

Final Project Summary

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CMP 262

Tools used:
Jupyter Notebook

Python Packages:

pandas

numpy

matplotlib

seaborn



Video Game Data Analytics

Original Dataset: <https://www.kaggle.com/datasets/jummyegg/rawg-game-dataset>
474417 rows × 26 columns

After Cleaning the Data

1842 rows × 11 columns

B	C	D	E	F	G	H	I	J	K	L
name	metacritic	rating	ratings_count	suggestions	reviews_count	platforms	genres	esrb_rating	added_status_beaten	added_status_dropped
Serious Sam Fusion 2017 (beta)	3.07	227	541	227	Linux macOS PC	Action Indie	N/A		41	79
Geneshift	2.2	139	380	139	Linux PC	Action RPG Indie	N/A		2	26
Space Engineers	68	3.54	176	479	177	PC Xbox One	Action Strategy Simu	N/A	26	119
Battlerite	3.24	393	518	395	PC	Action	N/A		41	249
HITMAN	83	3.92	1371	586	1375	Linux macOS PC Xbox One	Action Shooter	Adults Only		656
Europa Universalis IV	87	4.26	240	519	241	PC Linux macOS	Strategy	N/A	70	74
Tyranny	80	4.07	298	521	302	macOS Linux PC	RPG	N/A	182	79
Stellaris	78	4.25	421	402	428	Linux PC Nintendo Switch	n Strategy Simulation	N/A	113	156
Hitman: Codename 47	73	3.87	367	537	367	PC	Action Shooter	Mature		300
Thief Gold	92	4.13	173	478	173	PC	Action Simulation	Mature		81
Kane and Lynch: Dead Men	67	3.64	315	549	316	PC Xbox 360 PlayStation 3	Action Shooter	N/A		299
Watch Dogs 2	79	3.85	1044	592	1052	PC PlayStation 4 Xbox One	Action Adventure	Mature		742
Cities: Skylines	85	4.15	951	479	956	Linux macOS PC Nintendo	n Strategy Simulation	Everyone		300
Divinity: Original Sin 2	95	4.39	923	307	938	PlayStation 4 Xbox One PC	RPG Strategy	N/A		342
Owlboy	88	3.82	245	549	247	PlayStation 4 Nintendo Switch	Action Adventure In	N/A		159
Beholder	75	3.77	367	345	368	Linux PC iOS Android mac	Adventure RPG Strat	N/A		128
Minion Masters	2.42	241	420	242	PC Xbox One	Action Strategy Indie	N/A		10	99

