

Final Project Summary

Alex Barkovitch

CMP 262

Tools used:
Jupyter Notebook

Python Packages:

pandas

numpy

matplotlib

seaborn



Video Game Data Analytics

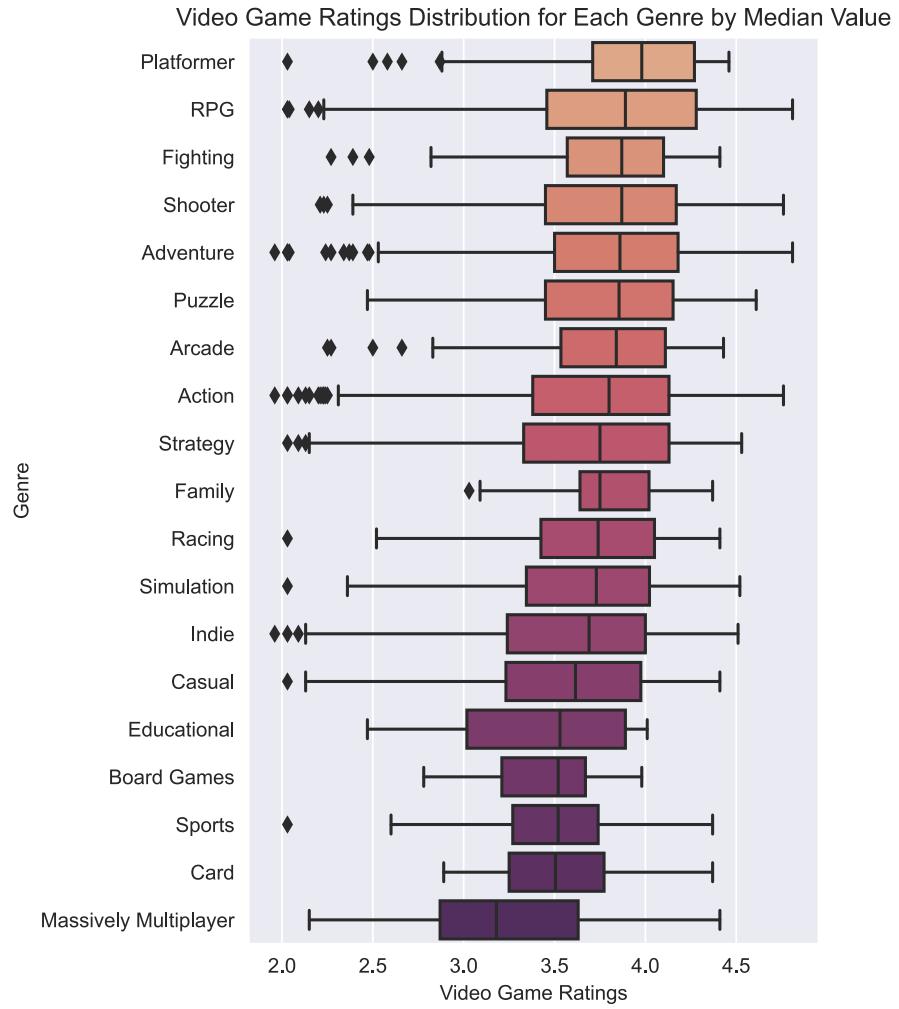
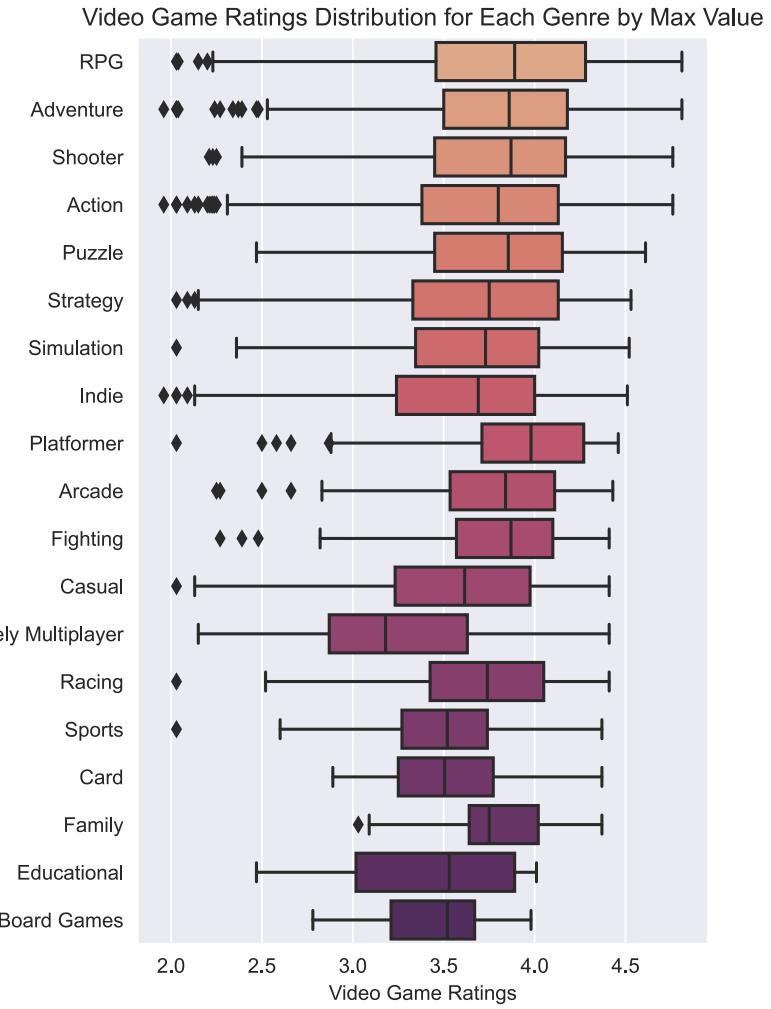
Dataset: <https://www.kaggle.com/datasets/jummyegg/rawg-game-dataset/data>

