

# IMDB MOVIE ANALYSIS

## PROJECT DESCRIPTION :--

IMBD is well known movie and series rating site for users and critics worldwide. The dataset provided is related to IMDB Movies. A potential problem to investigate could be: "What factors influence the success of a movie on IMDB?" Here, success can be defined by high IMDB ratings. The impact of this problem is significant for movie producers, directors, and investors who want to understand what makes a movie successful to make informed decisions in their future projects.

**Data Cleaning:** This step involves preprocessing the data to make it suitable for analysis. It includes handling missing values, removing duplicates, converting data types if necessary, and possibly feature engineering.

**Data Analysis:** Here, you'll explore the data to understand the relationships between different variables. You might look at the correlation between movie ratings and other factors like genre, director, budget, etc. You might also want to consider the year of release, the actors involved, and other relevant factors.



## **APPROACH :---**

### FILE IMPORTING ...

Imported the excel worksheet into my MS EXCEL given by the Product Manager using MICROSOFT 365.

### EXTRACTION OF INSIGHTS ...

After importing the file required insights are generated using Excel function in MS EXCEL.

## TECH-STACKED USED :---

Used MS EXCEL to find the insights from the given data and draw the suitable graph from it and also used MS PowerPoint for the Presentation.

## INSIGHTS :---

### ➤ DATA CLEANING..

- ✓ Removed Duplicates.
- ✓ Removed irrelevant column .
- ✓ Removed empty rows as per the demand of question.
- ✓ Putting the value in some missing data as per the demand of problem.

## ➤ VALUABLE INSIGHTS ...

- ❖ There were total 26 separate genre. The most common genre is DRAMA . Viewers like Drama show very much and its IMDB score is impressive.
- ❖ Even though the Director which made movies based on Drama earned a good profit margin.
- ❖ Movies having combination of multiple genre like ACTION|ADVENTURE|CRIME|DRAMA|SCI-FI|THRILLER has the best average IMDB score of 8.8 .





➤ FILM-NOIR has the highest average IMDB score while GAME show scored the lowest IMDB score.