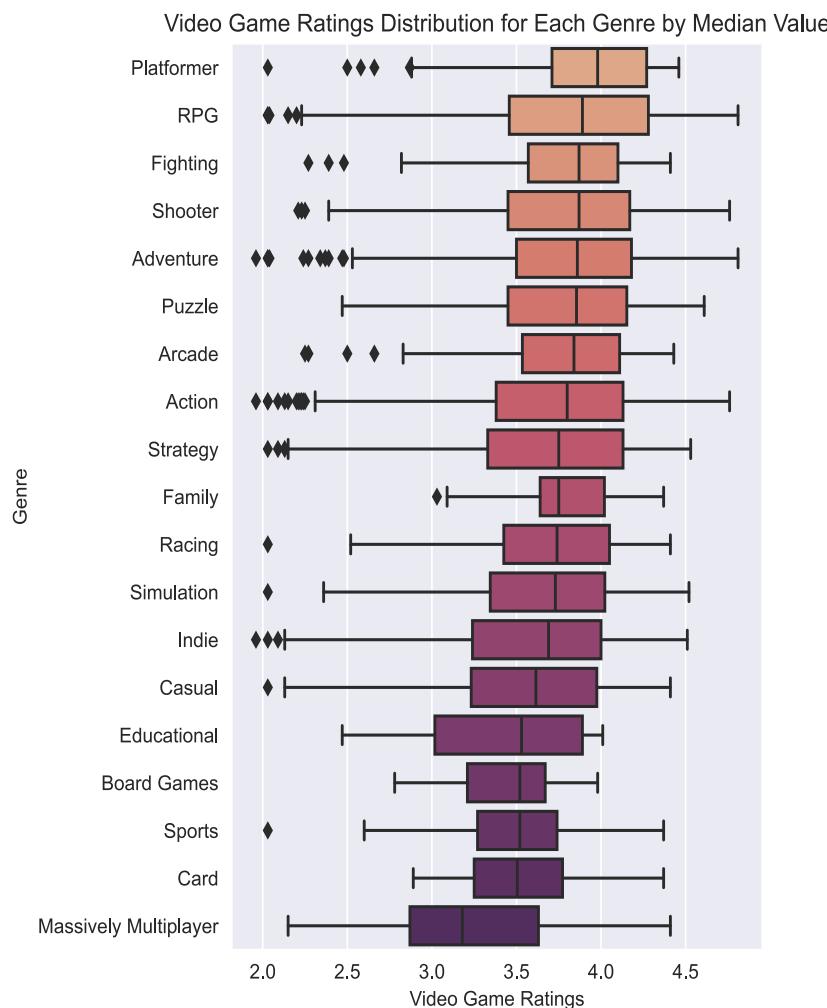
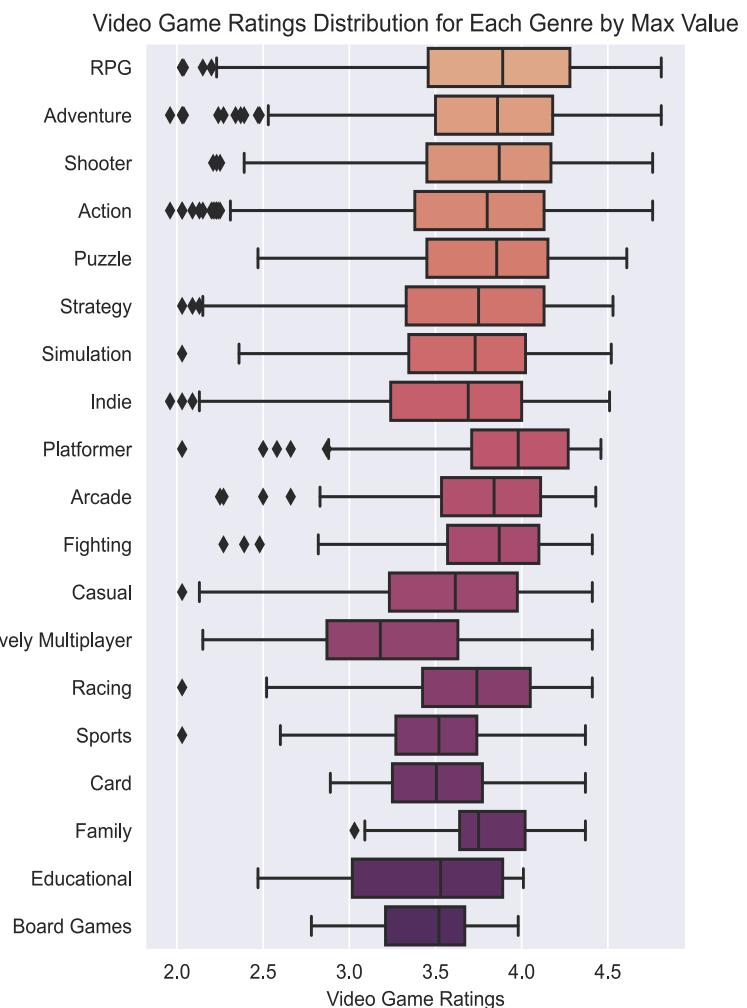
Which genres have the highest ratings?

This data shows that RPGs, Adventure, Shooter, and Platformer games are the most popular genres.

Developers would likely have better luck creating games in these genres than making MMO or board games.

