



Computing Vision Movie Studio Initiative

Computing Vision

Nobody said this would be easy



1. Movies cost money: Production, distribution, and marketing
2. Primary revenue source: box office sales and DVD + Digital release
3. Need to invest in the right projects to see the greatest return
4. Industry data can tell us how to make the most at the box office

Why should Computing Vision pay attention to **box office revenue**?

Having box office success can recover the initial upfront investment of producing a film.

Mitigating Risk

Median production budget is **\$17 million**
Recover cost of investment

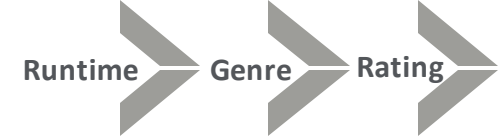
Public Sentiment

Indicator of perception and media buzz
Assists in forecasting for future release



Film recommendations

The components of a box office hit



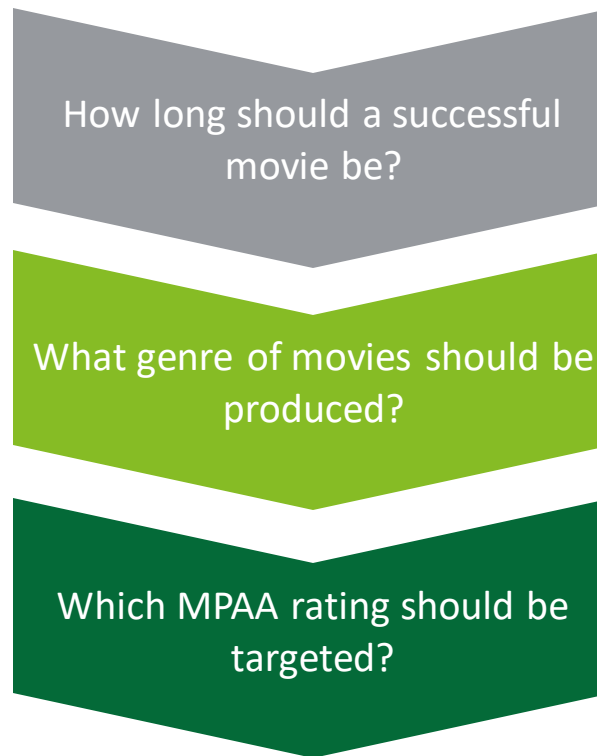
Components of a box office hit:



What are our guiding questions for analysis?

Box Office Mojo dataset provides three explanatory variables that drive domestic box office revenue

Three Guiding Questions for how to Create a Box Office Hit:



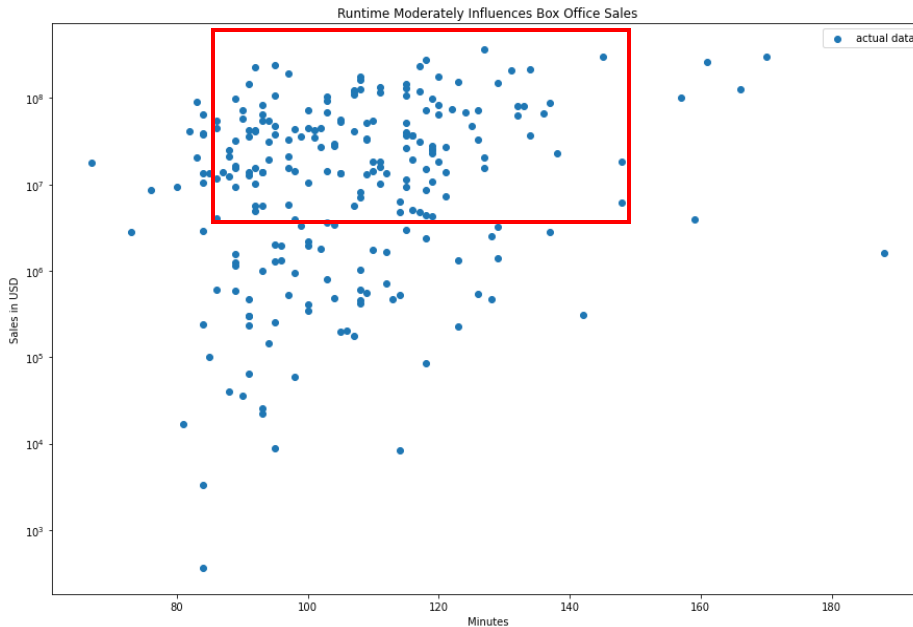
Runtime



Data insights on a film's runtime.