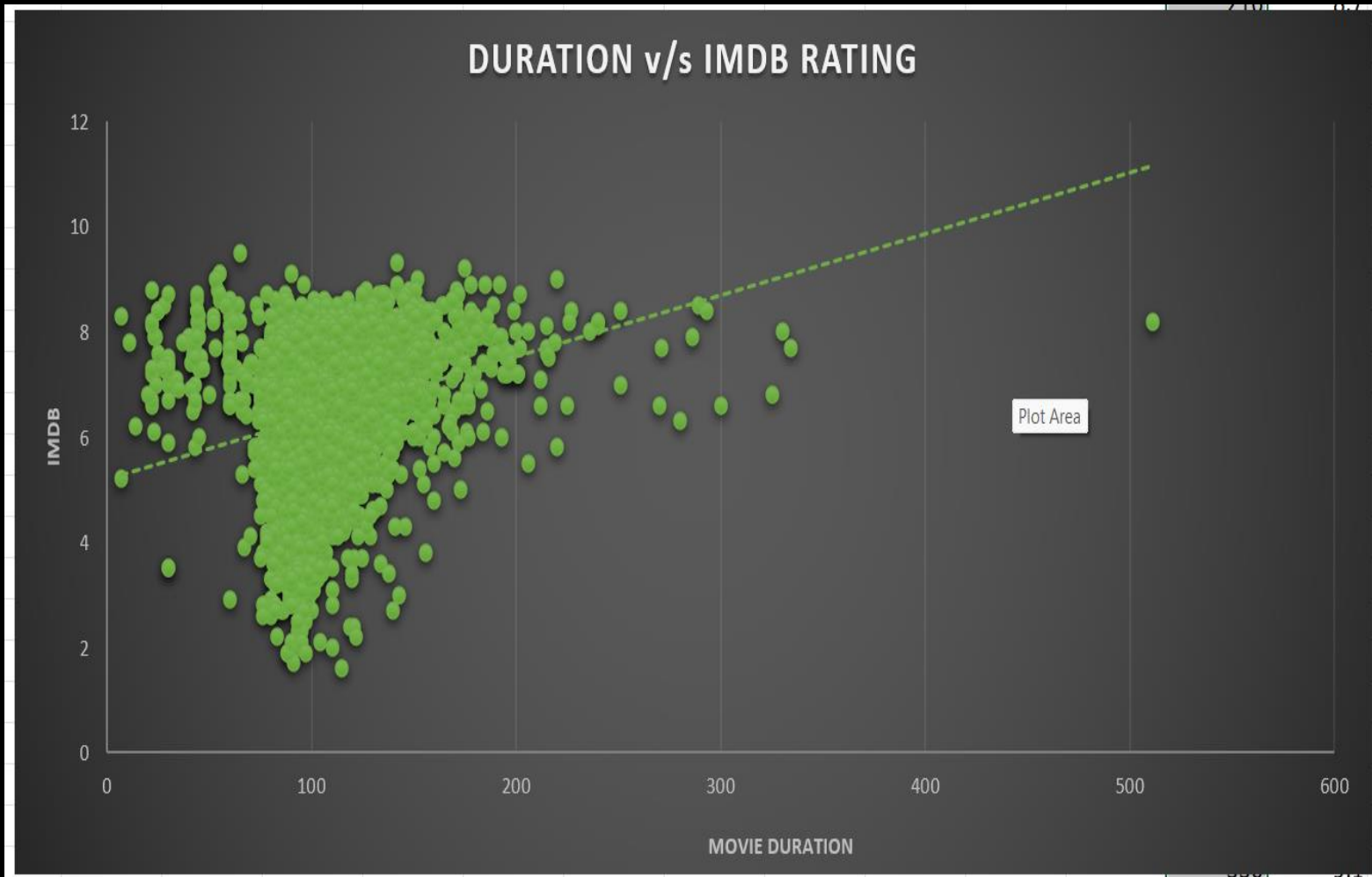
➤ TOP 3 GENRE based on average IMDB

1. FILM-NOIR
2. NEWS
3. DOCUMENTRY

Row Labels	Average of imdb_score
Action   Adventure   Biography   Drama   History	8.6
Action   Adventure   Crime   Drama   Sci-Fi   Thriller	8.8
Action   Adventure   Drama   Fantasy   War	8.4
Action   Animation   Crime   Sci-Fi   Thriller	8.4
Action   Drama   History   Thriller   War	8.5
Adventure   Animation   Comedy   Drama   Family   Fantasy	8.3
Adventure   Animation   Drama   Family   Musical	8.5
Adventure   Drama   Fantasy   Mystery	8.3
Adventure   Drama   History   Thriller   War	8.3
Adventure   Drama   Thriller   War	8.4
Biography   Drama   History   Music	8.3
Comedy   Drama   History   Romance	8.4
Comedy   Mystery   Thriller	8.3
Crime   Drama   Fantasy   Mystery	8.5
Documentary   Drama   Sport	8.3
<b>Grand Total</b>	<b>8.42</b>

GENRE	COUNT OF MOVIES	AVERAGE IMDB
Adventure	914	6.44
Drama	2571	6.76
Crime	883	6.56
Biography	292	7.15
Action	1143	6.24
Comedy	1862	6.19
Animation	242	6.58
Romance	1098	6.45
Mystery	493	6.49
Horror	556	5.83
Fantasy	604	6.31
Sci-Fi	611	6.28
Documentary	121	7.18
Thriller	1396	6.31
Game-Show	1	2.90
Family	544	6.25
Music	324	6.46
Western	94	6.70
Musical	132	6.51
Film-Noir	6	7.63
History	205	7.08
War	211	7.07
Sport	181	6.60
Reality-TV	2	4.75
Short	5	6.38
News	3	7.53

## MOVIE DURATION ANALYSIS



### BASED ON IMDB RATING –

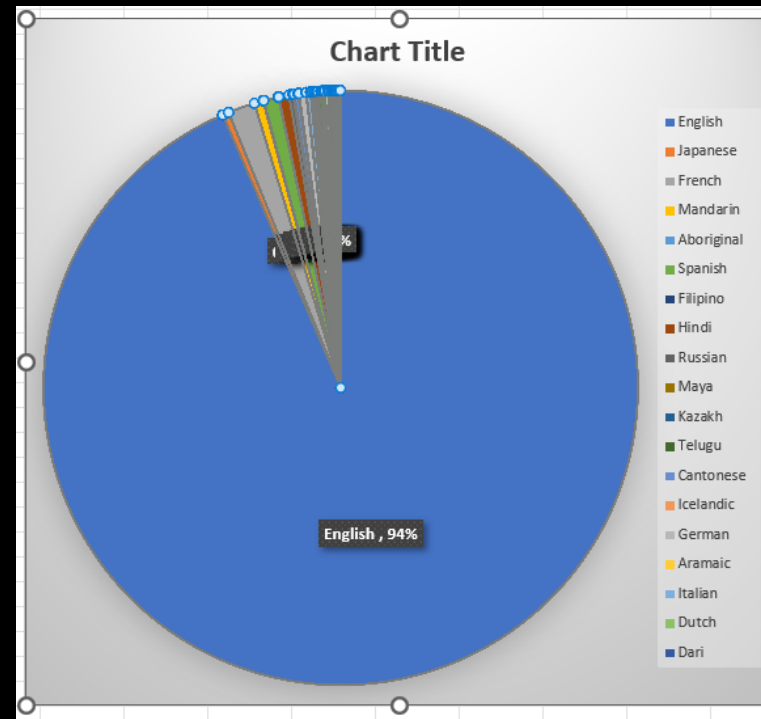
- Average – 6.44
- Median – 6.6
- Mode – 6.7

