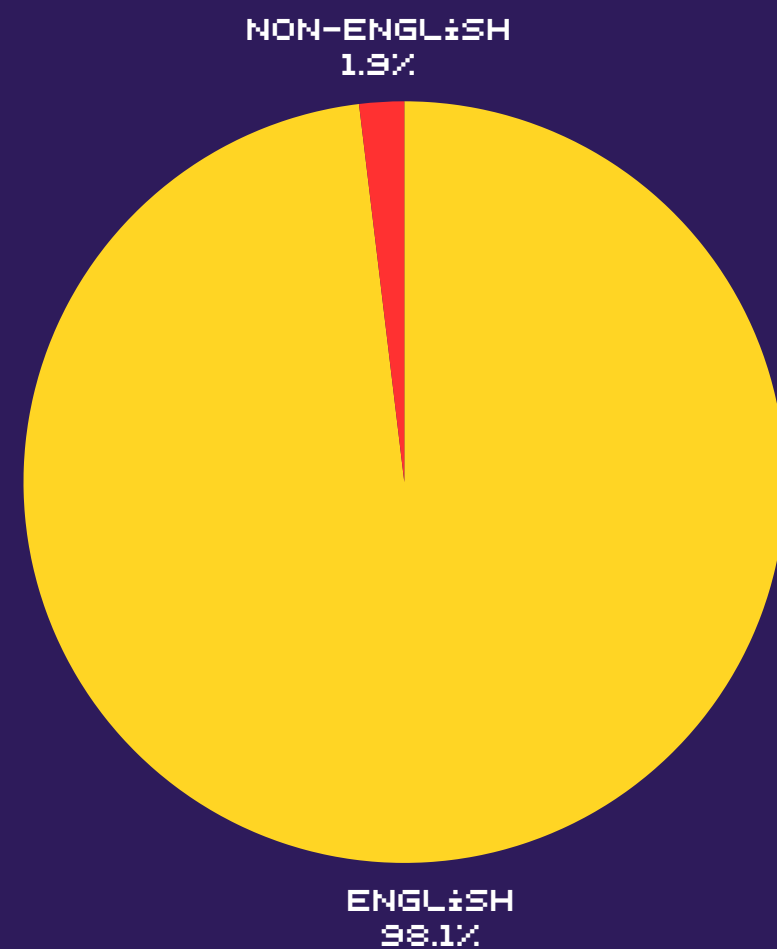
FREE
9.5%

PAID
90.5%

Pie chart on the left shows that there are almost 100% of the games are in English. On right it shows that more than 90% of games on steam is paid and not free.

EXPLORATORY DATA ANALYSIS & DATA PREPROCESSING

Is Price the problem for gamers on Steam?

AGREE
10.8%

DISAGREE
89.2%
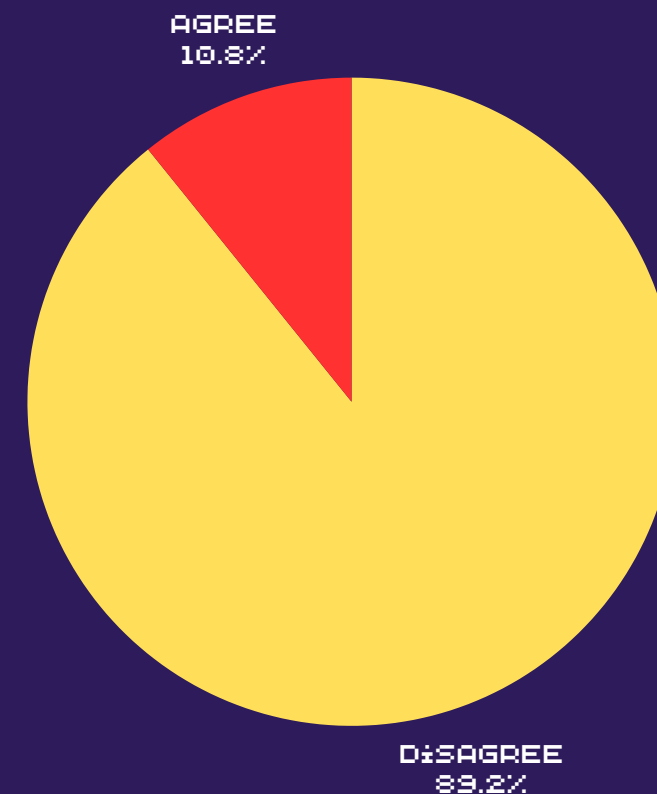
Pie Chart above shows that most gamers that buy games on Steam do not mind paying for games.