How short is too short, and how long is too long?

Between 105 and 140 minutes is the Goldilocks Zone for box office success



Medium correlation between runtime and revenue.

Most high-performers between 90 & 150 minutes.

Few movies are below 80 minutes or above 150 minutes.

Suggestions:

- Produce movies with lengths between 105 and 140 minutes
- Exercise caution producing movies below 90 minutes
- Movies should be neither shorter than 70 minutes nor longer than 140 minutes

Which Genre to Produce?

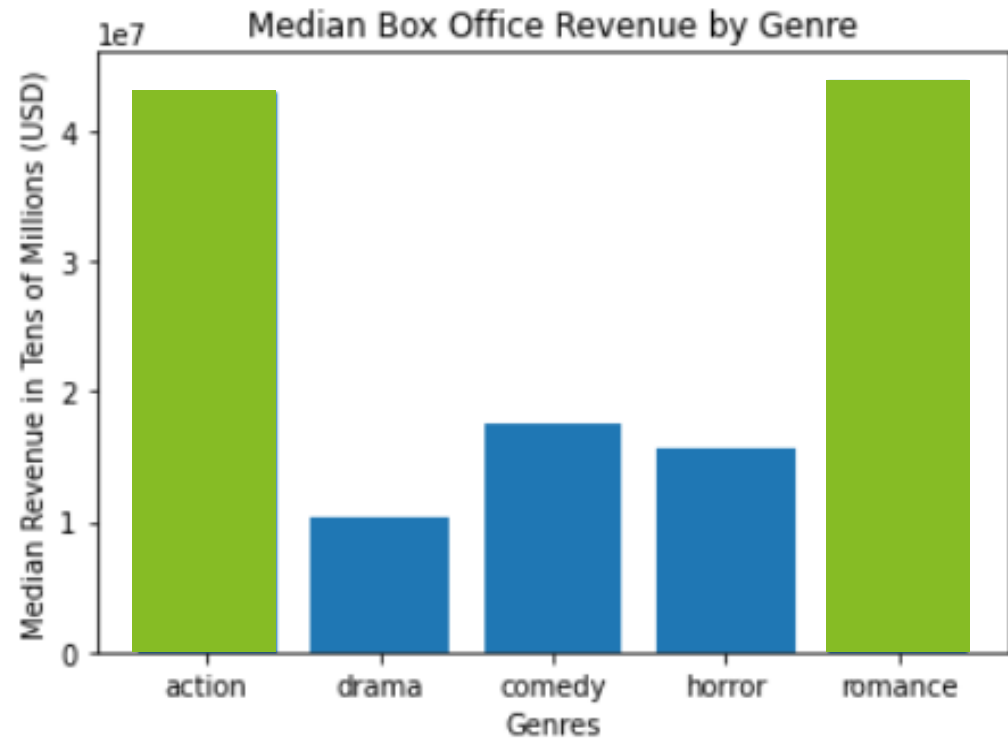
Themes that connect with audiences the most



What does the data tell us about genre?

Action high performer, but romance edges in front.