### BASED ON MOVIE DURATION –

- Average – 107.22 minutes
- Median – 103 minutes
- Mode – 90 minutes

## LANGUAGE ANALYSIS :-

- There were total 47 languages in which various films were released.
- 94% movies were released in English only.
- Telugu had the highest rating.
- Bosnian had the lowest average IMDB.



LANGUAGE	COUNT OF MOVIES	AVERAGE OF IMDB
English	4662	6.40
Japanese	17	7.35
French	73	7.04
Mandarin	24	6.79
Aboriginal	2	6.95
Spanish	40	6.94
Filipino	1	6.70
Hindi	28	6.63
Russian	11	6.36
Maya	1	7.80
Kazakh	1	6.00
Telugu	1	8.40
Cantonese	11	6.95
Icelandic	2	7.55
German	19	7.34
Aramaic	1	7.10
Italian	11	7.23
Dutch	4	7.43
Dari	2	7.50
Hebrew	5	7.58
Chinese	3	5.67
Mongolian	1	7.30
Swedish	5	7.44
Korean	8	7.39
Thai	3	6.63
Polish	4	8.25
Bosnian	1	4.30
None	2	7.95
Hungarian	1	7.10
Portuguese	8	7.49
Danish	5	7.50
Arabic	5	7.38
Norwegian	4	7.15
Czech	1	7.40
Kannada	1	7.10
Zulu	2	7.10
Panjabi	1	6.60
Tamil	1	5.10
Dzongkha	1	7.50
Vietnamese	1	7.40
Indonesian	2	7.80



DIRECTOR	COUNT OF MOVIES	AVERAGE IMDB
James Cameron	7	7.91
Gore Verbinski	7	6.99
Sam Mendes	8	7.50
Christopher Nolan	8	8.43
Doug Walker	1	7.10
Andrew Stanton	3	7.73
Sam Raimi	13	6.91
Nathan Greno	1	7.80
Joss Whedon	3	7.87
David Yates	3	7.20
Zack Snyder	8	7.18
Bryan Singer	8	7.29
Marc Forster	8	7.15
Andrew Adamson	5	7.08
Rob Marshall	5	6.60
Barry Sonnenfeld	7	6.46
Peter Jackson	12	7.68
Marc Webb	3	7.13
Ridley Scott	17	7.07
Chris Weitz	5	6.08
Anthony Russo	4	7.00
Peter Berg	6	6.67
Colin Trevorrow	2	7.00
Shane Black	2	7.40
Tim Burton	16	6.93
Brett Ratner	9	6.46
Dan Scanlon	1	7.30
Michael Bay	13	6.64
Joseph Kosinski	4	7.18
John Lasseter	5	7.38
Martin Campbell	9	6.71
Lee Unkrich	1	8.30
McG	6	6.08
James Wan	7	7.20
J.J. Abrams	4	7.45
Baz Luhrmann	5	7.12
Mike Newell	7	6.84
Guillermo del Toro	5	7.14

## • DIRECTOR ANALYSIS :-

- There were total 2398 directors in the dataset.
- Director John Blanchard, who directed only one movie had the highest IMDB rating of 9.5 .
- Steven Spielberg directed 26 movies which was the highest among them had the average rating of 7.48

