Bringing Big Data to the Silver Screen: An Analytical Framework for Microsoft Movies.

April 2022

overview

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Project Goal

Through rigorous data analysis, we will make a series of recommendations that will maximize revenue for the new Microsoft Movies Division.

We will win by creating new films which re simultaneously beloved my moviegoers and profitable.
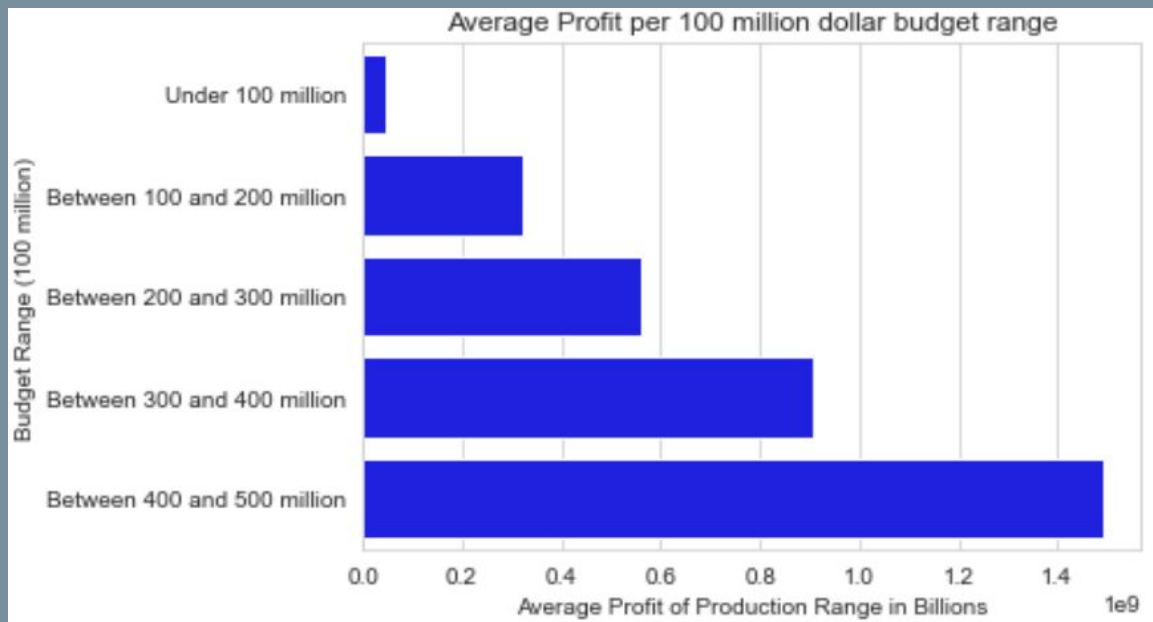
It takes money to make money!

Bigger budgets make you more money!
There is a strong correlation between a movie's production budget and worldwide gross. Therefore, the more money we invest, the more revenue we'll generate!

	id	release_date	movie	production_budget	domestic_gross	worldwide_gross
0	1	Dec	Avatar	425000000	760507625	2776345279
42	43	Dec	Titanic	200000000	659363944	2208208395
5	6	Dec	Star Wars Ep. VII: The Force Awakens	306000000	936662225	2053311220
6	7	Apr	Avengers: Infinity War	300000000	678815482	2048134200
33	34	Jun	Jurassic World	215000000	652270625	1648854864

Production Budget VS Worldwide Gross
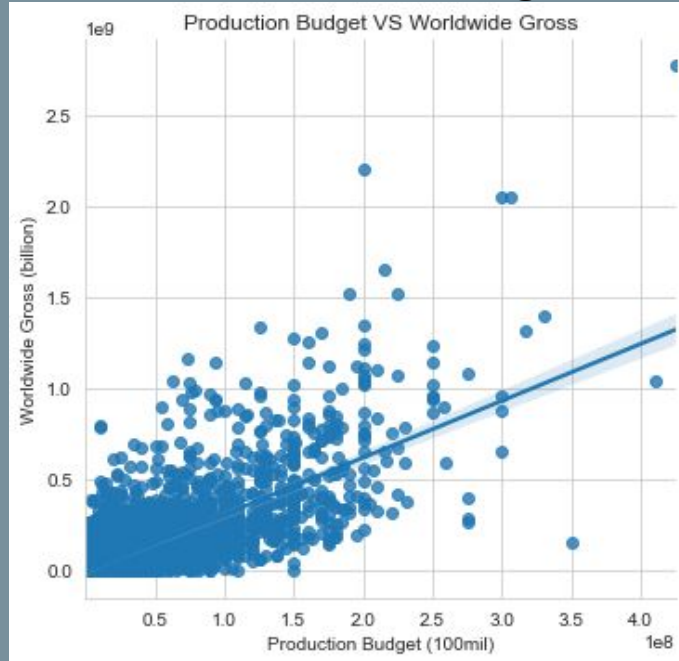
The more you spend, the more you make!

