



## Computing Vision Recommendations And Findings

Lights, Camera, Expansion into the Cinematic Future

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# Introductions

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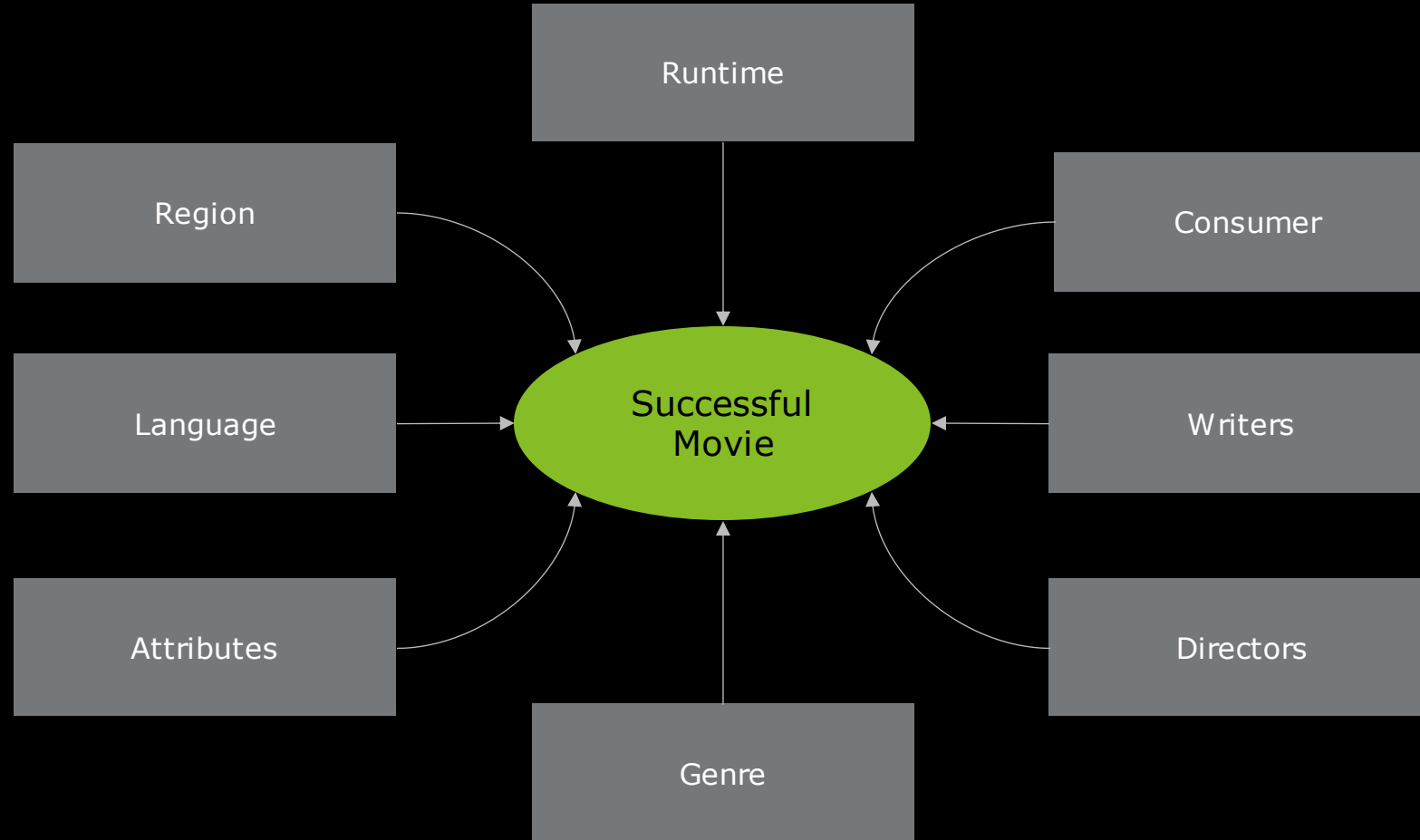


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## OVERVIEW

We have been tasked with determining **which type of movie would be the best investment** for a new movie studio. Based on empirical data collected over the past couple of years.

