

Civil War in the Home: "Which Marvel movie featuring Iron Man should we watch?"

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Mom admires the goatee. Dad wants the suit. The kids are looking for huge explosions. Which Marvel movie featuring the beloved Tony Stark is your family going to watch tonight?

All families and friend groups have experienced the trouble of finding a good movie that satisfies the greatest number of people; in fact, it is not uncommon for groups to spend half an hour or longer simply trying to choose a movie to watch. To help with this dilemma, we have created an algorithm that will analyze the ten different Marvel Cinematic Universe films featuring Iron Man and recommend the film that will best meet the needs of every member of your family.

What are our choices?

Before delving into the analysis and comparison of the Marvel films featuring Iron Man, we need to first identify which films specifically will be included in the analysis. Out of the twenty-three films released to date in the Marvel Cinematic Universe, ten of them have a direct appearance from Tony Stark. These ten films are highlighted below:

1. *Iron Man* (2008) – first film starring Robert Downey Jr. as the "Iron Man", released on May 2, 2008.

- 2. The Incredible Hulk (2008) Iron Man is briefly featured here; this scene is often recognized as setting a foundation for future Marvel films.
- 3. *Iron Man* 2 (2010) Tony Stark's newfound fame as a superhero is tested against the villain known as Whiplash.
- 4. The Avengers (2012) The formation of the Avengers in this film marks a pivotal point in the Marvel series as several superheroes come together to protect Earth.
- 5. *Iron Man 3* (2013) Iron Man's final standalone movie, most remembered for the dozens of Iron Man suits featured throughout the film.
- 6. Avengers: Age of Ultron (2015) The Avengers come together again to combat evil, but this time, Tony Stark finds himself fighting against a being of his own creation.
- 7. Captain America: Civil War (2016) This film features 12 different superheroes with Iron Man at the helm, fighting to protect the world from further harm.
- 8. *Spider-Man: Homecoming* (2017) In this film, Tony Stark develops into Peter's mentor and protector, which sets the stage for future films in the series.
- 9. Avengers: Infinity War (2018) Iron Man and the Avengers face their greatest battle yet against Thanos, a villain determined to wipe out half of all civilization and restore "balance" to the universe.
- 10. Avengers: Endgame (2019) Featuring 33 superheroes throughout the 182-minute movie, it is the culmination of the Marvel films prior to it, as the Avengers once again unite to save their fallen comrades and loved ones in one epic, final battle against Thanos and his followers.

How will we judge them?

Because there are so many movies to choose from, we have chosen ten standards of judgment by which to compare the ten Marvel films featuring Iron Man and decide which one will best meet the needs of your group. Table 1 explains each standard of judgement, their ranking in comparison to each other, how each standard was calculated, and the reasoning behind the standard's inclusion and rank.