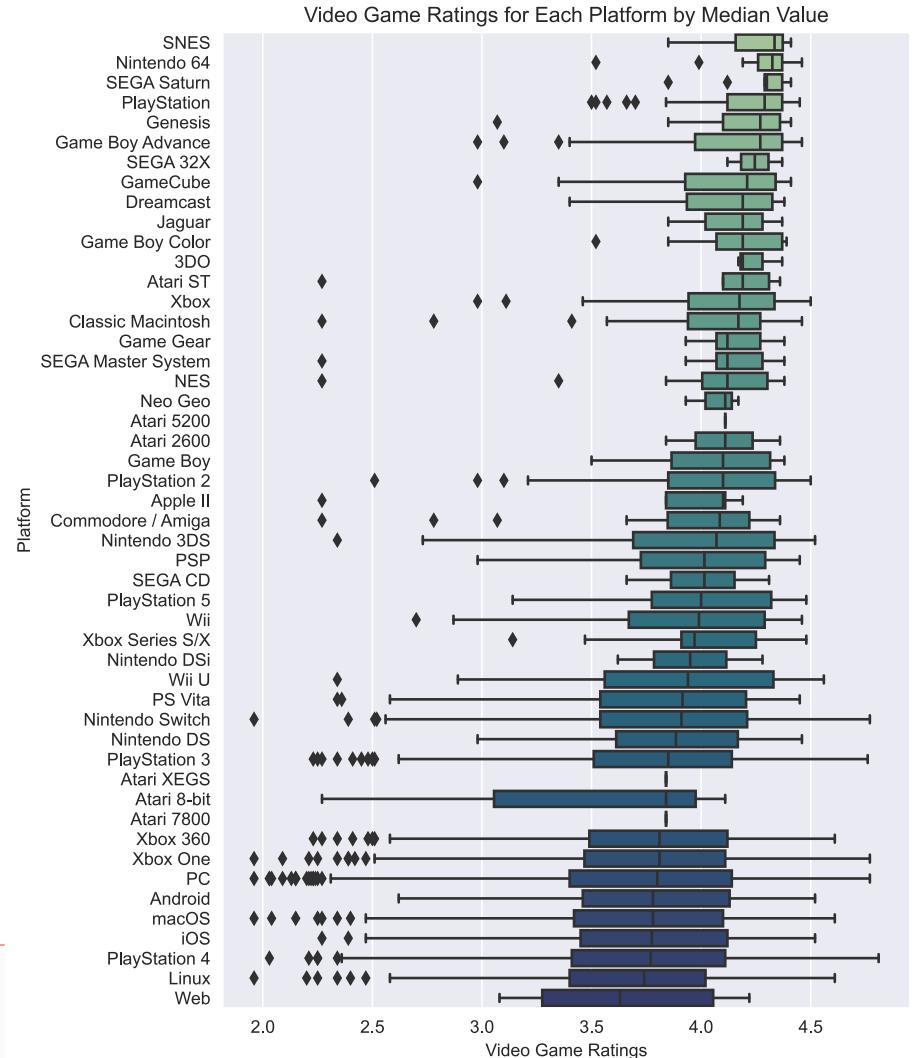
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	id	
339958	RPG	4.81
339958	Adventure	4.81
257255	Adventure	4.77
257255	RPG	4.77
4167	RPG	4.76
...
16183	Racing	2.03
16183	Simulation	2.03
17004	Adventure	1.96
17004	Action	1.96
17004	Indie	1.96