EXPLORATORY DATA ANALYSIS & DATA PREPROCESSING

Does average playing time effects negative and positive ratings?

	name	genres	negative_ratings	average_playtime
9201	The Abbey of Crime Extensum	Adventure;Free to Play	22	190625
1478	The Banner Saga: Factions	Free to Play;Indie;RPG;Strategy	202	95245
6014	The Secret of Tremendous Corporation	Adventure;Casual;Free to Play;Indie	50	95242
8969	PRICE	Adventure;Casual;Indie	233	63481
3930	Boundless	Action;Adventure;Indie;Massively Multiplayer;RPG	486	55204
3969	Shroud of the Avatar: Forsaken Virtues	Free to Play;Massively Multiplayer;RPG	1017	54618
2435	X-Plane 11	Simulation	443	44169
23409	懒人修仙传	Casual;Indie;RPG;Simulation	164	43632
2023	Fantasy Grounds	Indie;RPG;Strategy	100	43074

We can clearly see that games with so much higher average play time gets much less reviewer.

	name	genres	positive_ratings	average_playtime
9201	The Abbey of Crime Extensum	Adventure;Free to Play	146	190625
1478	The Banner Saga: Factions	Free to Play;Indie;RPG;Strategy	569	95245
6014	The Secret of Tremendous Corporation	Adventure;Casual;Free to Play;Indie	218	95242
8969	PRICE	Adventure;Casual;Indie	4198	63481
3930	Boundless	Action;Adventure;Indie;Massively Multiplayer;RPG	1153	55204
3969	Shroud of the Avatar: Forsaken Virtues	Free to Play;Massively Multiplayer;RPG	1065	54618
2435	X-Plane 11	Simulation	2033	44169
23409	懒人修仙传	Casual;Indie;RPG;Simulation	404	43632
2023	Fantasy Grounds	Indie;RPG;Strategy	377	43074

	name	developer	publisher	genres	positive_ratings	average_playtime
25	Counter-Strike: Global Offensive	Valve;Hidden Path Entertainment	Valve	Action;Free to Play	2644404	22494
22	Dota 2	Valve	Valve	Action;Free to Play;Strategy	863507	23944
19	Team Fortress 2	Valve	Valve	Action;Free to Play	515879	8495
12836	PLAYERUNKNOWN'S BATTLEGROUNDS	PUBG Corporation	PUBG Corporation	Action;Adventure;Massively Multiplayer	496184	22938
121	Garry's Mod	Facepunch Studios	Valve	Indie;Simulation	363721	12422
2478	Grand Theft Auto V	Rockstar North	Rockstar Games	Action;Adventure	329061	9837
1467	PAYDAY 2	OVERKILL - a Starbreeze Studio.	Starbreeze Publishing AB	Action;RPG	308657	3975
3362	Unturned	Smartly Dressed Games	Smartly Dressed Games	Action;Adventure;Casual;Free to Play;Indie	292574	3248
1120	Terraria	Re-Logic	Re-Logic	Action;Adventure;Indie;RPG	255600	5585
21	Left 4 Dead 2	Valve	Valve	Action	251789	1615