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
id	slug	name	metacritic	released	tba	updated	website	rating	rating_top	playtime	achievements	ratings_coi	suggestion	game_serik	reviews_cc	platforms	developers	genres	publishers	esrb	rating	added_stat	added_stat	added_stat	added_stat	status_playing	
1	dgeneratio	D/Generation HD	#####	2016-09-01	http://dgen	2019-09-17	http://dgen	0	0	1	80	2	292	0	4 PC macC	West Coas	Adventure	West Coas	Everyone 1	4	88	2	2	0	0	0	
2	10 g-prime	G Prime Into The Rain	1/6/2016	2019-11-06	2023:04:19	2016-09-17	http://www	0	0	0	26	3	389	0	3 macOS P	Soma	Gam Simulation	Immanitas	Everyone	2	42	2	0	0	0	0	
3	100 land-slider	Land Sliders	9/24/2015	2019-10-21	http://prett	2019-09-17	http://www	0	0	0	0	2	83	0	2 iOS	Prettygreat	Adventure	Prettygreat	Everyone 1	0	2	2	0	1	0	0	
4	1000 pixel-gear	Pixel Gear	#####	2019-08-21	https://www	2019-09-17	http://www	0	0	0	0	0	455	0	0 PC PlaySt	Oasis	Gam Action	Inc Geronimo	Teen	0	1	0	0	0	0	0	
5	10000 gods-and-ii	Gods and Idols	#####	2019-09-17	http://www	2019-09-17	http://www	0	1	1	0	5	262	0	5 PC	Viking Tao	RPG	Stral	Viking Tao	2	79	0	0	0	0	0	
6	100000 plague-ven	Plague venue	12/2/2017	2019-01-09	2023:12:41:06	2019-01-09	2023:12:41:06	0	0	0	0	0	40	0	0 Web	Alexander	Ponomariov			0	0	0	0	0	0	0	
7	100001 the-moon-the	The Moon Sliver (itch)	5/3/2014	2019-01-09	2023:12:41:06	2019-01-09	2023:12:41:06	0	0	0	0	0	116	0	0 PC macC	David Szyn	Adventure			0	0	0	0	0	0	0	
8	100002 red-entity	Red Entity	8/26/2014	2019-01-09	2023:12:41:06	2019-01-09	2023:12:41:06	0	0	0	0	0	39	0	0 PC macC	woof	Action	Shooter		0	0	0	0	0	0	0	
9	100004 hippiesvc	HippiesVsCops	4/18/2016	2019-08-28	2023:25:11	2019-08-28	2023:25:11	0	0	0	0	0	26	0	0 PC	alegarofici	Strategy			0	0	0	0	0	0	0	
10	100005 they-came	They Came Through	6/24/2018	2019-01-09	2023:12:41:06	2019-01-09	2023:12:41:06	0	0	0	0	0	98	0	0 PC	Atte	Okkon	Platformer		0	0	0	0	0	0	0	
11	100006 fading-light	Fading Light: Descent	8/24/2017	2019-01-09	2023:12:41:06	2019-01-09	2023:12:41:06	0	0	0	0	0	279	0	0 PC	Dansodic	Adventure			0	1	0	0	0	0	0	
12	100007 the-book-ri	The Book Ritual (Beta)	7/6/2018	2019-01-09	2023:12:41:06	2019-01-09	2023:12:41:06	0	0	0	0	0	111	0	0 PC mac	Alistair	Aitcheson			0	0	0	0	0	0	0	
13	100009 corner-of-t	Corner of the Club Sir	4/30/2018	2019-01-09	2023:12:41:06	2019-01-09	2023:12:41:06	0	0	0	0	0	21	0	0 PC Web	Jayson	Mut	Simulation		0	0	0	0	0	0	0	
14	10001 serious-sam	Serious Sam Fusion 2	3/20/2017	2020-03-01	http://www	2019-01-09	http://www	3.07	4	1	76	227	541	19	227 Linux ma	Croteam	Action	Inc Devolver	Digital Crot	200	3292	41	11	79	2	2	
15	100010 intelligence-th	Intelligence: The 314th	8/31/2016	2019-01-09	2023:12:41:06	2019-01-09	2023:12:41:06	0	0	0	0	0	355	0	0 PC	Bizarre Mo	RPG			0	0	0	0	0	0	0	
16	100011 que-sera-si	Que Sera Demo	4/8/2016	2019-08-28	2023:25:11	2019-08-28	2023:25:11	0	0	0	0	0	164	0	0 PC mac	Eufrasio	Action	Shooter	Platformer	0	0	0	0	0	0	0	