Average Profit per 100 million dollar budget range
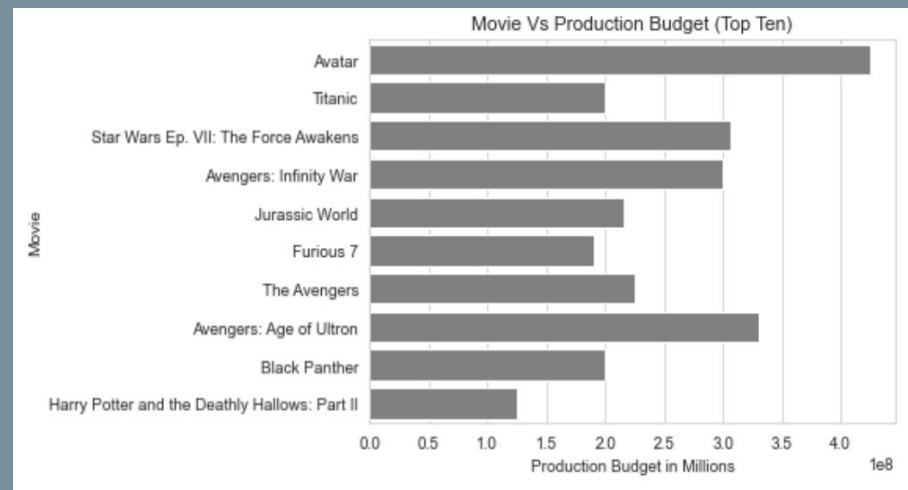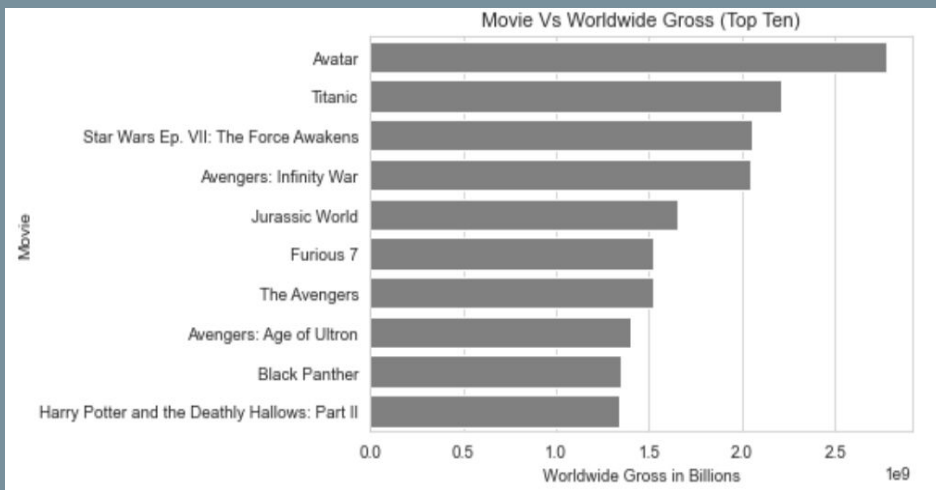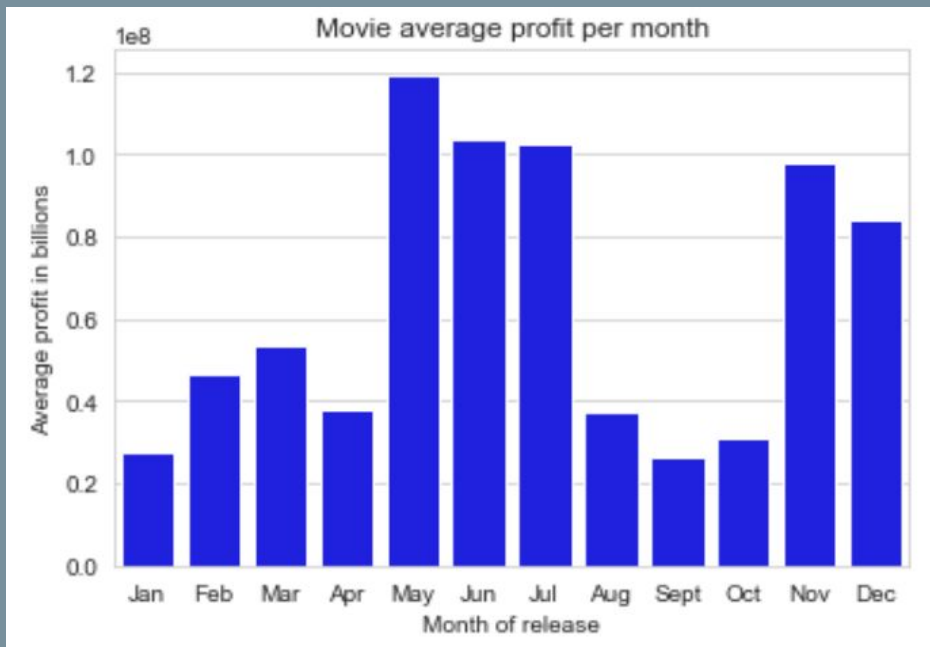
Pumping more money into the production budget will get you a better return.
You could release movie after movie with a budget under 100 million, and you'd still not come close to the average profit received from the higher range budgets.