EXPLORATORY DATA ANALYSIS & DATA PREPROCESSING

Distribution of Games Across platforms

LINUX
13%

MAC
20%
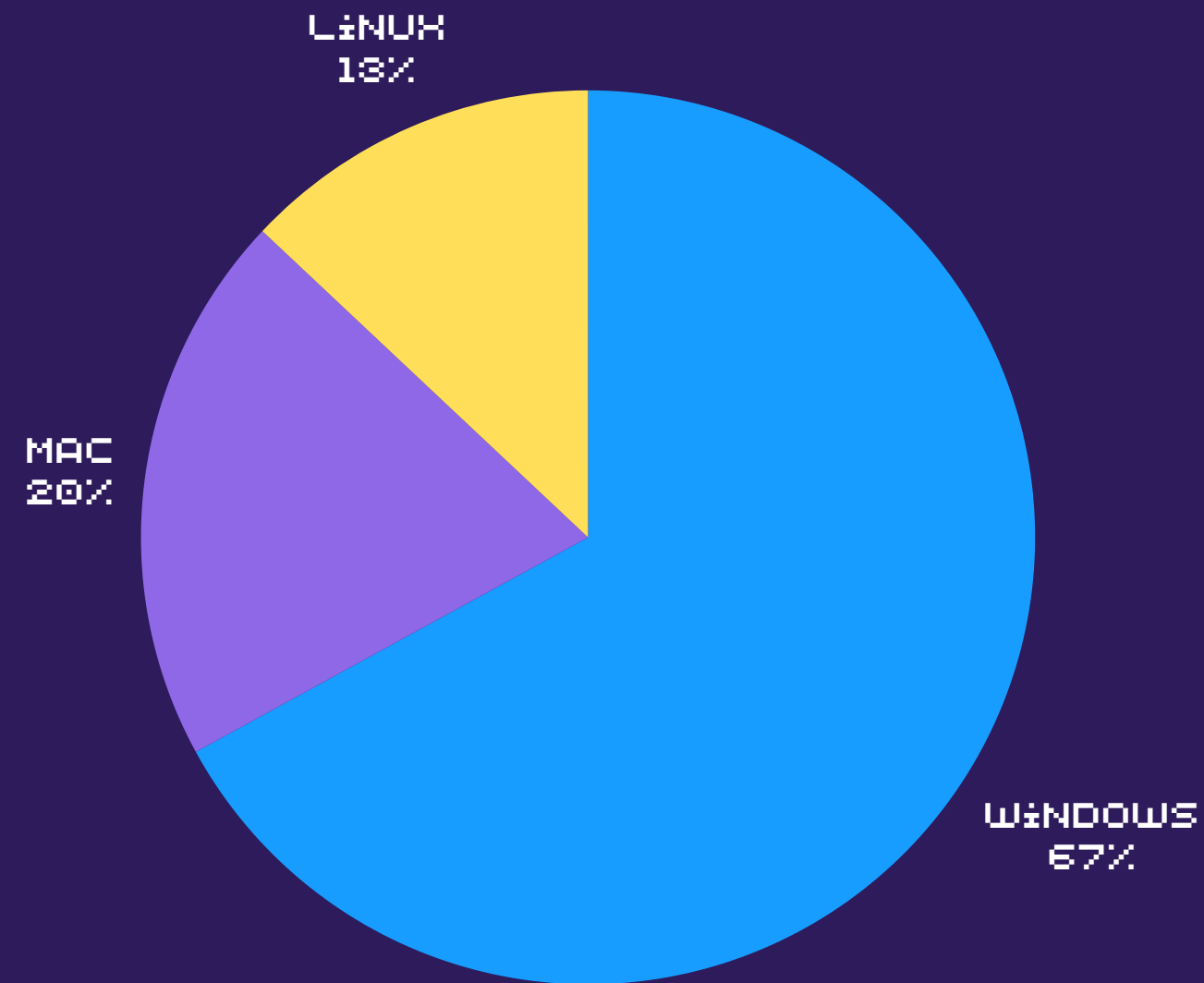
WINDOWS
67%

EXPLORATORY DATA ANALYSIS & DATA PREPROCESSING

Platform distribution based on Negative Ratings

LINUX
19%

MAC
19%
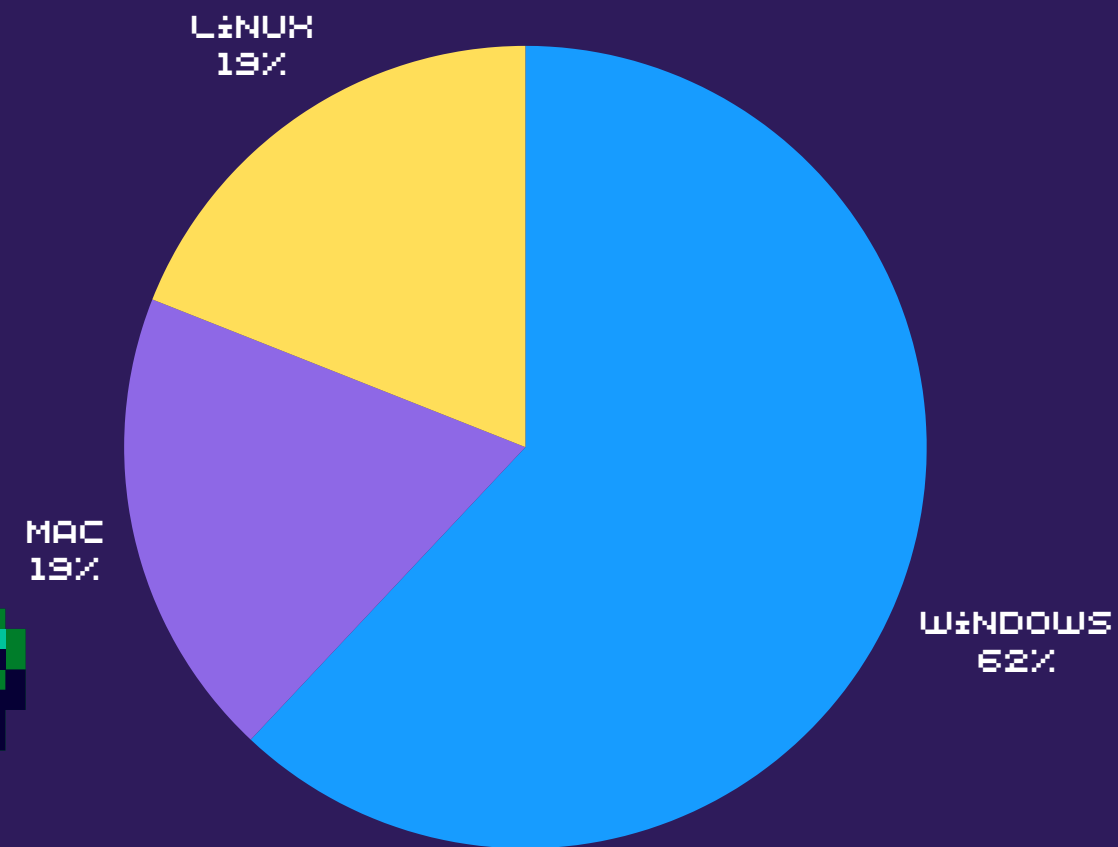