17	100012 excelsior-p	Excelsior Phase One: I	2/6/2017	2019-01-09	2023:12:41:06	2019-01-09	2023:12:41:06	0	0	0	0	0	164	0	0 PC	11th Dime	RPG			0	0	0	0	0	0	0	
18	100014 space-esc	Space Escape	9/5/2015	2019-01-09	2023:12:41:06	2019-01-09	2023:12:41:06	0	0	0	0	0	58	0	0 Web	Dark Wall	Shooter			0	0	0	0	0	0	0	
19	100015 passing-thru	Passing Through the M	7/2/2018	2019-01-09	2023:12:41:06	2019-01-09	2023:12:41:06	0	0	0	0	0	7	0	0 Web	Dermot				0	0	0	0	0	0	0	
21	100016 corpus100	CORPUS100	5/12/2017	2019-08-28	2023:25:11	2019-08-28	2023:25:11	0	0	0	0	0	48	0	0 Web	MAWV	Shooter			0	0	0	0	0	0	0	
22	100017 thoughts	Thoughts	5/5/2016	2019-01-09	2023:12:41:06	2019-01-09	2023:12:41:06	0	0	0	0	0	56	0	0 PC	VikkiRuttie	Platformer			0	0	0	0	0	0	0	
23	100018 blasted-bo	Blasted Bots	3/7/2016	2019-01-09	2023:12:41:06	2019-01-09	2023:12:41:06	0	0	0	0	0	201	0	0 PC	IanAnimate	Shooter			0	0	0	0	0	0	0	
24	100019 the-spaghetti	The Spaghetti Western	3/31/2018	2019-01-09	2023:12:41:06	2019-01-09	2023:12:41:06	0	0	0	0	0	22	0	0 Web	Jordan	Oloman			0	0	0	0	0	0	0	
25	10002 life-is-feud	Life is Feudal Forest	8/26/2016	2019-09-17	http://lifeis	2019-09-17	http://lifeis	3.74	4	3	29	18	596	0	19 PC	Mindilliuso	Strategy	Bitbox		8	150	7	10	5	4	2	
26	100020 legionwood	Legionwood 2: Rise of	1/3/2016	2019-01-09	2023:12:41:06	2019-01-09	2023:12:41:06	0	0	0	0	0	230	0	0 PC	Dark Gaia	RPG			0	0	0	0	0	0	0	
27	100021 shape-mas	Shape Master	4/18/2016	2019-01-09	2023:12:41:06	2019-01-09	2023:12:41:06	0	0	0	0	0	129	0	0 PC macC	B0pt1k			0	0	0	0	0	0	0		
28	100022 my-world	My World	4/25/2017	2019-01-09	2023:12:41:06	2019-01-09	2023:12:41:06	0	0	0	0	0	84	0	0 PC macC	ciderwrath			0	0	0	0	0	0	0		
29	100023 toilet-tycoon	Toilet Tycoon (itch)	5/3/2016	2019-01-09	2023:12:41:06	2019-01-09	2023:12:41:06	0	0	0	0	0	124	0	0 PC	Plug In Digi	Strategy	Simulation		0	0	0	0	0	0	0	
30	100024 daddy-don	Daddy, Don't Explode	9/25/2015	2019-01-09	2023:12:41:06	2019-01-09	2023:12:41:06	0	0	0	0	0	33	0	0 PC	Fi Silva	Puzzle			0	0	0	0	0	0	0	
31	100025 the-spellbel	The Spellbel Keep	5/27/2016	2019-08-28	2023:25:11	2019-08-28	2023:25:11	0	0	0	0	0	209	0	0 PC	Billy Slang	RPG			0	0	0	0	0	0	0	
32	100027 circuit-bre	Circuit Breakers - Dem	9/2/2016	2019-01-09	2023:12:41:06	2019-01-09	2023:12:41:06	0	0	0	0	0	142	0	0 PC	ree_lbig_kr	Shooter			0	0	0	0	0	0	0	
33	100028 toadies-ad	Toadie's Adventure	3/30/2018	2019-01-09	2023:12:41:06	2019-01-09	2023:12:41:06	0	0	0	0	0	99	0	0 PC	FelixBlobD	Adventure	Platformer		0	0	0	0	0	0	0	
34	100029 a-near-dawn	A Near Dawn: Text Pro	11/1/2017	2019-01-09	2023:12:41:06	2019-01-09	2023:12:41:06	0	0	0	0	0	10	0	0 Web	Leonid Pilc	Action			0	0	0	0	0	0	0	
35	10003 naval-actic	Naval Action	1/21/2016	2020-11-0	http://www	2019-01-09	http://www	0	5	15	0	4	342	0	5 PC	Game-Lab	Action	Ad Game-Labs		2	49	2	1	1	0	0	
36	100030 purify	Purify	2/24/2017	2019-01-09	2023:12:41:06	2019-01-09	2023:12:41:06	0	0	0	0	0	32	0	0 PC	Trov-Marte	Action			0	0	0	0	0	0	0	