# What goes into making a successful movie



## BUSINESS UNDERSTANDING

We want your initial investment in a movie to be successful so you can hit the ground running in your new and exciting venture. For that to be a success, we have taken a deep dive into the data to determine **how long a movie should be, what rating, and how much to spend** to insure a hit in the box office.

# Data Understanding

## Box Office Mojo

- studio
- Domestic gross
- Foreign gross

## Rotten Tomatoes

- MPAA rating of the movie.
- The year the movie came out

## The Movie Database

- The name of the movie
- The popularity of the movie
- How many viewers contributed to the popularity column

## The Numbers

- The production budget
- The movie run-time

# Data Analysis



We used these data files because they have data columns that have the right combination of data to provide insightful advance to the stakeholders.



After importing the necessary python libraries, we converted the files into Pandas Dataframes and merged based on similar column names.



Once the Dataframes were properly merged, we had to format the columns into the right data type for analysis.

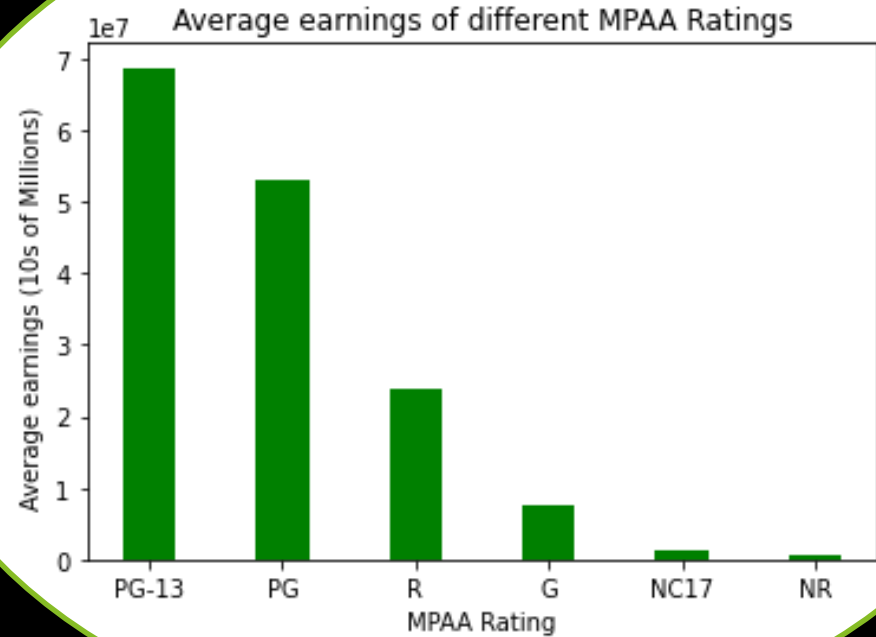


Once we combined and pre-processed the DataFrames we zoned in on variables that related to expanses and revenues, for example.

- Movie production budget
- Movie worldwide gross
- Movie MPAA ratings







We recommend movie producers focus on making family friendly movies that are rated **PG-13 or PG** because they make **more money** on **average**.

# Hypothesis



What is a Hypothesis Test?