## BUDGET ANALYSIS :-

director_name	duration	BUDGET	PROFIT MARGIN	GROSS	CORRELATION	genres	movie_title
James Cameron	178	\$23,70,00,000.00	\$52,35,05,847.00	\$76,05,05,847.00		Action Adventure Fantasy Sci-Fi	Avatar
Gore Verbinski	169	\$30,00,00,000.00	\$94,04,152.00	\$30,94,04,152.00		Action Adventure Fantasy	Pirates of the Caribbean: At World's End
Sam Mendes	148	\$24,50,00,000.00	-\$4,49,25,825.00	\$20,00,74,175.00		Action Adventure Thriller	Spectre
Christopher Nolan	164	\$25,00,00,000.00	\$19,81,30,642.00	\$44,81,30,642.00		Action Thriller	The Dark Knight Rises
Doug Walker	110					Documentary	Star Wars: Episode VII - The Force Awakens
Andrew Stanton	132	\$26,37,00,000.00	-\$19,06,41,321.00	\$7,30,58,679.00		Action Adventure Sci-Fi	John Carter
Sam Raimi	156	\$25,80,00,000.00	\$7,85,30,303.00	\$33,65,30,303.00		Action Adventure Romance	Spider-Man 3
Nathan Greno	100	\$26,00,00,000.00	-\$5,91,92,738.00	\$20,08,07,262.00		Adventure Animation Comedy Family Fantasy Musical Romance	Tangled
Joss Whedon	141	\$25,00,00,000.00	\$20,89,91,599.00	\$45,89,91,599.00		Action Adventure Sci-Fi	Avengers: Age of Ultron
David Yates	153	\$25,00,00,000.00	\$5,19,56,980.00	\$30,19,56,980.00		Adventure Family Fantasy Mystery	Harry Potter and the Half-Blood Prince
Zack Snyder	183	\$25,00,00,000.00	\$8,02,49,062.00	\$33,02,49,062.00		Action Adventure Sci-Fi	Batman v Superman: Dawn of Justice
Bryan Singer	169	\$20,90,00,000.00	-\$89,30,592.00	\$20,00,69,408.00		Action Adventure Sci-Fi	Superman Returns
Marc Forster	106	\$20,00,00,000.00	-\$3,16,31,573.00	\$16,83,68,427.00		Action Adventure	Quantum of Solace
Gore Verbinski	151	\$22,50,00,000.00	\$19,80,32,628.00	\$42,30,32,628.00		Action Adventure Fantasy	Pirates of the Caribbean: Dead Man's Chest
Gore Verbinski	150	\$21,50,00,000.00	-\$12,57,10,090.00	\$8,92,89,910.00		Action Adventure Western	The Lone Ranger
Zack Snyder	143	\$22,50,00,000.00	\$6,60,21,565.00	\$29,10,21,565.00		Action Adventure Fantasy Sci-Fi	Man of Steel
Andrew Adamson	150	\$22,50,00,000.00	-\$8,33,85,977.00	\$14,16,14,023.00		Action Adventure Family Fantasy	The Chronicles of Narnia: Prince Caspian
Joss Whedon	173	\$22,00,00,000.00	\$40,32,79,547.00	\$62,32,79,547.00		Action Adventure Sci-Fi	The Avengers
Rob Marshall	136	\$25,00,00,000.00	-\$89,36,125.00	\$24,10,63,875.00		Action Adventure Fantasy	Pirates of the Caribbean: On Stranger Tides
Barry Sonnenfeld	106	\$22,50,00,000.00	-\$4,59,79,146.00	\$17,90,20,854.00		Action Adventure Comedy Family Fantasy Sci-Fi	Men in Black 3
Peter Jackson	164	\$25,00,00,000.00	\$51,08,370.00	\$25,51,08,370.00		Adventure Fantasy	The Hobbit: The Battle of the Five Armies
Marc Webb	153	\$23,00,00,000.00	\$3,20,30,663.00	\$26,20,30,663.00		Action Adventure Fantasy	The Amazing Spider-Man
Ridley Scott	156	\$20,00,00,000.00	-\$9,47,80,265.00	\$10,52,19,735.00		Action Adventure Drama History	Robin Hood
Peter Jackson	186	\$22,50,00,000.00	\$3,33,55,354.00	\$25,83,55,354.00		Adventure Fantasy	The Hobbit: The Desolation of Smaug
Chris Weitz	113	\$18,00,00,000.00	-\$10,99,16,481.00	\$7,00,83,519.00		Adventure Family Fantasy	The Golden Compass
Peter Jackson	201	\$20,70,00,000.00	\$1,10,51,260.00	\$21,80,51,260.00		Action Adventure Drama Romance	King Kong
James Cameron	194	\$20,00,00,000.00	\$45,86,72,302.00	\$65,86,72,302.00		Drama Romance	Titanic
Anthony Russo	147	\$25,00,00,000.00	\$15,71,97,282.00	\$40,71,97,282.00		Action Adventure Sci-Fi	Captain America: Civil War
Peter Berg	131	\$20,90,00,000.00	-\$14,38,26,840.00	\$6,51,73,160.00		Action Adventure Sci-Fi Thriller	Battleship
Colin Trevorrow	124	\$15,00,00,000.00	\$50,21,77,271.00	\$65,21,77,271.00		Action Adventure Sci-Fi Thriller	Jurassic World
Sam Mendes	143	\$20,00,00,000.00	\$10,43,60,277.00	\$30,43,60,277.00		Action Adventure Thriller	Skyfall
Sam Raimi	135	\$20,00,00,000.00	\$17,33,77,893.00	\$37,33,77,893.00		Action Adventure Fantasy Romance	Spider-Man 2
Shane Black	195	\$20,00,00,000.00	\$20,89,92,272.00	\$40,89,92,272.00		Action Adventure Sci-Fi	Iron Man 3
Tim Burton	108	\$20,00,00,000.00	\$13,41,85,206.00	\$33,41,85,206.00		Adventure Family Fantasy	Alice in Wonderland
Brett Ratner	104	\$21,00,00,000.00	\$2,43,60,014.00	\$23,43,60,014.00		Action Adventure Fantasy Sci-Fi Thriller	X-Men: The Last Stand
Dan Scanlon	104	\$20,00,00,000.00	\$6,84,88,329.00	\$26,84,88,329.00		Adventure Animation Comedy Family Fantasy	Monsters University
Michael Bay	150	\$20,00,00,000.00	\$20,20,76,689.00	\$40,20,76,689.00		Action Adventure Sci-Fi	Transformers: Revenge of the Fallen
Michael Bay	155	\$21,00,00,000.00	\$3,54,38,137.00	\$24,54,38,137.00		Action Adventure Sci-Fi	Transformers: Age of Extinction