Which genres have the highest ratings?

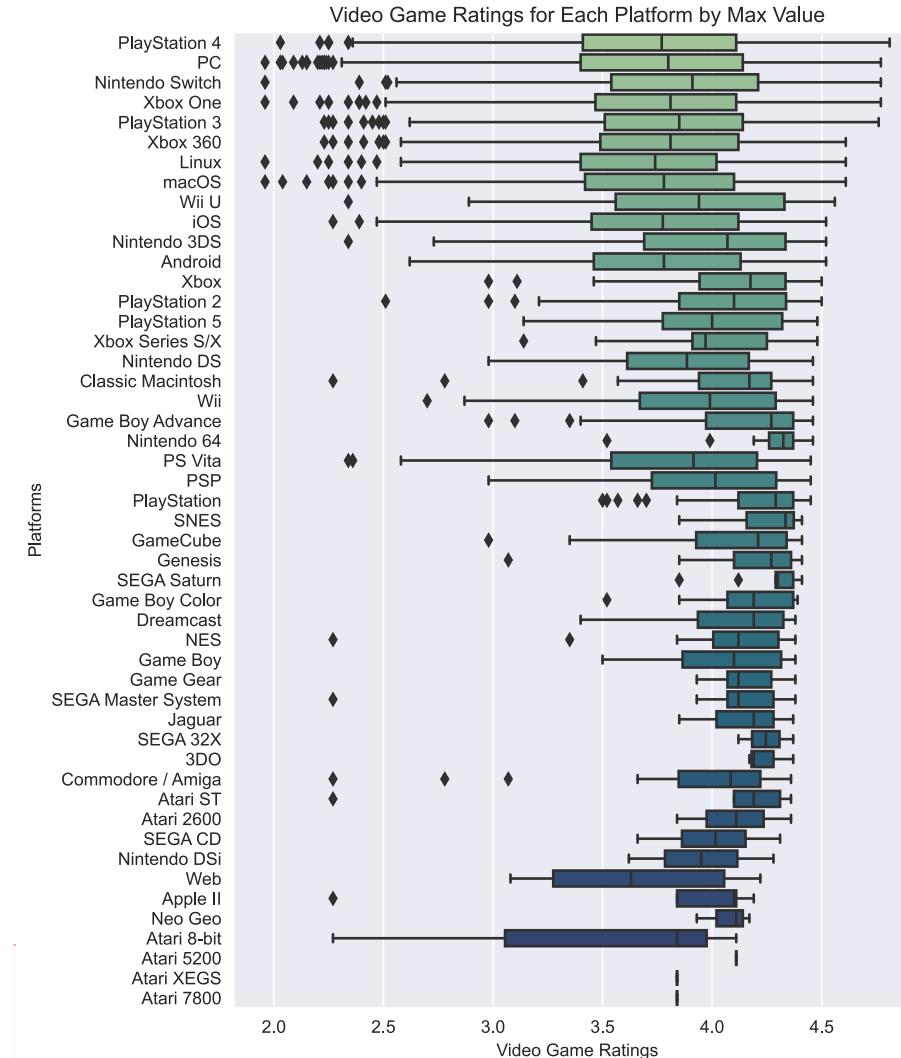
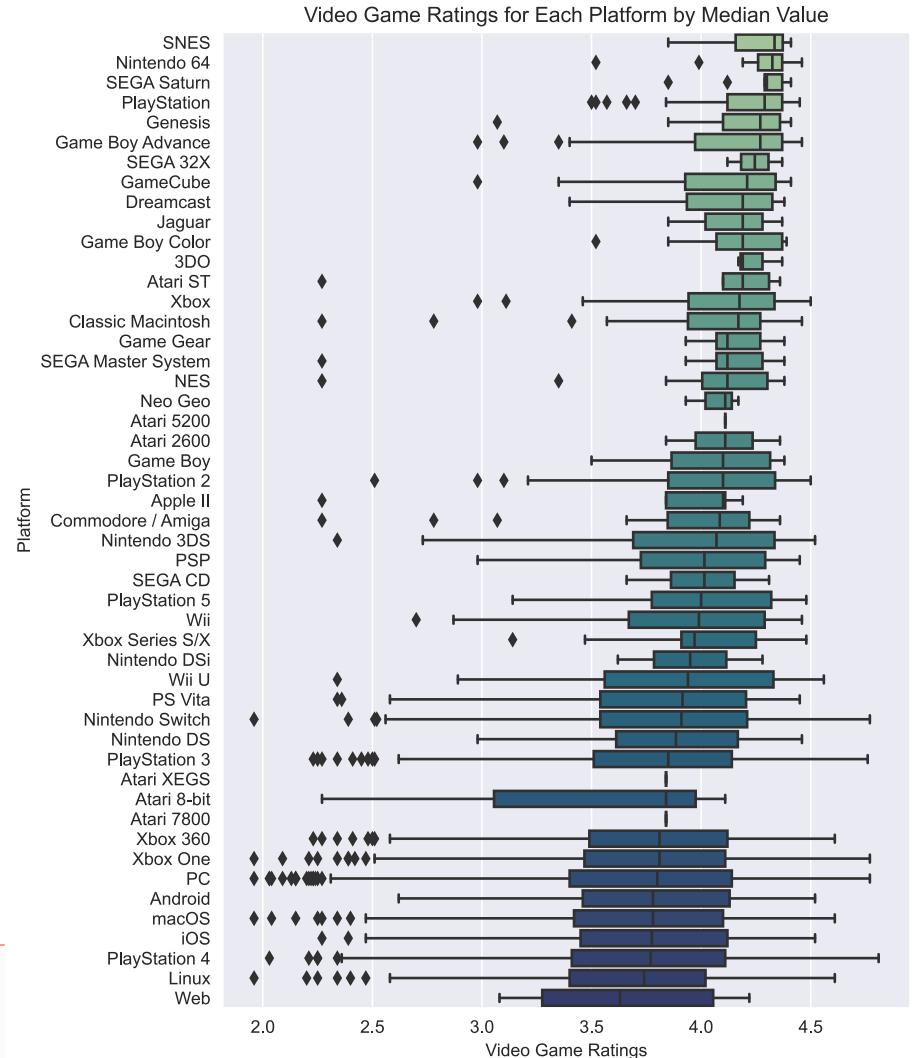
This data shows that RPGs, Adventure, Shooter, and Platformer games are the most popular genres.