WINDOWS
62%

Platform distribution based on Positive Ratings
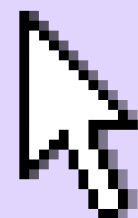
LINUX
25.4%

WINDOWS
45.7%

MAC
28.9%
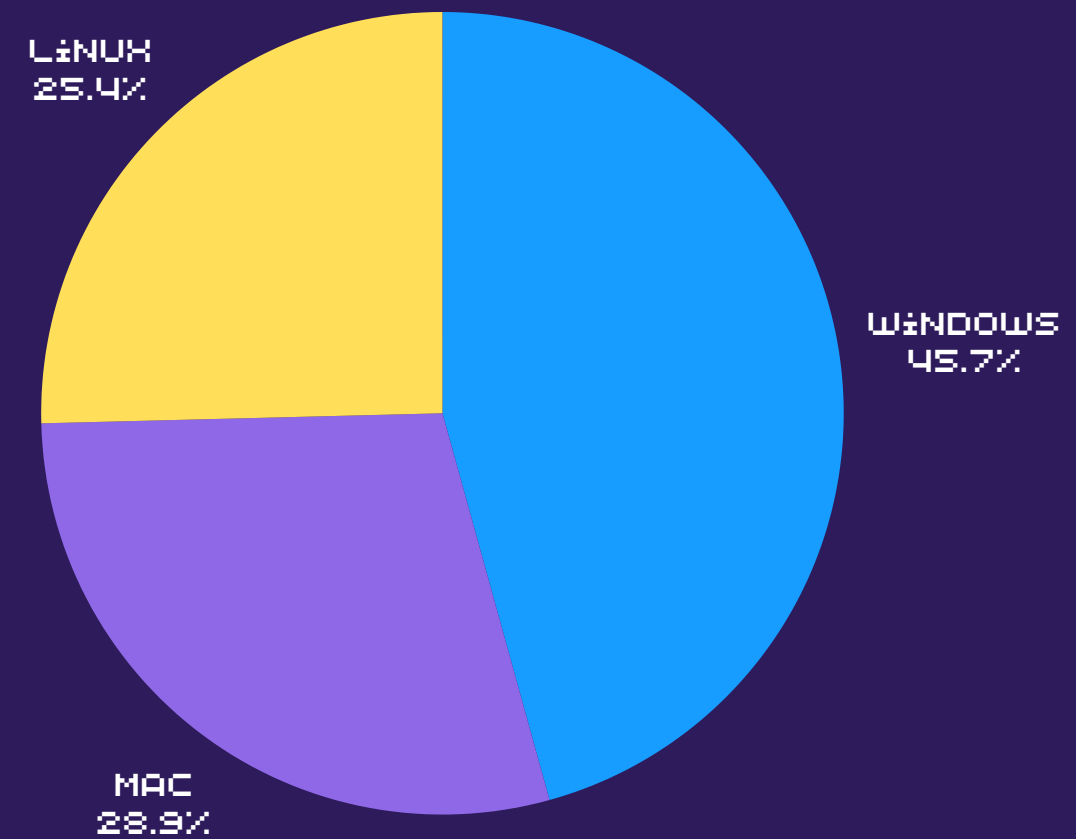
From the chart above we can see that there are more negative ratings on windows compared to the positive ratings