## BUDGET ANALYSIS :-

- James Cameron movie Avatar earned the maximum profit of **\$1,19,96,25,910.00**
- Steven Spielberg earned the maximum profit of **\$2,45,13,32,231.00** among the directors.
- Joon-ho-Bong directed two movies and he made a loss of **-\$12,24,79,35,559.00**.
- Joon-ho-Bong, South Korean movie The Host was the maximum loss made movie of **\$12,21,32,98,588.00**

DIRECTOR	COUNT OF MOVIES	AVERAGE IMDB	TOTAL PROFIT/LOSS
James Cameron	7	7.91	\$1,19,96,25,910.00
Gore Verbinski	7	6.99	\$25,86,00,995.00
Sam Mendes	8	7.50	\$27,58,63,626.00
Christopher Nolan	8	8.43	\$80,82,27,576.00
Doug Walker	1	7.10	
Andrew Stanton	3	7.73	\$14,00,04,438.00
Sam Raimi	13	6.91	\$61,85,74,198.00
Nathan Greno	1	7.80	-\$5,91,92,738.00
Joss Whedon	3	7.87	\$59,76,07,081.00
David Yates	3	7.20	\$13,80,09,605.00
Zack Snyder	8	7.18	\$26,51,92,852.00
Bryan Singer	8	7.29	\$8,47,39,614.00
Marc Forster	8	7.15	\$30,22,871.00
Andrew Adamson	5	7.08	\$53,49,42,785.00
Rob Marshall	5	6.60	\$10,64,30,006.00
Barry Sonnenfeld	7	6.46	\$19,29,24,214.00
Peter Jackson	12	7.68	\$90,09,69,279.00
Marc Webb	3	7.13	\$5,97,75,970.00
Ridley Scott	17	7.07	-\$9,22,28,312.00
Chris Weitz	5	6.08	\$17,32,00,378.00
Anthony Russo	4	7.00	\$25,68,82,536.00
Peter Berg	6	6.67	-\$4,09,59,813.00
Colin Trevorrow	2	7.00	\$50,54,35,063.00
Shane Black	2	7.40	\$19,82,28,109.00
Tim Burton	16	6.93	\$82,42,75,480.00
Brett Ratner	9	6.46	\$15,33,38,122.00
Dan Scanlon	1	7.30	\$6,84,88,329.00
Michael Bay	13	6.64	\$64,42,42,537.00
Joseph Kosinski	4	7.18	-\$2,68,74,691.00
John Lasseter	5	7.38	\$47,59,15,953.00
Martin Campbell	9	6.71	-\$7,54,38,353.00
Lee Unkrich	1	8.30	\$21,49,84,497.00
McG	6	6.08	-\$8,97,09,453.00
James Wan	7	7.20	\$51,42,76,204.00
J.J. Abrams	4	7.45	\$20,68,17,809.00
Baz Luhrmann	5	7.12	\$3,59,02,351.00
Mike Newell	7	6.84	\$1,45,92,779.00
Guillermo del Toro	5	7.14	-\$5,26,56,449.00
Steven Spielberg	26	7.48	\$2,45,13,32,231.00
Peter Sohn	1	6.80	\$12,30,70,338.00