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



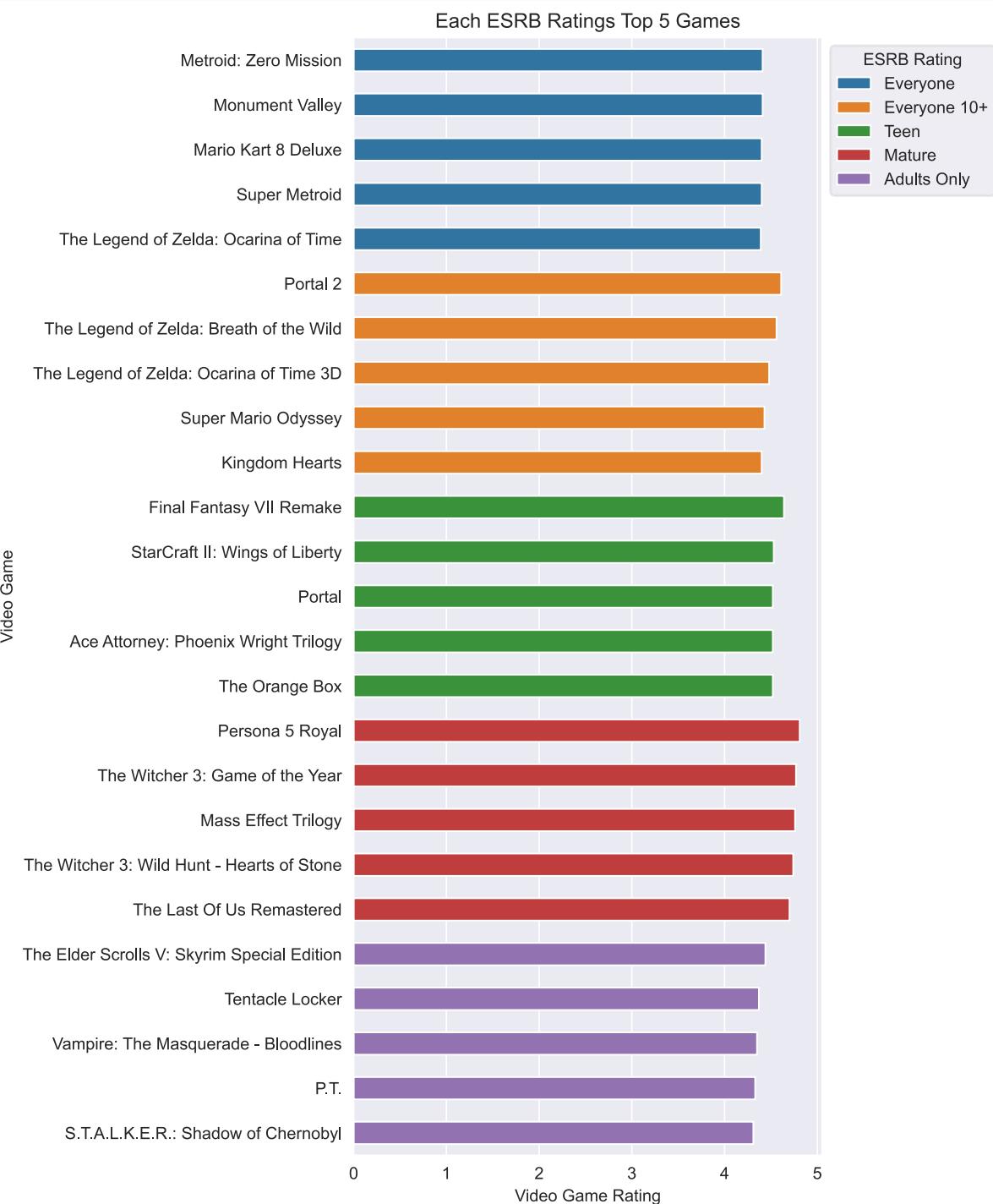
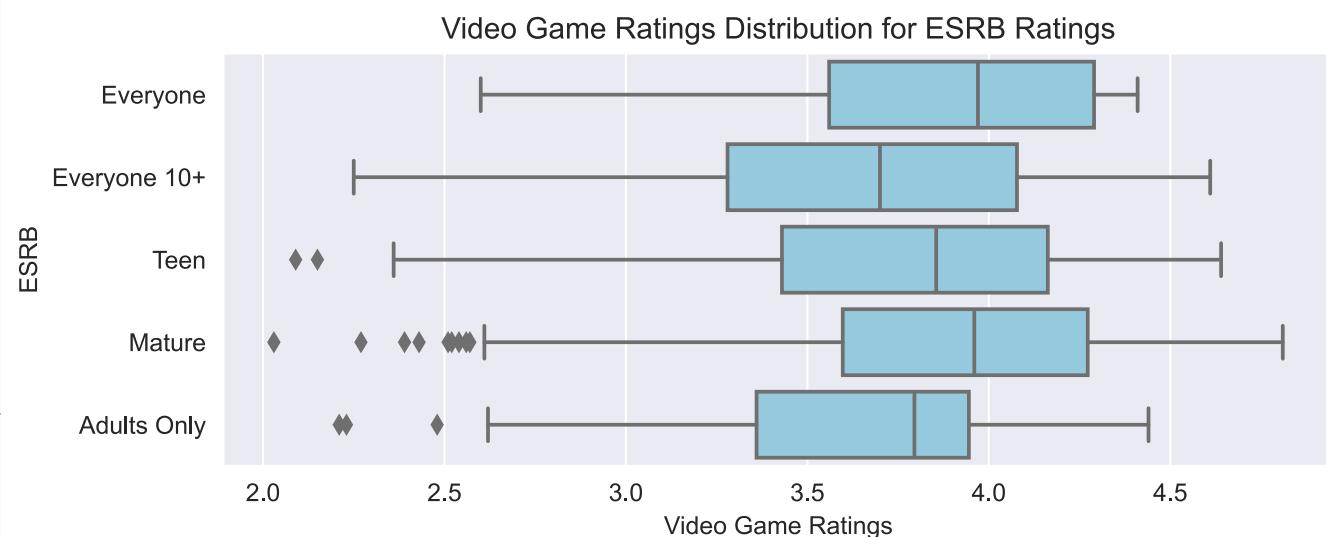
Video Game Ratings for Each Platform

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.