4506 rows × 2 columns



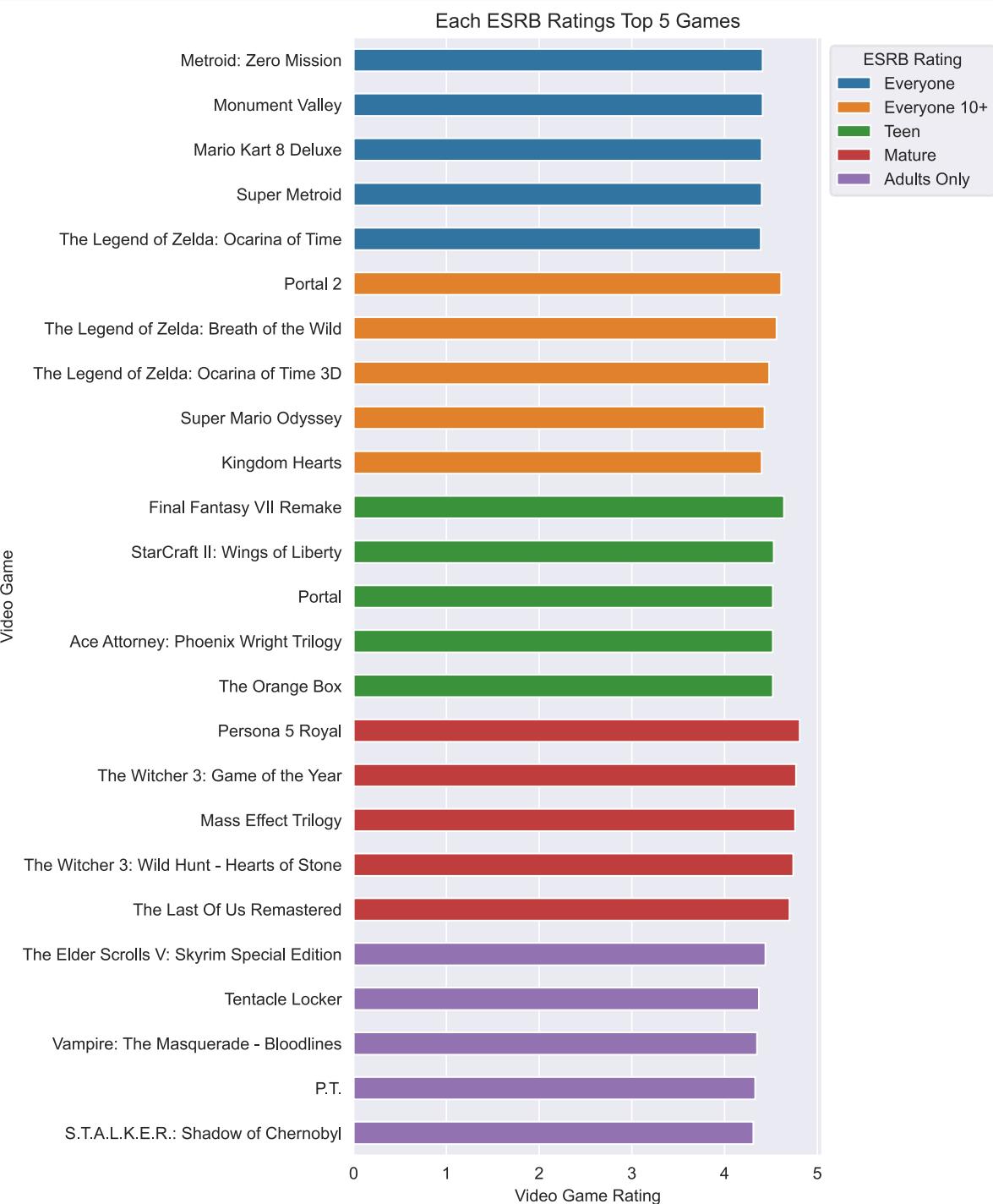
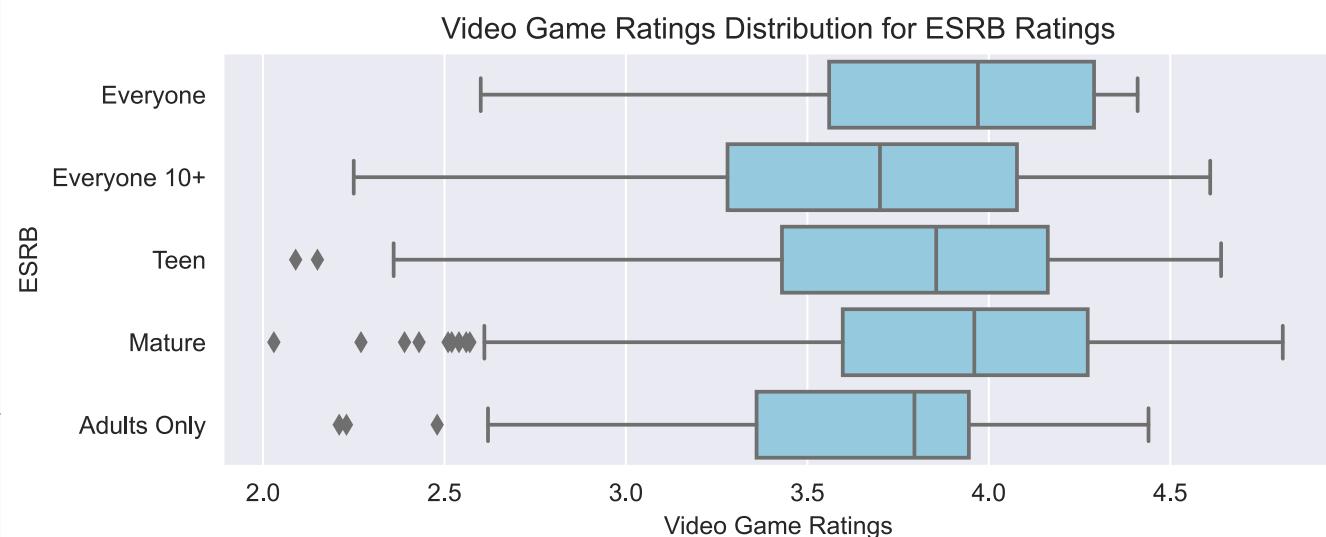
Video Game Ratings for Each Platform