# Investing more money will give you a better chance of a bigger return!

Maximize your profit by releasing during the right time!

The movie business is extremely seasonal. Here we see that our best bet will be to release movies during the busy summer season or over the holidays. Releasing movies during the slower months will produce considerable headwinds.

Maximizing profitability by avoiding saturated release months.

Which months have the most movies?

Release Month and Total Profit Of That Month
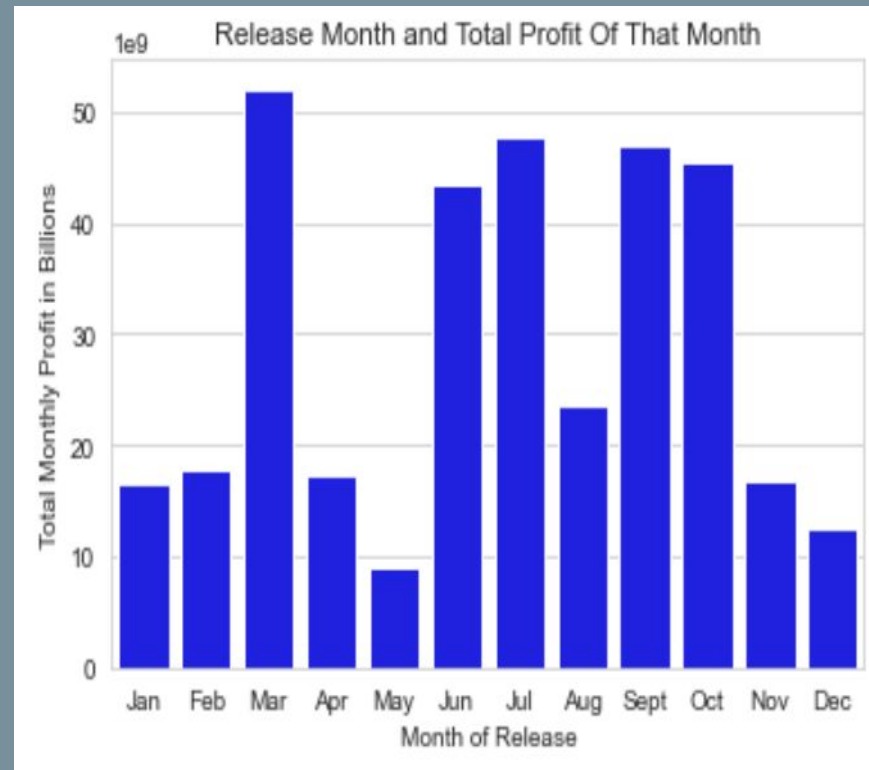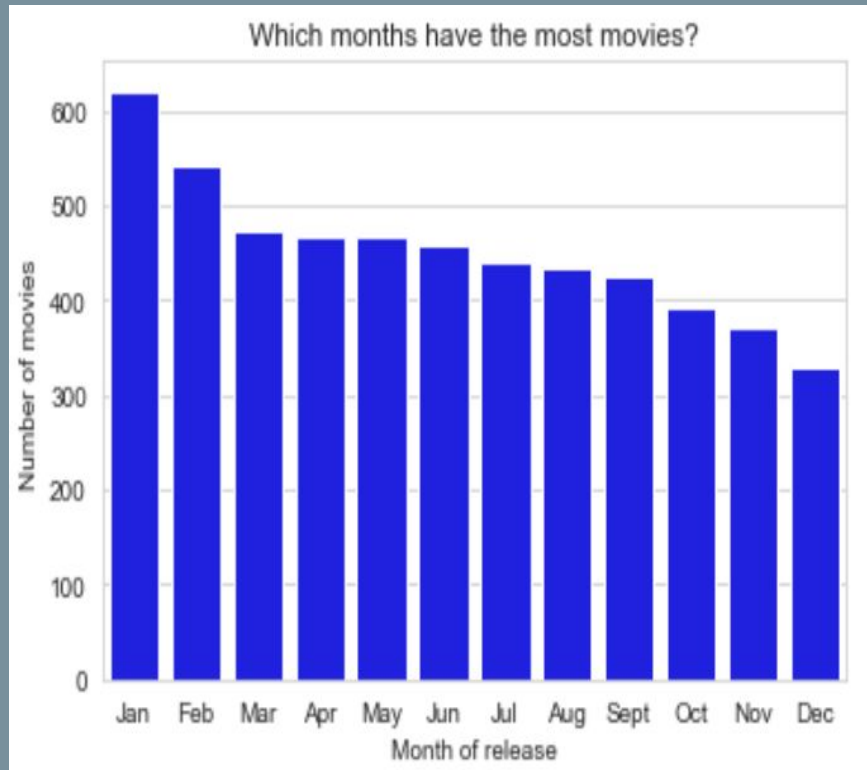
Which genres do people enjoy?