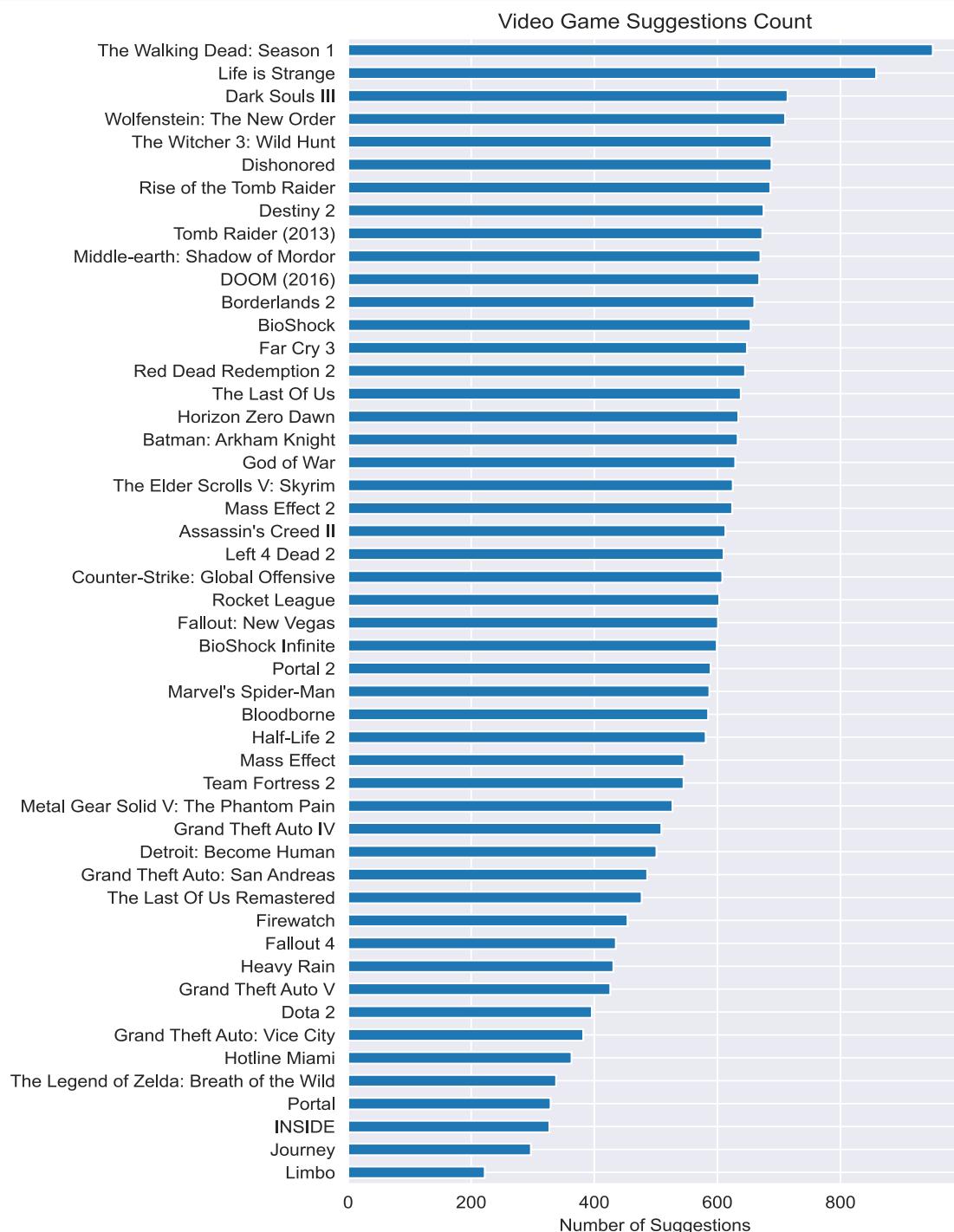
Popular ESRB Ratings

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.