Median Revenue: Five
Primary Genres

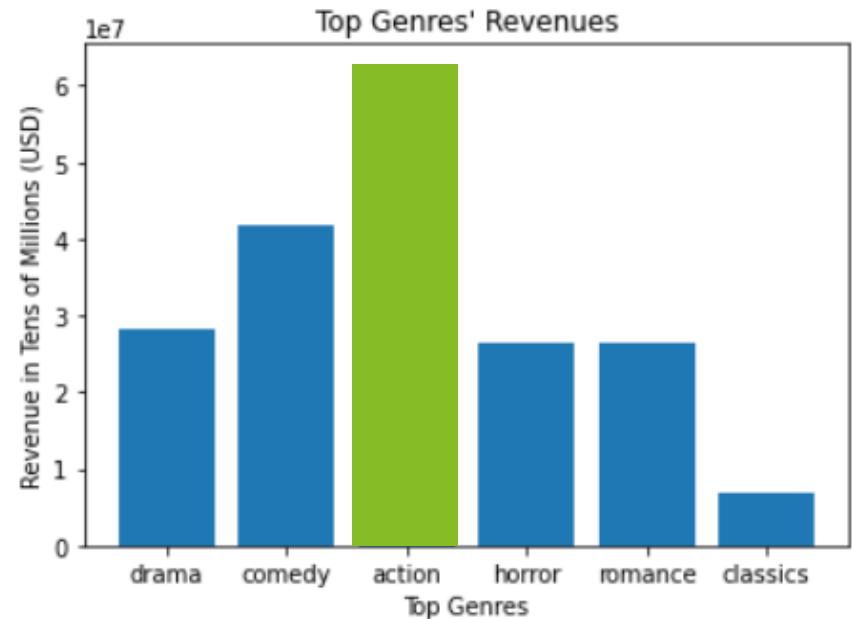


What can a hypothesis test tell us?

Prioritize production of action films

Tested whether sample average of action films earned more box office revenue than all genres

Action film revenue is statistically significantly higher than the rest of the genres' revenue



Finding the right audience

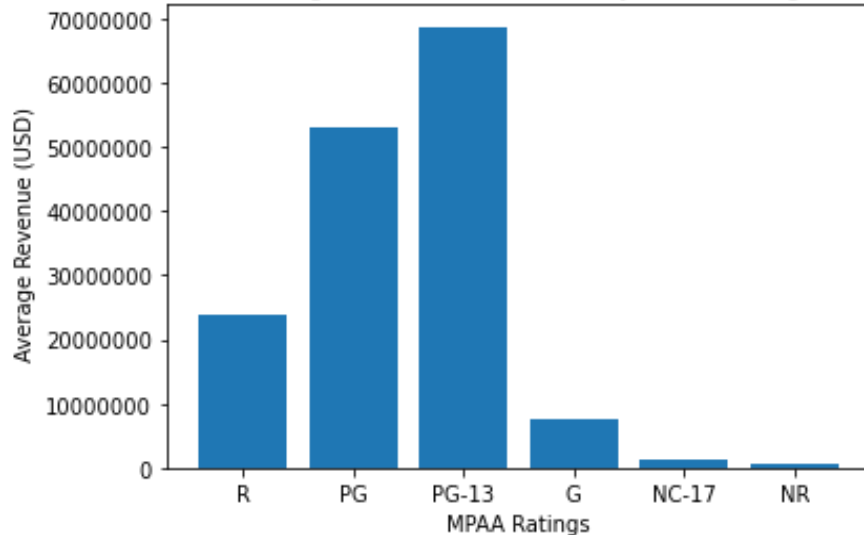
Bringing the most value to the most people



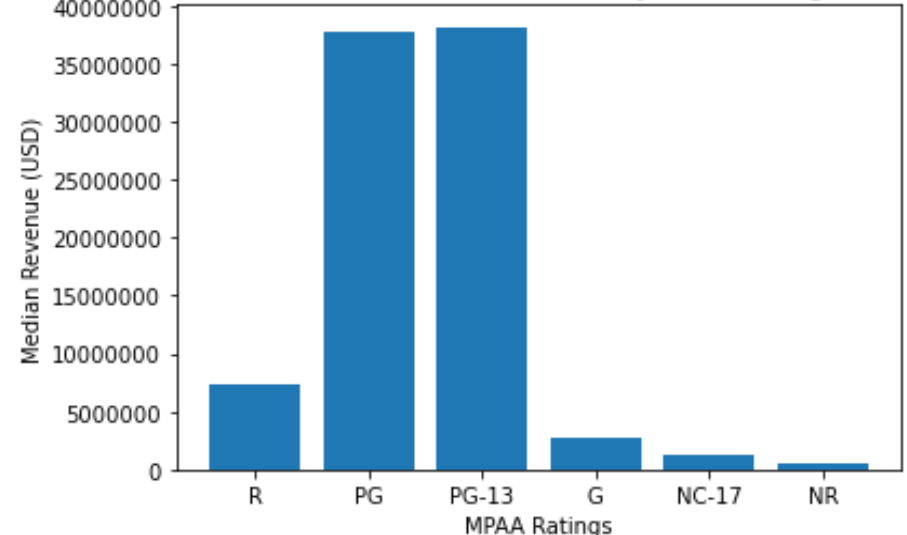
How do we continue to appeal to a broad audience?