Table 1 - Standards of Judgement

Standard of	Rank			
Screen Time of Robert Downey Jr.	1	How it was Calculated The amount of time Robert Downey, Jr. was on screen in each film, according to the Internet Movie Database (IMDb)	Inclusion Justification The intended audience wants to watch a Marvel movie that includes Tony Stark / Iron Man.	Rank Justification The primary goal of this analysis is to report which of the Marvel movies with Iron Man is the best choice for a family.
Parent Guide Score	2	The IMDb Parents' Guide rates each film according to the following categories: Sex & Nudity, Violence & Gore, Profanity, Alcohol, Drugs, & Smoking, and Frightening/Intense Scenes. We generated an overall "Parent Guide Score" for each film based on the ratings it received in each of the above categories.	The movie should be appropriate for as wide an age range as possible, since the intended audience is a family.	Because the intended audience of this report is a family, the age-appropriateness of the film needs to be weighted highly in comparison to the other standards of judgement.
Number of Superheroes in the Film	3	The number of superheroes in the film. This statistic was generated from the casting data on IMDb.	An increased number of superheroes can really turn a great film into a mind-blowing one (if handled properly). They not only feature Iron Man, but they show how Iron Man and the other superheroes interacted and worked with (or against) one another.	Multiple superheroes appeal to the diversity of a family - each member of the family may have a secondary hero in the movie they feel attached to.
Screen Time of Superhero Battles	4	The amount of time in each film during which a superhero battle or fight scene – a scene in which two or more characters engage in combat in some way - takes place. To generate this statistic, we watched all ten movies and timed the fight scenes ourselves.	One of the reasons people watch superhero movies is the potential for amazing battles between super- powered beings.	The screen time of superhero battles is ranked fourth in order to reflect the importance of one of the core traits of a superhero movie: superhero action.
Number of Quips Made by Tony Stark	5	The number of times Tony Stark made a quip - a purposeful sarcastic, witty, or humorous remark - throughout the film. To generate this statistic, we watched all ten movies and counted the quips ourselves.	Tony Stark is known for his humor and sarcasm. This is one of his signature traits and part of what defines the "Tony Stark"-ness of a Marvel film.	Although the number of quips may not be the most important standard, it is ranked fifth in order to emphasize the "Tony Stark"-ness of the film in the algorithm.
Quality of the Villain	6	To measure the quality of each villain, we published a survey on Ranker.com, where people could rank every villain in the Marvel Cinematic Universe against each other, according to what they deemed as the "highest quality" villains. A total of 564 people from around the world participated in the survey. As a result, we gave each Iron Man film a "Quality of the Villain" score that corresponds to the net survey score of the highest-ranking villain in the film.	A good villain adds to a film. A bad villain can take away from the film. The better the villain, the better it helps the audience appreciate the heroism of Tony Stark.	The villains of Marvel films that include Iron Man have had a mix of receptions, despite the performance of Tony Stark in the movie. The quality of the villain is certainly important for a superhero film. However, the top five standards all rank before the quality of the villain because of their focus on the desires of the intended audience.
People's Opinion of the Movie	7	The average rating of the film's IMDb Rating and Rotten Tomatoes Audience Score	The peoples' rankings of films on websites such as Rotten Tomatoes or IMDb are often used by film lovers to decide whether or not to watch a movie.	People are more inclined to trust other people when it comes to evaluation of a movie, since critics can be looking for other elements in a movie than the average viewer does.
Quality of Visual Effects	8	The "Quality of Visual Effects" score was generated by giving each film points based on the number and type of <i>Visual Effects</i> awards it received.	Part of what makes a superhero movie great is the ability of the filmmakers to bring something from fiction to the screen in a way that makes the audience believe it is possible.	The quality of visual effects in a film may not be as important to every member of the family as the other standards are.
Number of New Iron Man Suits in the Film	9	The number of new Iron Man suits that appear in the film, as recorded by ScreenRant.com.	Another one of the signature traits of the "Tony Stark"-ness of a Marvel film is the number of new Iron Man suits Tony has created in order to tackle the problems that occur throughout the film.	This marker should not carry more weight than the other standards of judgement for the intended audience. Only one of the Marvel films features more than four new Iron Man suits.
Total Awards	10	The "Total Awards" score was generated by giving each film points based on the number and type of <i>total</i> awards it received.	Another way to measure the general quality of a movie is the number of awards it receives from various film organizations, such as the Oscars, the BAFTAS, etc.	This standard is least important because most superhero films rarely win major awards, despite the fact that they are loved by the general population.

What did we do with all this data?