When looking at the data for platform ratings, it's a bit harder to identify a clear winner. While PlayStation 4 has the highest maximum rating, it has the third lowest mean. PC is also at the top of the max value list, but the bottom of the median ratings.



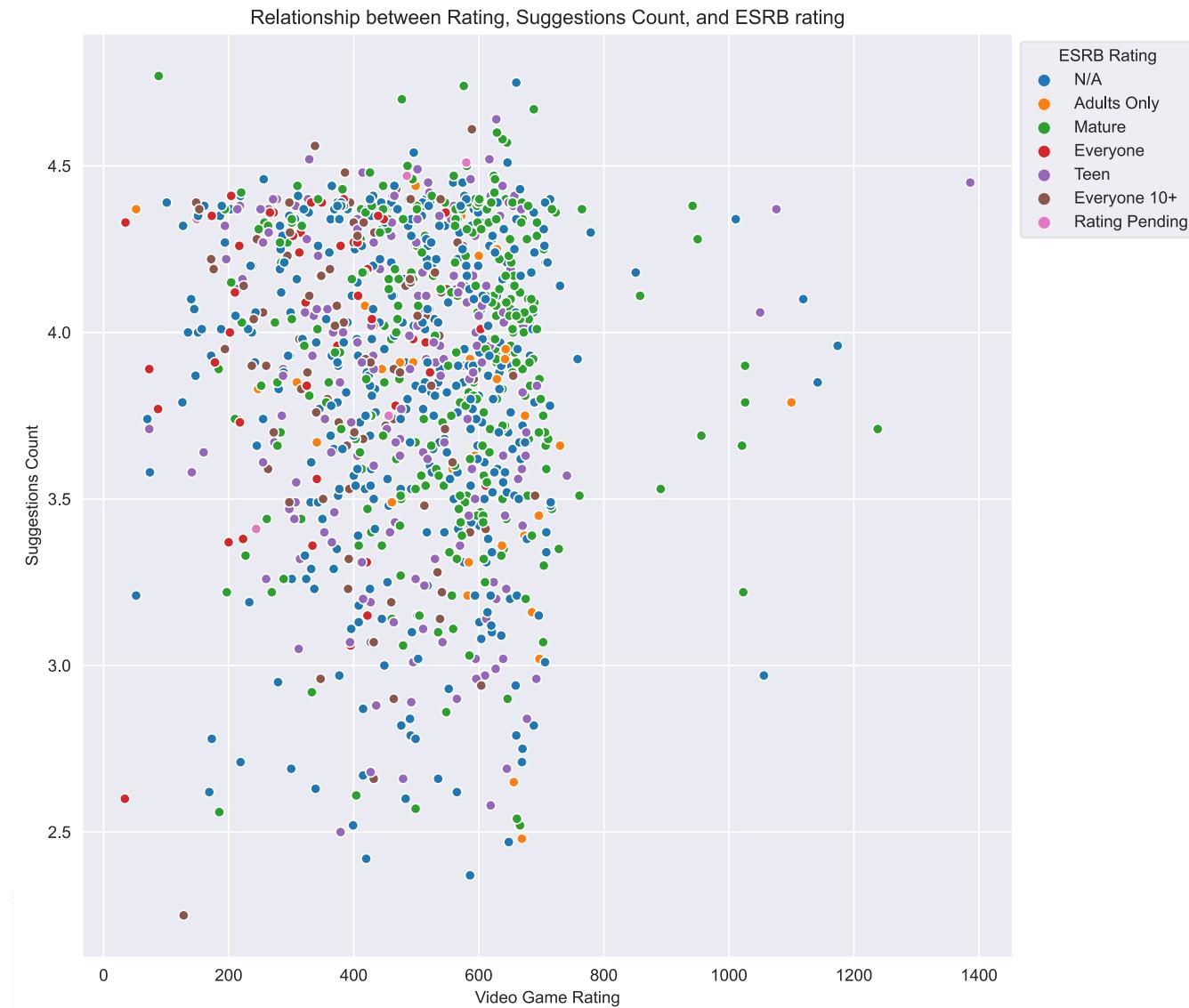
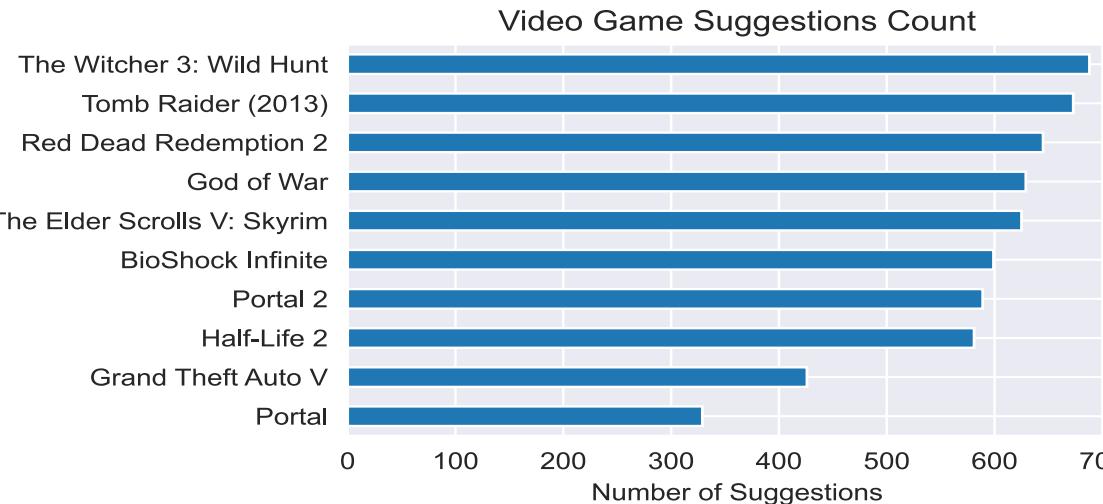
Popular ESRB Ratings

Persona 5 Royal is the highest rated game in this dataset, and it's rated Mature. Mature games have the highest max ratings, but for a developer looking to play it safe, games rated for Everyone also see success, with a very consistent average rating.



