**Introduction**

Before choosing is it write to invest in any industry, it is a good practice to have a deeper look into that industry before committing the decision.

I’m going to analyze a dataset in the movie industry in the last 50 years, trying to figure out key factors affecting the success of movies and to examine whether is it good to invest or not in that industry.

The dataset I'm using is collected from (The movie database - TMDB), it contains information about 10,000 movies including main features but not limited to:

* id and imdb\_id
* title, genre
* revenue, revenue
* director, cast, production company
* popularity, vote rate, vote count

**Problem Description**

Exploring my best options for investments requires answering the following 7 questions:

1- What is the performance of the movie industry over the last 50 years in terms of the following:

* number of movies released
* total budget
* total revenue

2- Which seasons are best to produce movies for more customers?

3- Is there a correlation between average vote and average vote count for movies?

4- Is there a correlation between average vote and runtime for movies?

5- What are the top movie genres in terms of the following:

* number of movies released
* total budget allocated
* total revenues

6- Who are the best directors in terms of a KPI combining (movie average vote and revenue)?

7- What is the list of top production companies in terms of revenue, budget?

**Solution**

Using the tools of Numpy, Pandas, Python, and basic concepts of Data Analysis and EDA. we have succeeded to answer some questions to help us know more about the movie industry so that we can make a better decision before investing and here are the best options for any new investor who wants to create something remarkable:

* Release movies in high seasons (summer, autumn), since there will be high competition but also you will have lot of reviewers to watch and review your movies
* invest in Drama, comedy and romance movies, they don't require to have a big budget for investment. if you are willing to risk, invest in action and adventure movies for HIGHER profits (ROI). Also, a mix of drama, comedy with light action would be a good choice
* Try to arrange a meeting with Mr. Michael Bay or Mr. Francis Lawrence for your next movie. as they have good KPIs over the last years and good experience to make a good movie.

**Limitations**

The above analysis is based on the above dataset which has the following characteristics:

1- It has data up to the only year 2015 and not beyond

2- There are 1173 null values, most of them are not known production companies

3- There are 4584 rows where there is no information about neither revenue nor budget

**Assumptions**

NA

**Inputs**

TMDb Dataset

**Outputs**

NA