Spooky Statistics

Uncovering the Trends Behind Horror Movies

The Positron Pumpkins



INTRODUCTION

What actually makes a horror movie successful? For studios, knowing which features are linked to success can guide decisions about when to release a film and influence media campaigns. For consumers, it raises a fun question: can small details of a film influence how well it does, even before anyone watches it? Through statistical analysis, Spooky Statistics looks beyond the scary scenes to uncover what the data can tell us about the industry of fear.

Research question:

What characteristics are associated with horror movie popularity, measured by revenue and audience ratings?

OUR DATASET

A look inside the numbers behind horror movies

Columns

21

Rows

32,540

Data Source

“The Movie Database” via Kaggle

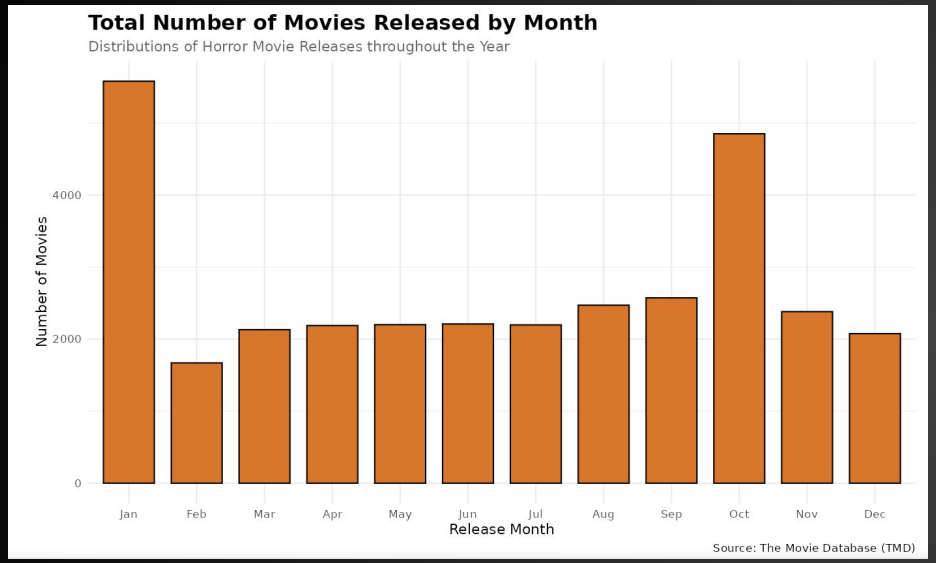
Movie Characteristics

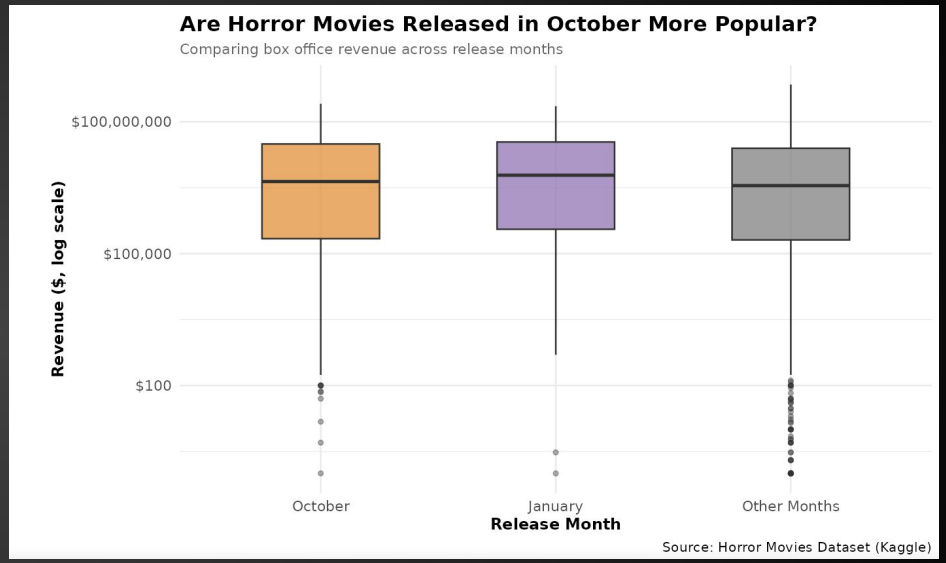
- Release month & year
- Genre
- Title
- Overview keywords

Popularity Measures

- Box Office Revenues
- Audience Ratings

Does *Timing* Affect Success?