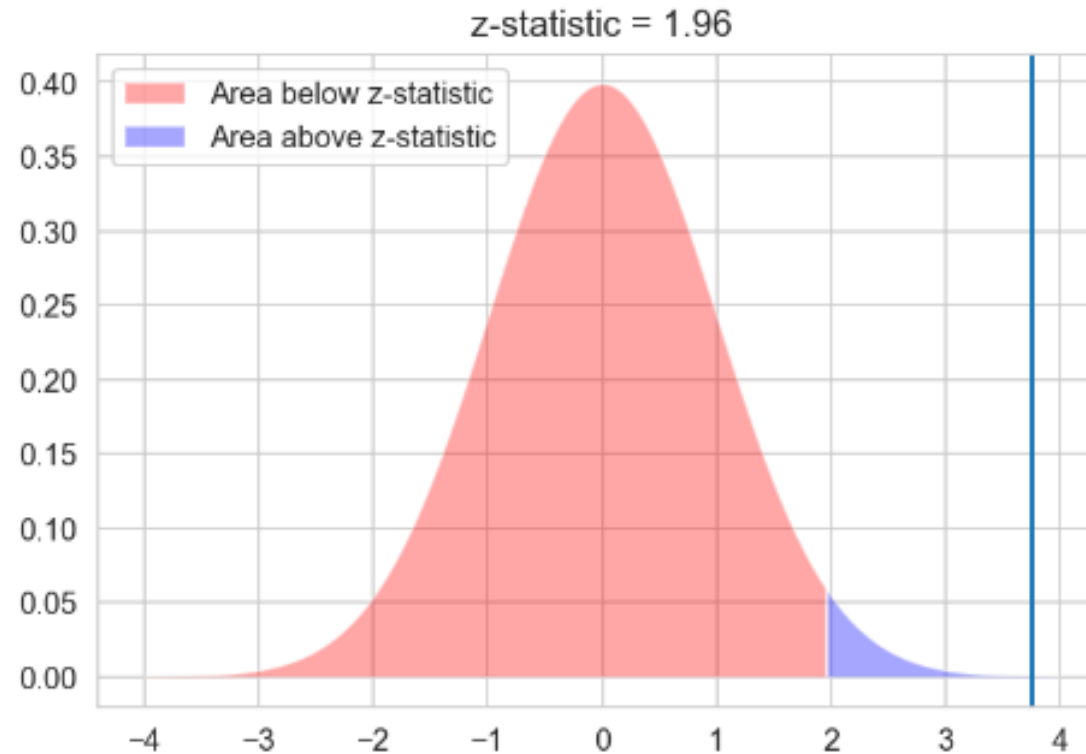
Question: Does having a PG-13 movie rating affect the box office numbers when a movie releases

\*A PG-13 rating should not affect the box office numbers.

\*A PG-13 rating should affect the box office numbers.

# Hypothesis

Based on the Hypothesis Test we completed on the data; we have determined with a **95% confidence rate** that creating a **PG13** does affect the box office numbers.