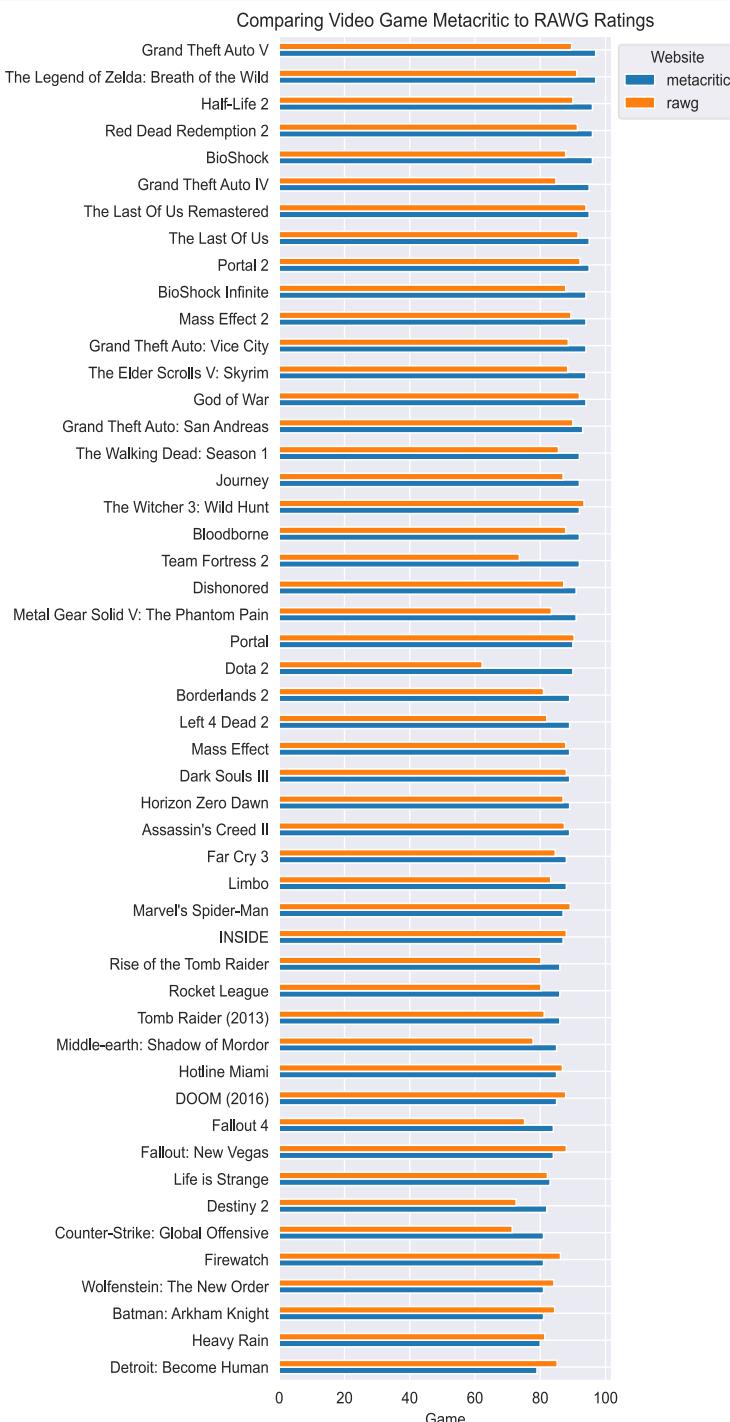
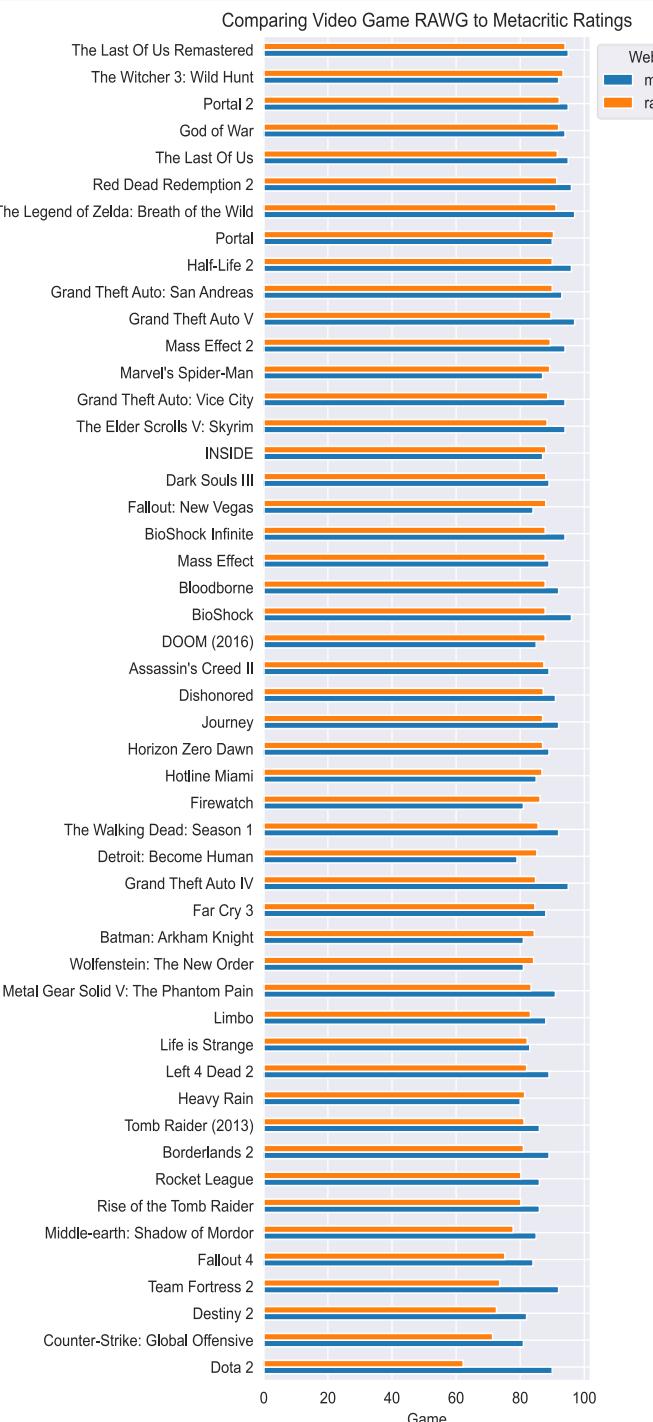
Top Recommended Games

The top 2 suggested games are *The Walking Dead: Season 1* and *Life is Strange*, which both have significantly more suggestions than the 3rd on the list, *Dark Souls III*. While ratings are more important than suggestions count, developers can still take inspiration from the top games on this list.