TAKEAWAY: Horror movies are most frequently released in **JANUARY**, but box office revenue is similar across the popular October and January vs. Other Months

What are the Top 10 Most Common Words?

Overview

	word	n
	<chr>	<int>
1	woman	3071
2	film	3016
3	house	2957
4	life	2909
5	horror	2831
6	night	2706
7	friends	2331
8	family	2317
9	mysterious	2237
10	home	2124

Tagline

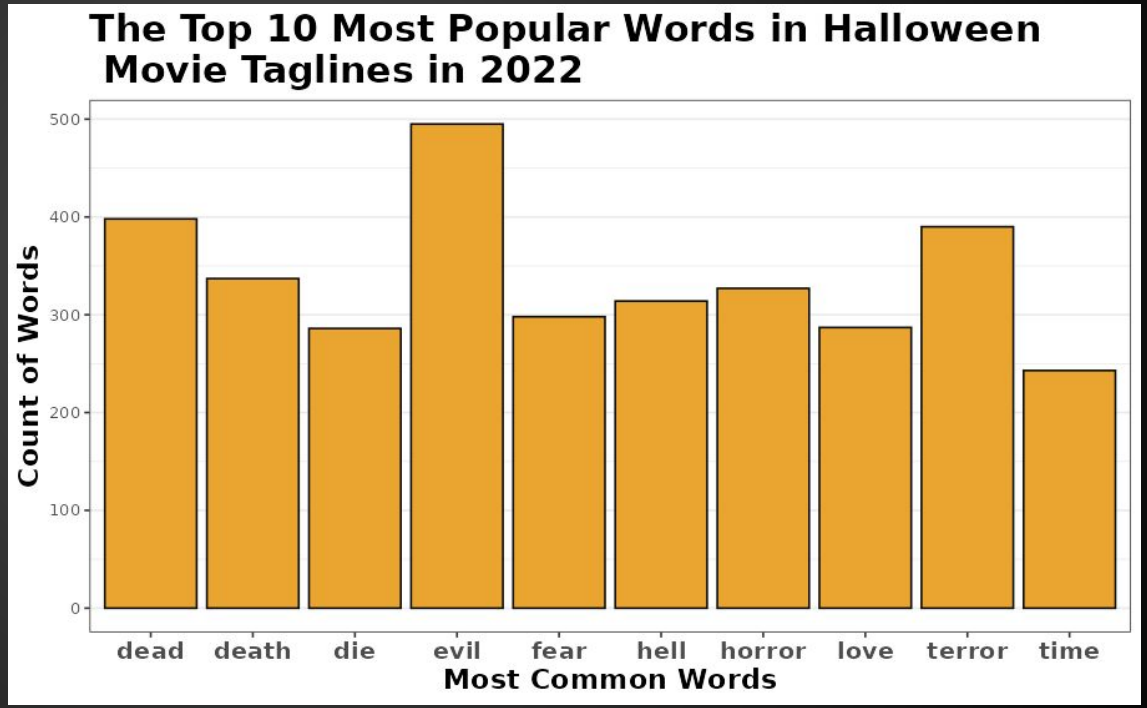
	word	n
	<chr>	<int>
1	evil	495
2	dead	398
3	terror	390
4	death	337
5	horror	327
6	hell	314
7	fear	298
8	love	287
9	die	286
10	time	243