1. Gather the Data

The first step of our process was to gather the data for the outlined standards of judgement for each film. This gathered data can be seen in Table 2 below.

that Robert Downey, Jr. had in a single Iron Man film. This calculation produced a percentage that still allowed the relativity of the values in each category to be taken into consideration, while also placing each category onto a "level" field of measurement for the next step in the algorithm.2

Table 2 - Gathered Data

Movie	Screen Time - RDJ (min)	Parent Guide Score	# of Superheroes in the Film	Screen Time - Battles (min)	# of Quips by Tony Stark	Quality of Villain Score₁	People's Opinion Score	Visual Effects Score ₁	# of New Iron Man Suits	Total Awards Score₁
Iron Man	77.25	7	2	25.25	71	-66	85.0	6.5	3	39.25
The Incredible Hulk	0.5	7	2	18	2	-133	68.5	0	0	3
Iron Man 2	61.25	7	4	23	54	-153	70.5	3.25	4	18.75
The Avengers	31.75	5	7	55.75	73	330	85.5	12	1	58.75
Iron Man 3	62.25	7	3	31.75	68	-136	75.0	4.75	36	36.5
Avengers: Age of Ultron	27.25	7	13	43	12	69	78.0	2.75	4	19.75
Captain America: Civil War	37.25	6	12	46.25	53	28	83.5	2	2	33
Spider-Man: Homecoming	8	4	2	20	6	43	80.5	0	1	9.25
Avengers: Infinity War	17	5	26	30.5	17	352	88.0	20.75	3	62.5
Avengers: Endgame	34.75	5	33	32	15	352	87.5	20.75	4	74

However, almost all of these standards are measured on different scales (minutes, number of superheroes, number of quips, generated scores, etc.). In order to properly compare each category, each category needed to be "leveled" so that it could be compared to the other categories.

2. Level the Category Scores

To level each category to the same unit of measurement, every value was divided by the highest value in the category (except for the Parents Guide Score, which will be explained later.) For example, each value in the "Screen Time of Robert Downey, Jr." category was divided by 77.25, the greatest amount of time

To level the Parent Guide Score category, a slightly different approach was used in order to preserve the fact that a higher score in this category is worse than a lower score. Instead of dividing by the highest value, each value was divided by the lowest value in the category. This value was then subtracted by 100 and multiplied by -1. Thus, the lowest Parent Guide Score value was converted to 0.00, and all others represented a negative percentage relative to how much higher they were than the lowest value.

3. Calculating Final Scores

Now that each standard of judgement was on the same scale from 0 to 100, they could all be multiplied by their respective weights and

¹ For details regarding how this score was calculated, see the "Additional Tables" section of the Appendix.

² The results of the "level" calculations are recorded in Table 11 in the "Additional Tables" section of the Appendix.

summed to produce a final score. As stated earlier, each standard of judgement was ranked in a specific order to best reflect their relative importance in the algorithm's calculation of the final scores. The highest-ranking standard of judgement was the "Screen Time of Robert Downey, Jr.". Since this was the highest-ranking standard, it received an algorithmic weight of 1. The next highest standard, the Parent Guide Score, received an algorithmic weight of 0.9. The next highest received 0.8, the next 0.7, and so on, with the lowest ranked category receiving a weight of 0.1. The "leveled" scores found in the previous step of the algorithm were each multiplied by these respective weights, after which the resulting "weighted scores" for each film were added up to produce a final score for the film.3 This final score represented the evaluated appropriateness for your family or friend group of the Marvel film featuring Iron Man.

So... which film should we watch?

Based on the scores that were calculated by our algorithm, we recommend that your group should choose Avengers: Endgame, as it had the highest overall score of 286.99. Upon comparing each standard of judgment, Avengers: Endgame performed consistently well, whereas other films had some standards perform remarkably well while others did quite poorly. It had an average amount of Robert Downey, Jr. screen time, a relatively low Parent Guide Score, a high number of superheroes, the highest quality villain, great special effects, and received a significant number of awards. Because of the distinct consistency in Avengers: Endgame, this film is the best option for those wishing to see a movie featuring Iron Man.

However, it is important to point out that *The Avengers* came in a close second place with 277.15 points. This result is because there were 33 superheroes in *Avengers: Endgame* while there were only 7 in *The Avengers*. This gave *Avengers: Endgame* a marked point boost in our algorithm. If the number of superheroes in the

film does not matter to you and your family, then *The Avengers* is another great choice.