Genre by Average Rating
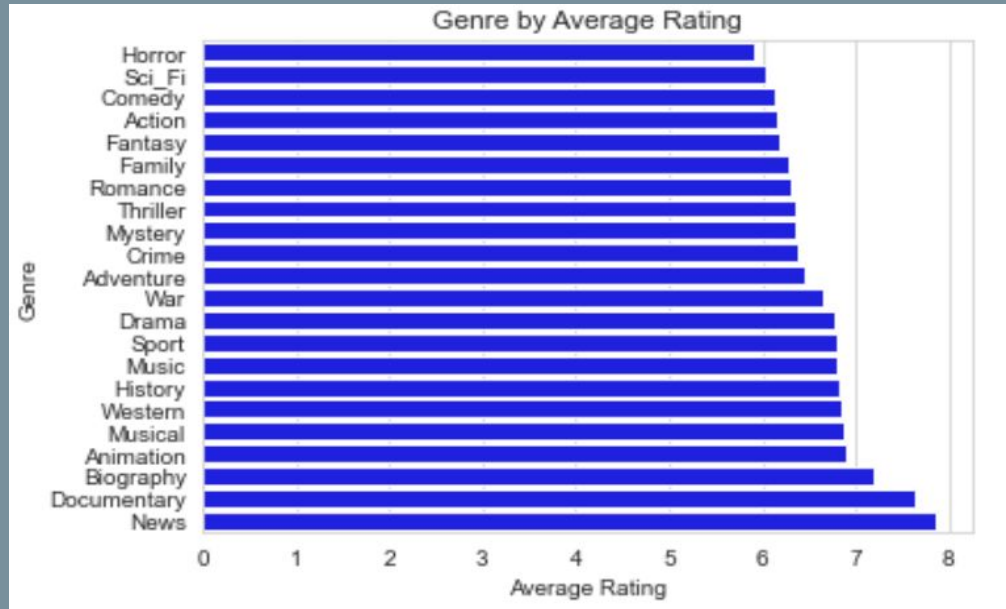
With this we can see which genres of movies will return the best ratings
The top 5 genres are
1.)   News
2.)   Documentary
3.)   Biography
4.)   Musical
5.)   Western