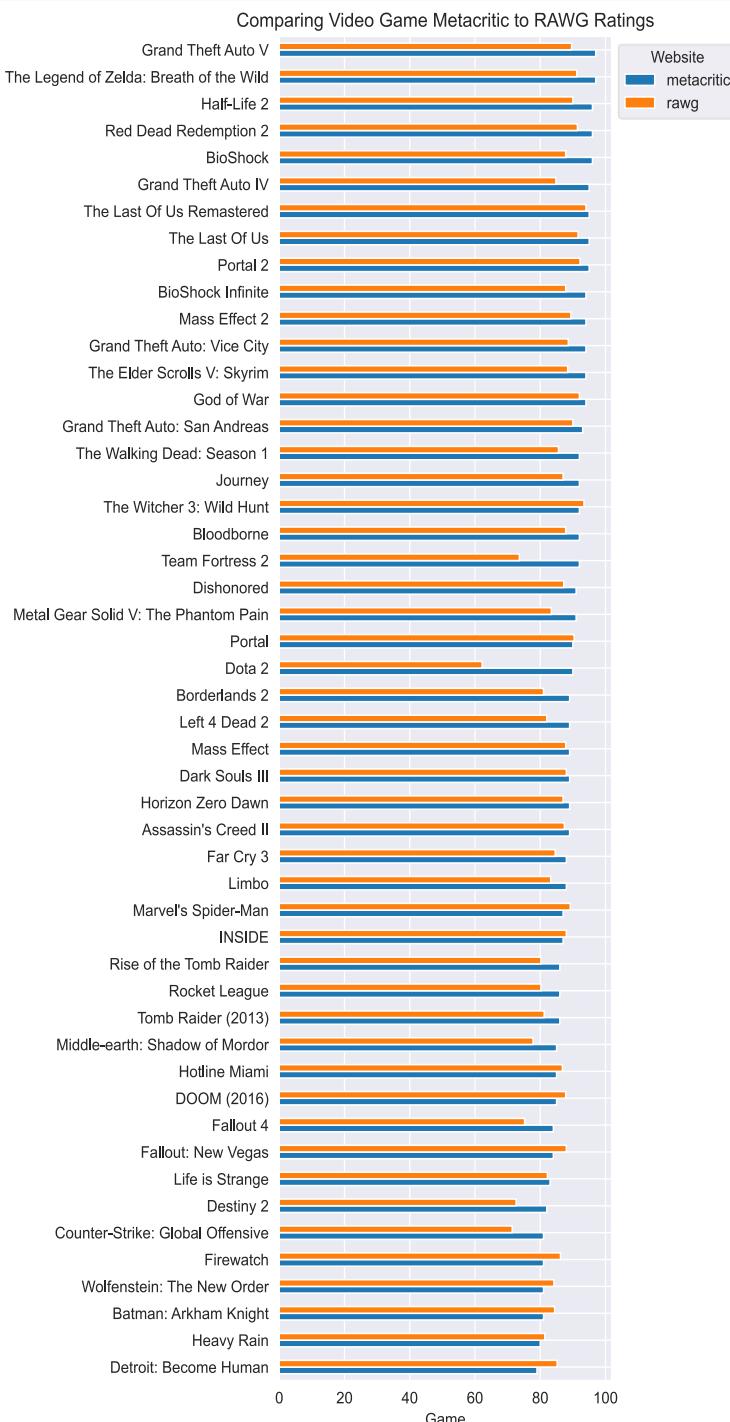
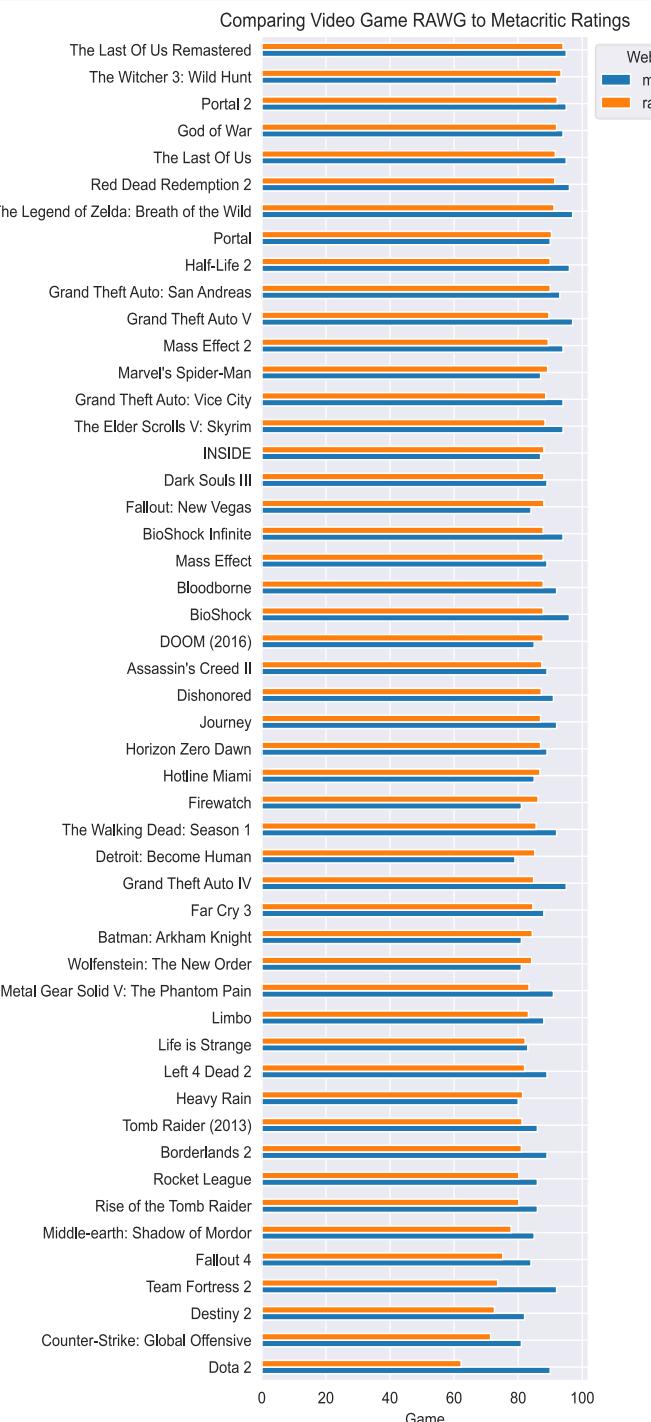
Top Recommended Games