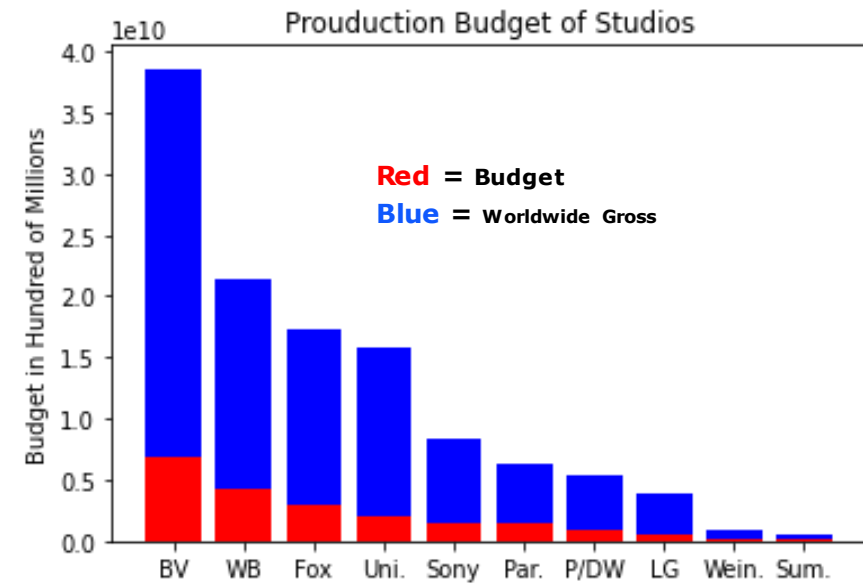


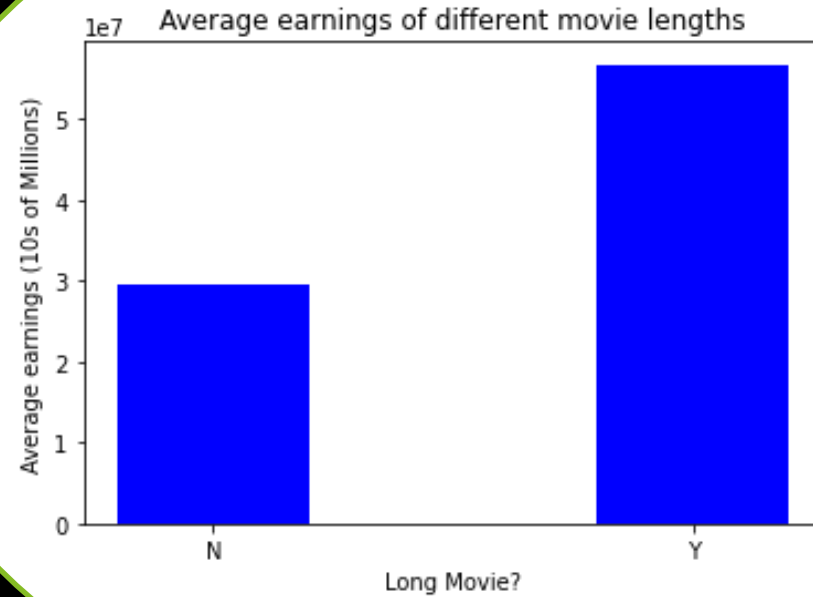


We recommended that movie producers make their movies with a **higher budget** than the industry standard to maximize profit.

\*Based on movies that grossed **\$400,000,000** or more.

	studio	production_budget	worldwide_gross
0	BV	6.831200e+09	3.176650e+10
1	WB	4.166000e+09	1.731940e+10
2	Fox	2.937000e+09	1.378231e+10
3	Uni.	1.974000e+09	1.440055e+10
4	Sony	1.440000e+09	6.862027e+09
5	Par.	1.394000e+09	4.907887e+09
6	P/DW	9.500000e+08	4.341653e+09
7	LG	5.150000e+08	3.384705e+09
8	Wein.	1.000000e+08	4.499483e+08
9	Sum.	6.800000e+07	7.061028e+08

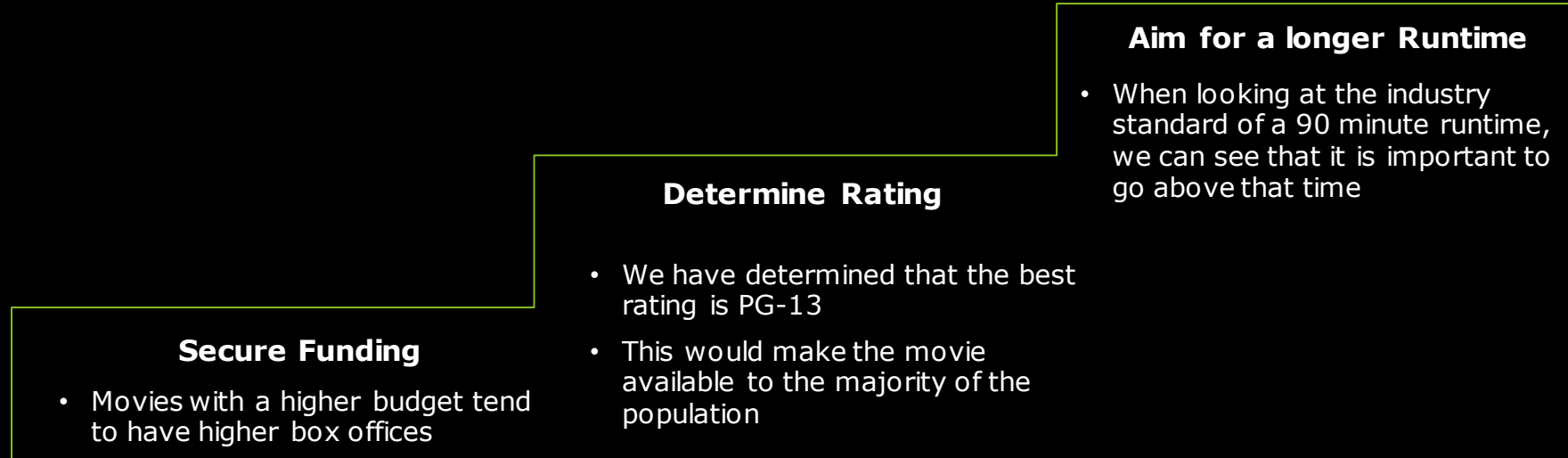




We recommended that movie producers make their movies run-time **above** the industry standard of **90 minutes** to maximize profit.

\*A long movie is considered long if the runtime is above **107** minutes.

# Next Steps



# THANK YOU

## Q & A