Table 3 - Final Ranking

Ranking	Movie	Algorithm Score
1	Avengers: Endgame (2019)	286.99
2	The Avengers (2012)	277.15
3	Avengers: Infinity War (2018)	244.92
4	Captain America: Civil War (2016)	184.34
5	Iron Man (2008)	173.04
6	Iron Man 3 (2013)	162.68
7	Avengers: Age of Ultron (2015)	117.27
8	Iron Man 2 (2010)	114.51
9	Spider-Man: Homecoming (2017)	89.75
10	The Incredible Hulk (2008)	-25.11

Conclusion

In all reality, you may have your own personal favorite that disagrees with the ranking concluded from our data. You might love the character arc that Tony Stark experiences in his civil war against Captain America much more than you enjoy seeing half of all the superheroes get wiped from existence in less than five minutes. You might enjoy seeing Tony's fatherly relationship with Peter Parker much more than you care about seeing Thanos defeated. You may look at our standards of judgement and think to yourself, "That isn't why I love Iron Man movies at all." However, when it comes to the diverse opinions that can exist in a family or friend group, and the vastness of the Marvel Cinematic Universe, the rankings we calculated represent the pinnacle of what makes an Iron Man movie special. Now you can stop the arguing, start popping the popcorn, and begin your cinematic experience with Tony Stark...

For additional information about the gathered data, see the attached appendix.

³ The final weighted scores are recorded in Table 12 in the "Additional Tables" section of the Appendix.

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Glossary of Defined Terms

MCU – Acronym for the Marvel Cinematic Universe, the collection of superhero films produced by Marvel Studios that all take place within the same fictional universe

Quip – A purposeful sarcastic, witty, or humorous remark

Superhero Battle/Fight Scene - A scene in which two or more characters engage in combat in some way

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Table 4 - Parent Guide Scores

	Sex & I	Nudity	Violence &	& Gore	Profa	anity	Alcohol, Drugs, & Frigh Smoking			rightening/Intense Scenes	
Movie	Rating*	Score	Rating	Score	Rating	Score	Rating	Score	Rating	Score	Total Score
Iron Man	Mild	1	Moderate	2	Mild	1	Mild	1	Moderate	2	7
The Incredible Hulk	Mild	1	Moderate	2	Mild	1	Mild	1	Moderate	2	7
Iron Man 2	Mild	1	Moderate	2	Mild	1	Mild	1	Moderate	2	7
The Avengers	None	0	Moderate	2	Mild	1	Mild	1	Mild	1	5
Iron Man 3	Mild	1	Moderate	2	Mild	1	Mild	1	Moderate	2	7
Avengers: Age of Ultron	Mild	1	Moderate	2	Mild	1	Mild	1	Moderate	2	7
Captain America: Civil War	None	0	Moderate	2	Mild	1	Mild	1	Moderate	2	6
Spider-Man: Homecoming	Mild	1	Mild	1	Mild	1	None	0	Mild	1	4
Avengers: Infinity War	None	0	Moderate	2	Mild	1	None	0	Moderate	2	5
Avengers: Endgame	None	0	Moderate	2	Mild	1	None	0	Moderate	2	5

^{*}Ratings are from the IMDb Parents Guide

Table 5 - Weights of IMDb Ratings					
IMDb Rating	Weight				
None	0				
Mild	1				
Moderate	2				
Severe	3				

Table 6 - Quality of Villain Scores*
(*From "Survey: Best Marvel Cinematic Universe Villains" on p. 14)

Movie	Highest Ranking Villain from Movie (acc. to survey)	"Up" Votes for Highest Ranking Villain	"Down" Votes for Highest Ranking Villain	Net Score of Highest-Ranking Villain
Iron Man	Iron Monger	170	236	-66
The Incredible Hulk	Abomination	102	235	-133
Iron Man 2	Whiplash	101	254	-153
The Avengers	Loki	397	67	330
Iron Man 3	Aldrich Killian	108	244	-136
Avengers: Age of Ultron	Ultron	252	183	69
Captain America: Civil War	Helmut Zemo	215	187	28
Spider-Man: Homecoming	The Vulture	236	193	43
Avengers: Infinity War	Thanos	409	57	352
Avengers: Endgame	Thanos	409	57	352
Total Number of Survey Participants	564			