03.
RECOMMENDATION SYSTEM

RECOMMENDATION SYSTEM

Below is a recommended games using global filtering, where it shows the games with the most positive ratings on steam.

	name	developer	publisher	genres	positive_ratings
25	Counter-Strike: Global Offensive	Valve;Hidden Path Entertainment	Valve	Action;Free to Play	2644404
22	Dota 2	Valve	Valve	Action;Free to Play;Strategy	863507
19	Team Fortress 2	Valve	Valve	Action;Free to Play	515879
12836	PLAYERUNKNOWN'S BATTLEGROUNDS	PUBG Corporation	PUBG Corporation	Action;Adventure;Massively Multiplayer	496184
121	Garry's Mod	Facepunch Studios	Valve	Indie;Simulation	363721
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1467	PAYDAY 2	OVERKILL - a Starbreeze Studio.	Starbreeze Publishing AB	Action;RPG	308657
3362	Unturned	Smartly Dressed Games	Smartly Dressed Games	Action;Adventure;Casual;Free to Play;Indie	292574
1120	Terraria	Re-Logic	Re-Logic	Action;Adventure;Indie;RPG	255600
21	Left 4 Dead 2	Valve	Valve	Action	251789

RECOMMENDATION SYSTEM

The recommendation system that will be used is content based recommendation, where it will take recommendation based on the user past preference and games that is similar to the once they played. In the recommendation it will also display The game name, platform, steamspy tags, as well as the price. Below are the top 10 recommended games that are similar to Grand Theft Auto V

```
Recommended games for Grand Theft Auto V:
+-------------------------------------------+-----------+-------------------------------+---------+
|                    name                   | platforms |        steamspy_tags          |  price  |
+-------------------------------------------+-----------+-------------------------------+---------+
|              Grand Theft Auto             |  windows  |   Action;Classic;Open World   |   0.0   |
|             Grand Theft Auto 2            |  windows  |   Action;Classic;Open World   |   0.0   |
|            Grand Theft Auto III           |  windows  |   Open World;Action;Classic   |   5.99  |
|        Grand Theft Auto: San Andreas      |  windows  | Open World;Action;Multiplayer |   9.99  |
|            Grand Theft Auto IV            |  windows  |   Open World;Action;Bowling   |  19.99  |
| Grand Theft Auto: Episodes from Liberty City | windows | Open World;Action;Multiplayer |  14.99  |
|         Grand Theft Auto: Vice City       |  windows  |    Open World;Action;1980s    |   5.99  |
|                Get Over Here              |  windows  |         Action;Indie          |   6.99  |
|               Auto-Staccato              |  windows  |  Early Access;Casual;Action   |   7.19  |
|        BLOCK WARRIORS: "Open World" Game   |  windows  |  Adventure;Action;Open World  |   1.69  |
+-------------------------------------------+-----------+-------------------------------+---------+
```

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Github: https://github.com/Nauffdlh/Data