Looking at this data, it looks like generally, higher rated games have more recommendations, and lower rated games have less. When looking at the games ESRB ratings, it looks like Mature games have the highest rating to suggestion count ratio. The top rated games are The Witcher 3: Wild Hunt and Tomb Raider.



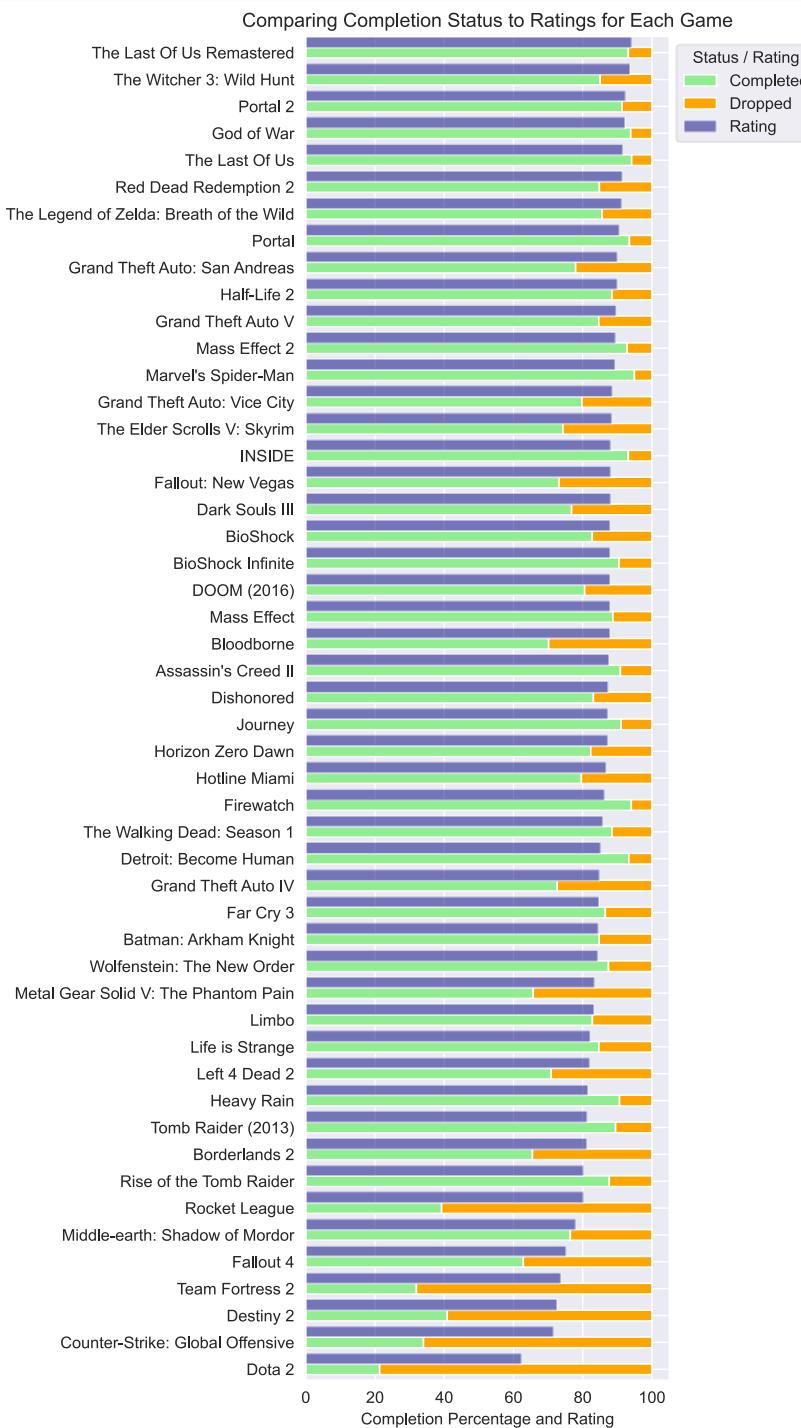
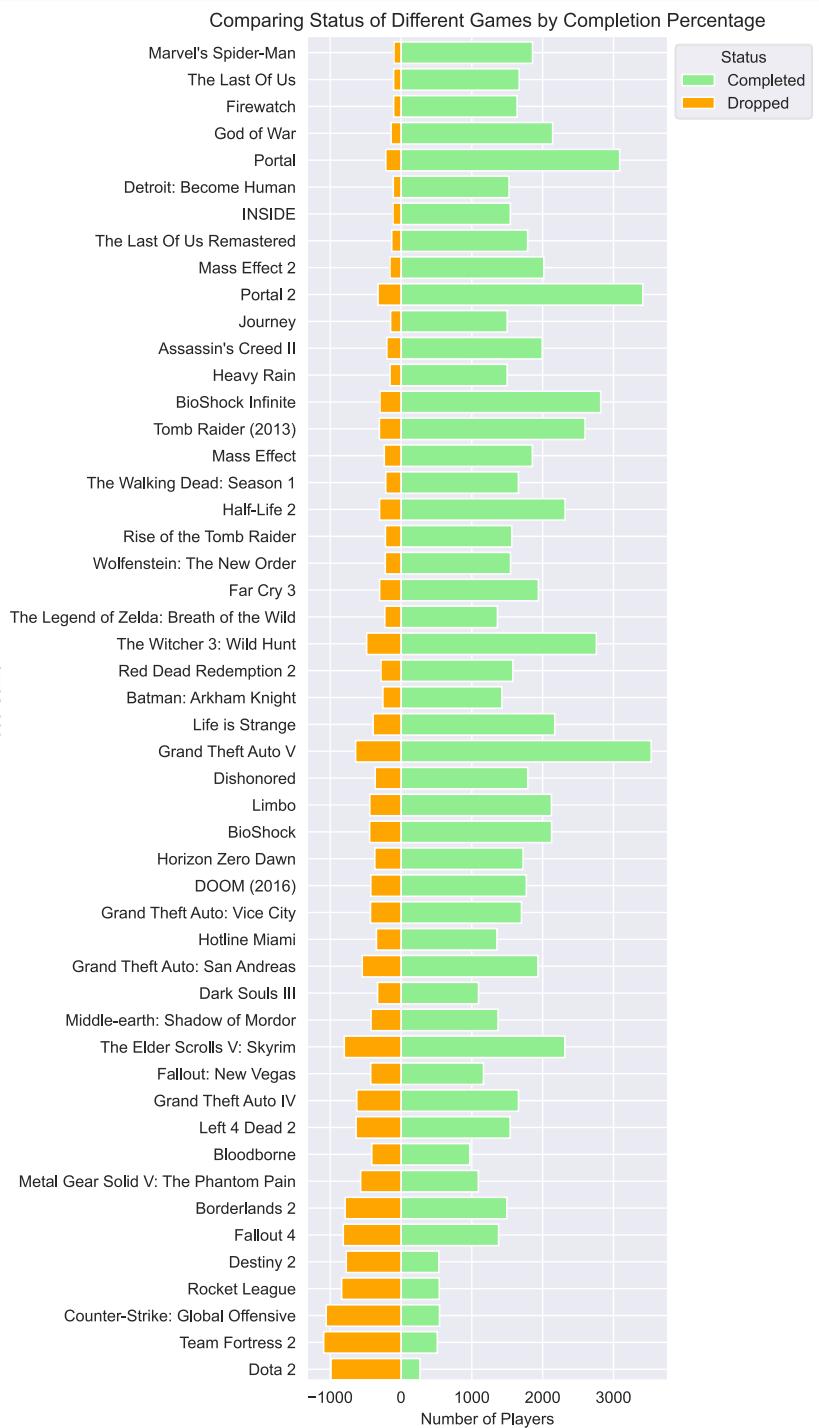
Comparing Ratings on Different Sites

I took the ratings from Metacritic and from RAWG and compared them side by side to see how different sites rated the same games. I wasn't expecting quite so many differences, especially how Dota 2 is the bottom rated game in the RAWG list but is in the middle of Metacritic, who rated it about 30 points higher.



Game Completion Status

For these plots, I took the number of RAWG players who marked a game as completed or dropped and compared these values to the ratings. There does seem to be a general correlation between higher rated games and higher completion rates.



Thank You

I hope you gained some insights from my analysis!