Table 7 - People's Opinion Scores

Movie	IMDb Rating	IMDb Rating (converted to %)	Rotten Tomatoes (People Rating)	Score (Avg. of IMDb & Rotten Tomatoes)
Iron Man	7.9	79	91	85.0
The Incredible Hulk	6.7	67	70	68.5
Iron Man 2	7	70	71	70.5
The Avengers	8	80	91	85.5
Iron Man 3	7.2	72	78	75.0
Avengers: Age of Ultron	7.3	73	83	78.0
Captain America: Civil War	7.8	78	89	83.5
Spider-Man: Homecoming	7.4	74	87	80.5
Avengers: Infinity War	8.5	85	91	88.0
Avengers: Endgame	8.5	85	90	87.5

Table 8 - Visual Effects Scores*
(*Only awards for Visual Effects are considered for this Standard of Judgement)

Movie	# Nom. (Oscar)	# Nom. (Other)	# Won (Oscar)	# Won (Other)	Weighted Score
Iron Man	0	18	0	2	6.5
The Incredible Hulk	0	0	0	0	0
Iron Man 2	0	9	0	1	3.25
The Avengers	1	20	0	6	12
Iron Man 3	1	15	0	0	4.75
Avengers: Age of Ultron	0	7	0	1	2.75
Captain America: Civil War	0	8	0	0	2
Spider-Man: Homecoming	0	0	0	0	0
Avengers: Infinity War	1	27	0	13	20.75
Avengers: Endgame	1	27	0	13	20.75

Table 9 - Total Awards Score

Movie	# Nom. (Oscar)	# Nom. (Other)	# Won (Oscar)	# Won (Other)	Weighted Score
Iron Man	2	65	0	21	39.25
The Incredible Hulk	0	8	0	1	3
Iron Man 2	1	43	0	7	18.75
The Avengers	1	79	0	38	58.75
Iron Man 3	1	62	0	20	36.5
Avengers: Age of Ultron	0	47	0	8	19.75
Captain America: Civil War	0	68	0	16	33
Spider-Man: Homecoming	0	9	0	7	9.25
Avengers: Infinity War	1	70	0	44	62.5
Avengers: Endgame	1	100	0	48	74

Table 10 - Weights of Awards

Oscar Nomination	1
Other Nomination	0.25
Oscar Win	4
Other Win	1

Table 11 - Leveled Scores

Table 11 - Leveled Scoles											
Movie	RDJ Screen Time	Parent Guide Score	# of Superheroes	Screen Time - Battles	# RDJ Quips	Quality of Villain	People's Opinion	Visual Effects	# New IM Suits	Total Awards	
Iron Man (2008)	100.00	-75.00	6.06	45.29	97.26	-18.75	96.59	31.33	8.33	53.04	
The Incredible Hulk (2008)	0.65	-75.00	6.06	32.29	2.74	-37.78	77.84	0.00	0.00	4.05	
Iron Man 2 (2010)	79.29	-75.00	12.12	41.26	73.97	-43.47	80.11	15.66	11.11	25.34	
The Avengers (2012)	41.10	-25.00	21.21	100.00	100.00	93.75	97.16	57.83	2.78	79.39	
Iron Man 3 (2013)	80.58	-75.00	9.09	56.95	93.15	-38.64	85.23	22.89	100.00	49.32	
Avengers: Age of Ultron (2015)	35.28	-75.00	39.39	77.13	16.44	19.60	88.64	13.25	11.11	26.69	
Captain America: Civil War (2016)	48.22	-50.00	36.36	82.96	72.60	7.95	94.89	9.64	5.56	44.59	
Spider-Man: Homecoming (2017)	10.36	0.00	6.06	35.87	8.22	12.22	91.48	0.00	2.78	12.50	
Avengers: Infinity War (2018)	22.01	-25.00	78.79	54.71	23.29	100.00	100.00	100.00	8.33	84.46	
Avengers: Endgame (2019)	44.98	-25.00	100.00	57.40	20.55	100.00	99.43	100.00	11.11	100.00	
Largest Score in Category	77.25	-	33	55.75	73	352	88	20.75	36	74	
Lowest Score in Category	-	4	-	-	-	-	-	-	-	-	