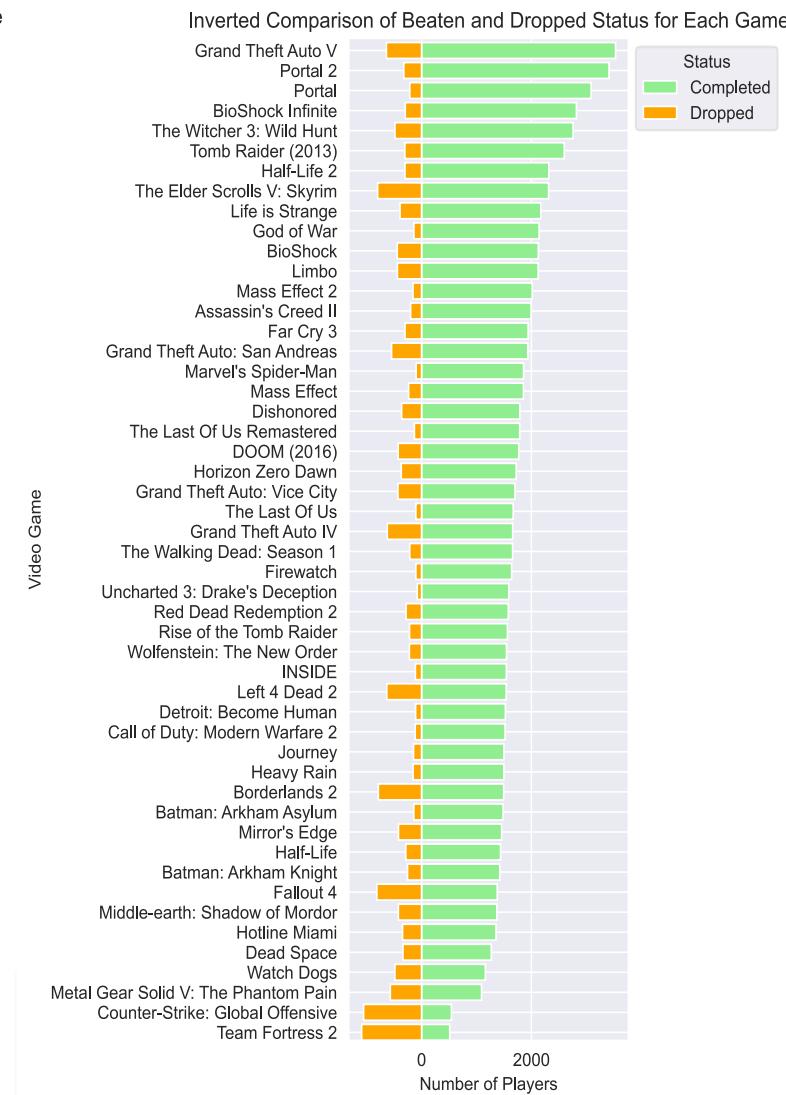
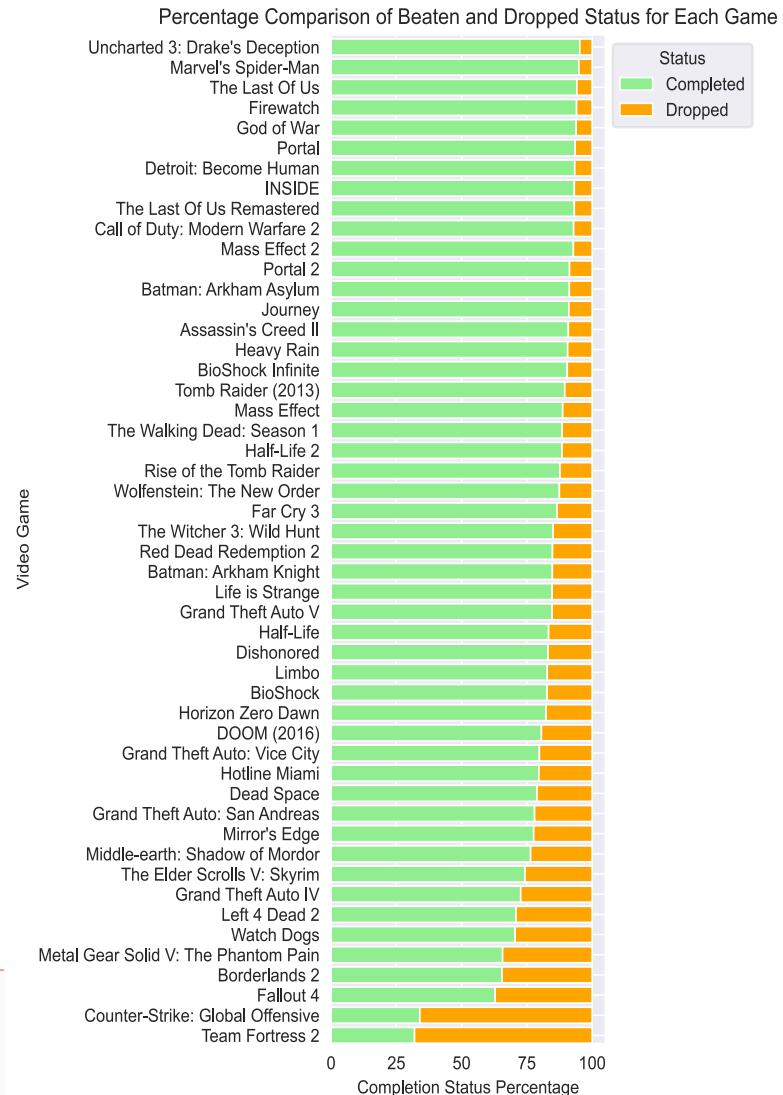
Comparing Ratings on Different Sites

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. I wanted to see if games that completed more had higher ratings. Grand Theft Auto V has the highest number of completions, and is the top game in our Metacritic ratings. The Last Of Us has the 3rd highest completion rate and has the 5th highest rating, so there does seem to be a correlation.



Thank You

I hope you gained some insights from my analysis!