Does the genre rating of a movie affect how much money we'll make?
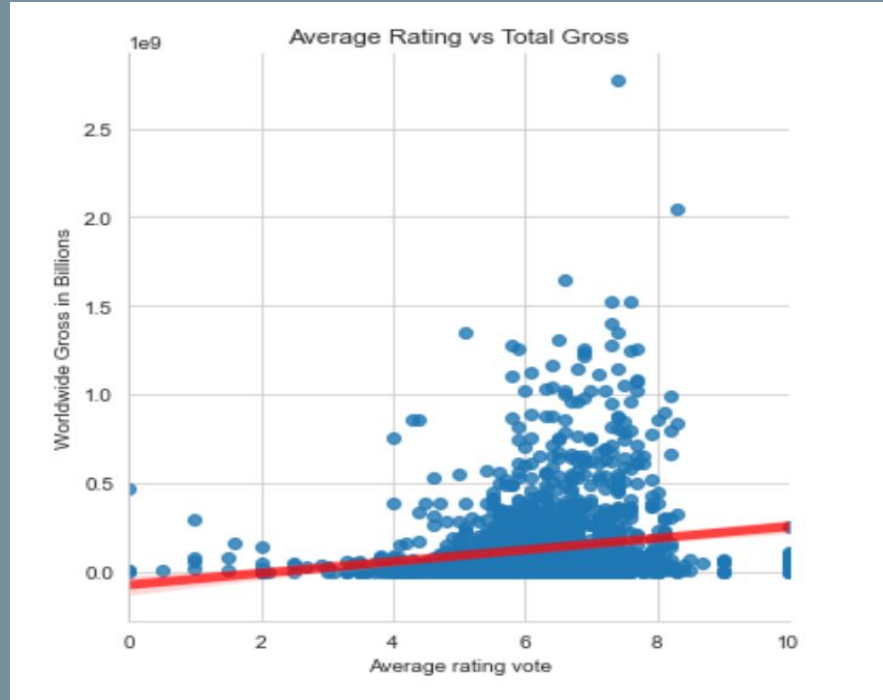
When comparing this with our last graph, we can make decisions on which genre will return a greater total gross. Comparing a genre's average rating with this graph will show a general idea of what kind of total gross we are looking at.

Top writers in the top 4 rated Genres

For the four genres most likely to generate revenue wile maintaining high ratings, I suggest approaching these ten writers.

Writer name	Average rating	category	genres
Brian Baucum	10.0	writer	Documentary
Heather Augustyn	10.0	writer	Documentary
Ana Beatriz Nogueira	10.0	writer	Documentary
Rok Andres	9.8	writer	Documentary
Cassandra Roberts	9.7	writer	Documentary
Jessie Deeter	9.7	writer	Documentary
Steve Armstrong	9.7	writer	Documentary
Alex Bakker	9.6	writer	Documentary
Mike Tucker	9.5	writer	Documentary
Mukunda Das	9.5	writer	Documentary

Writer name	Average Rating	category	genres
Bienvenido Santiago	8.6	writer	Biography
Harjeet Singh	8.5	writer	Biography
Tejinder Harjit	8.5	writer	Biography
Shahzad Firdaus	8.0	writer	Biography
Luke Hwong	7.4	writer	Biography
Tony Hu	7.4	writer	Biography
Wong Siew Chooi	7.4	writer	Biography
Matt Harvey	7.3	writer	Biography
Dominic Morgan	7.3	writer	Biography
Ben Sihombing	7.1	writer	Biography

Writer name	Average Rating	category	genres
Purushottam Darvekar	8.8	writer	Musical
Prakash Kapadia	8.8	writer	Musical
Harvey Fierstein	8.5	writer	Musical
Bob Tzudiker	8.5	writer	Musical
Noni White	8.5	writer	Musical
Gilles Marchand	6.1	writer	Musical
Pierre De Clercq	6.0	writer	Musical
Heather Ravarino	5.3	writer	Musical
Lex de Azevedo	5.3	writer	Musical
Douglas C. Stewart	5.3	writer	Musical

Writer name	Average Rating	category	genres
Usha Kaljai	9.2	writer	Animation
Jyoti Deshpande	8.4	writer	Animation
Pathik Vats	8.4	writer	Animation
Nur Naquyah bt Burhanuddin	8.1	writer	Animation
Aliya bt Nazlan	8.1	writer	Animation
Hjh. Ainon Ariff	8.1	writer	Animation
Daraka Wongsiri	7.9	writer	Animation
Bryan Edward Hill	7.9	writer	Animation
Suphakorn Riansuwan	7.9	writer	Animation
Yana Toboso	7.7	writer	Animation

Overall Suggestion

1.) We want to have a larger production budget, the data shows that generally larger production budgets will have a higher overall gross and profit. I suggest a 300 million to 400 million dollar production budget, do to the fact that only 2 movies had over 400 million it is hard to tell if the average profit will remain at around 1.5 billion.

2.) May, June, July, November, and December should be our target release months. Movies released during these months have the highest returns, and the holiday month of december is particularly promising due to the lack of competition with other new releases.

3.) Musical, Animation, Documentary, and Biography are genres with compelling opportunities, due to the fact the generate high ratings and high revenue.

4.) When targeting those four genres, we should target our outreach to the top ten most highly rated writers in that category.