Table 12 - Final Scores (Ranked)

Movie	RDJ Screen Time	Parent Guide Score	# of Superheroes	Screen Time - Battles	# RDJ Quips	Quality of Villain	People's Opinion	Visual Effects	# New IM Suits	Total Awards	Total Score
Avengers: Endgame	44.98	-22.50	80.00	40.18	12.33	50.00	39.77	30.00	2.22	10.00	286.99
The Avengers	41.10	-22.50	16.97	70.00	60.00	46.88	38.86	17.35	0.56	7.94	277.15
Avengers: Infinity War	22.01	-22.50	63.03	38.30	13.97	50.00	40.00	30.00	1.67	8.45	244.92
Captain America: Civil War	48.22	-45.00	29.09	58.07	43.56	3.98	37.95	2.89	1.11	4.46	184.34
Iron Man	100.00	-67.50	4.85	31.70	58.36	-9.38	38.64	9.40	1.67	5.30	173.04
Iron Man 3	80.58	-67.50	7.27	39.87	55.89	-19.32	34.09	6.87	20.00	4.93	162.68
Avengers: Age of Ultron	35.28	-67.50	31.52	53.99	9.86	9.80	35.45	3.98	2.22	2.67	117.27
Iron Man 2	79.29	-67.50	9.70	28.88	44.38	-21.73	32.05	4.70	2.22	2.53	114.51
Spider-Man: Homecoming	10.36	0.00	4.85	25.11	4.93	6.11	36.59	0.00	0.56	1.25	89.75
The Incredible Hulk	0.65	-67.50	4.85	22.60	1.64	-18.89	31.14	0.00	0.00	0.41	-25.11
Ranking of S.o.J.	1	2	3	4	5	6	7	8	9	10	
Weight of S.o.J.	1	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1	