MPAA PG-13 films are top performers

Average Box Office Revenue by MPAA Rating



Median Box Office Revenue by MPAA Rating



Suggestion: Prioritize production of PG-13 films

What Makes a Box Office Hit?

Summary of business insights and recommendations



Runtime

1. Between **105 to 140 minutes** in length
2. Avoid producing films shorter than 70 minutes
3. Avoid producing films longer than 140 minutes



Genre

1. **Action**
2. Romance
3. Comedy



MPAA Rating

1. **PG-13**
2. PG

Rationale for our decisions

Understanding the reasoning and limits of the findings and general approach

Limitations

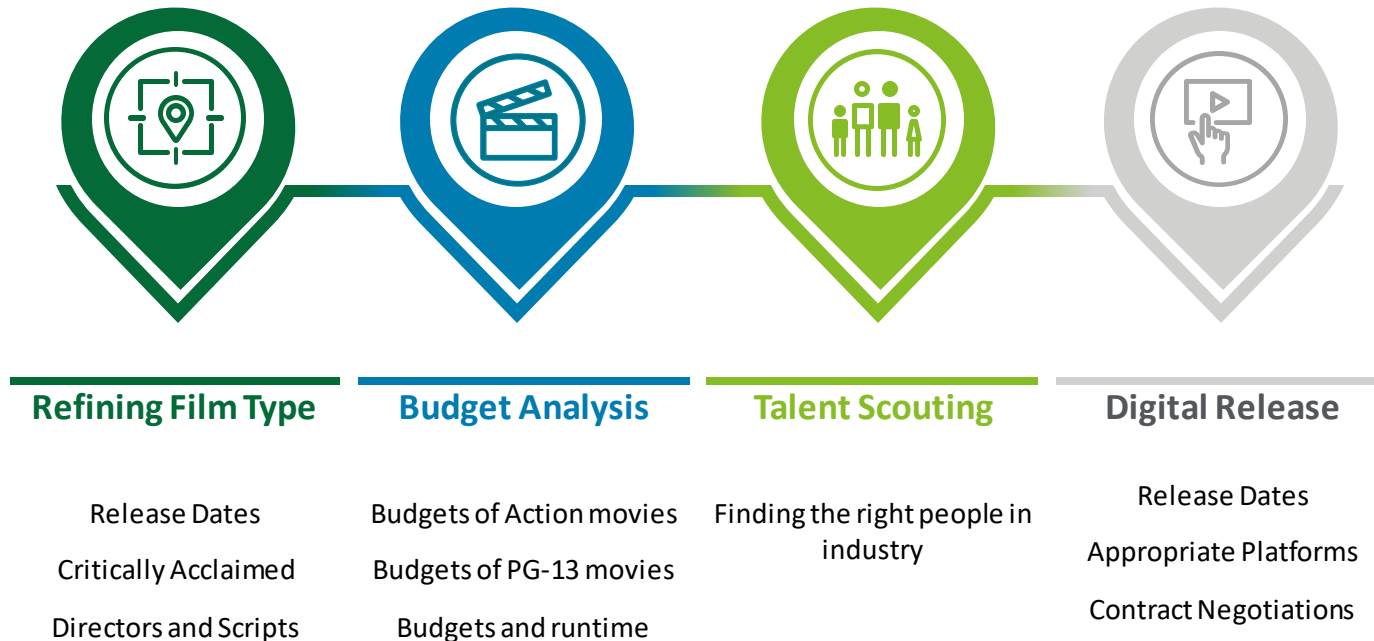
- Only calculates revenue and not profit
- The findings have a lot of overlap, even after narrowing movies down to ones that conform with the findings there are still many ways to approach the actual movie-making process

Rationale

- Used mean to calculate the average revenue for genres and maturity ratings.
- Median accounted for outliers
- A range for the run time to show the best lengths

What else can we offer?

Deloitte can do it all.



Thank You

Any Questions?

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