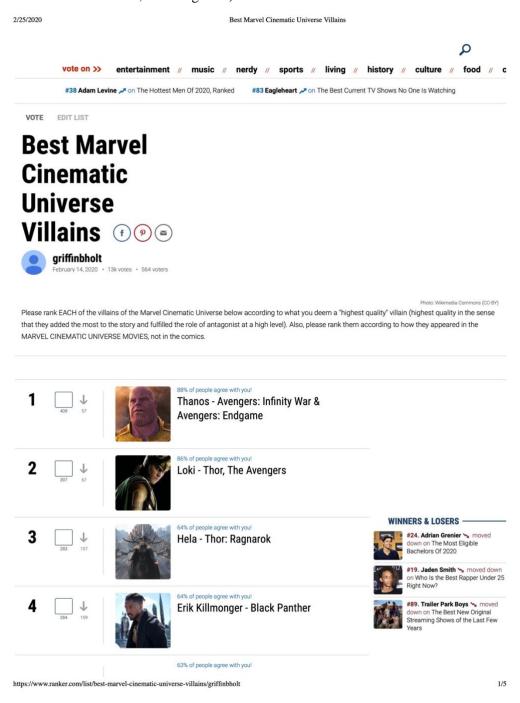
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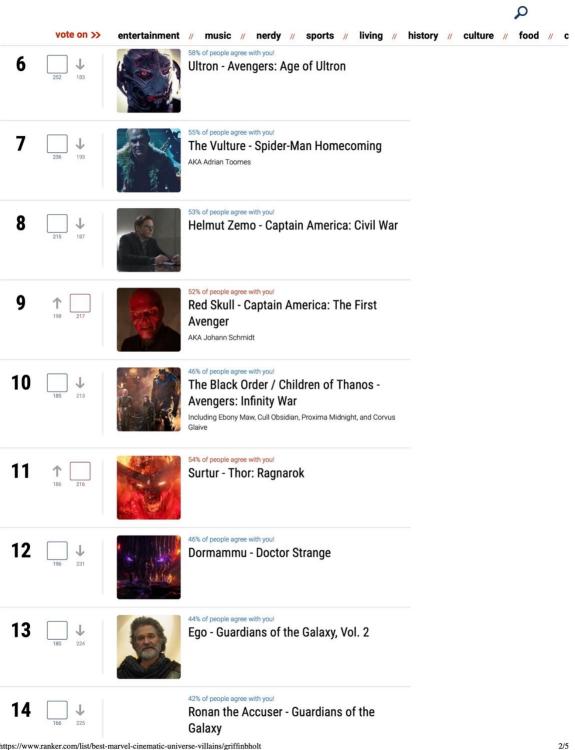
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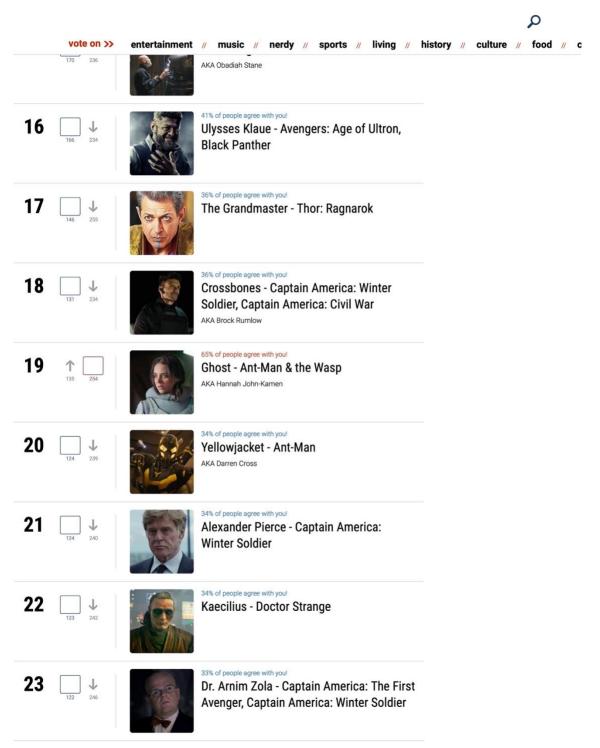
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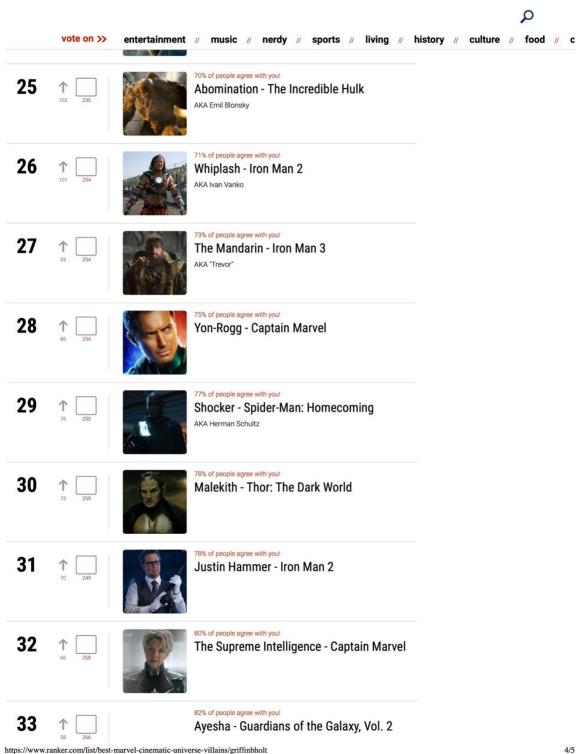




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