Visualizing Common Tagline Words

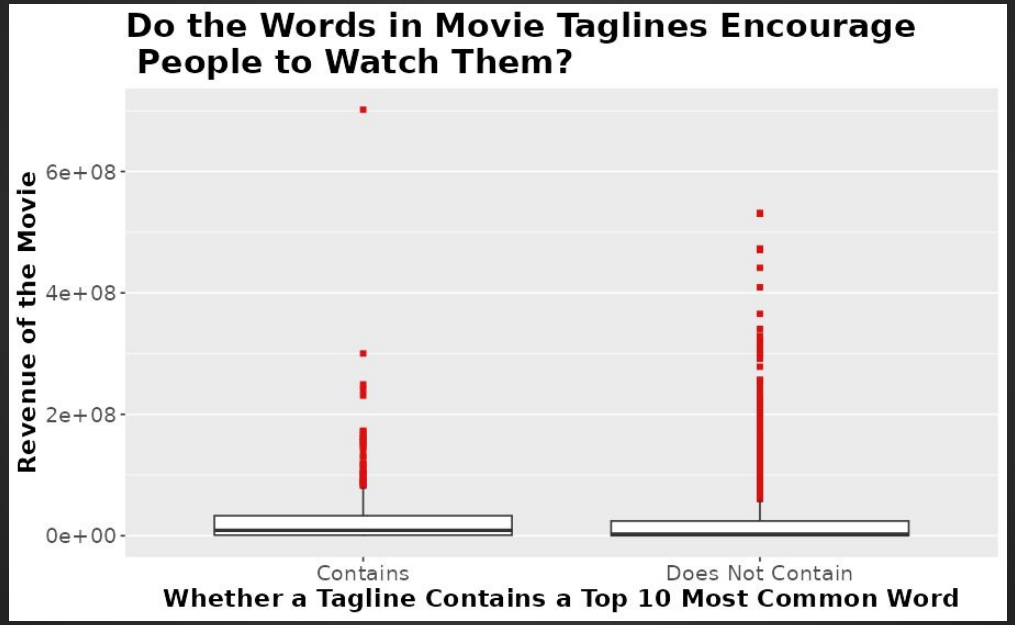
Things to note from the chart:

- Evil is the most common words found in the taglines provided in our dataset
- Dead and terror are very close in count for second and third place, respectively.

Where do we go from here?



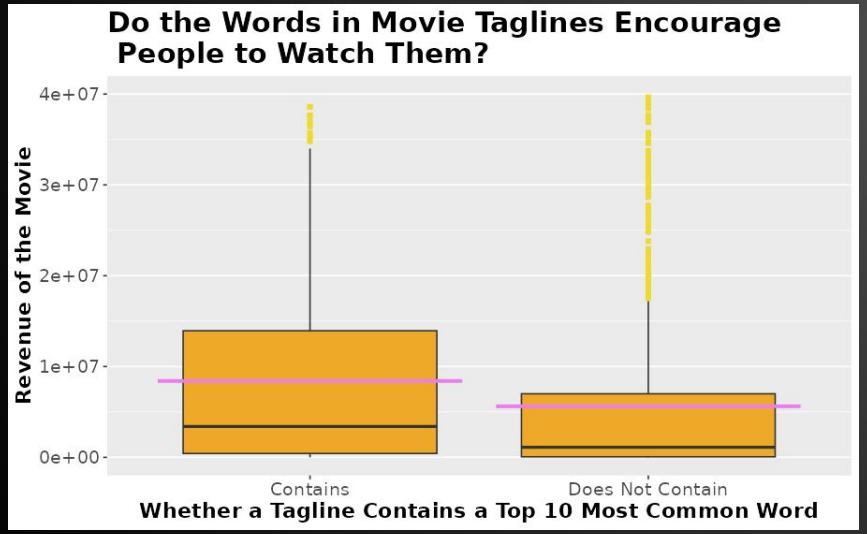
Do Taglines that Use Any of The Top 10 Words Make More Revenue Than Those Without?



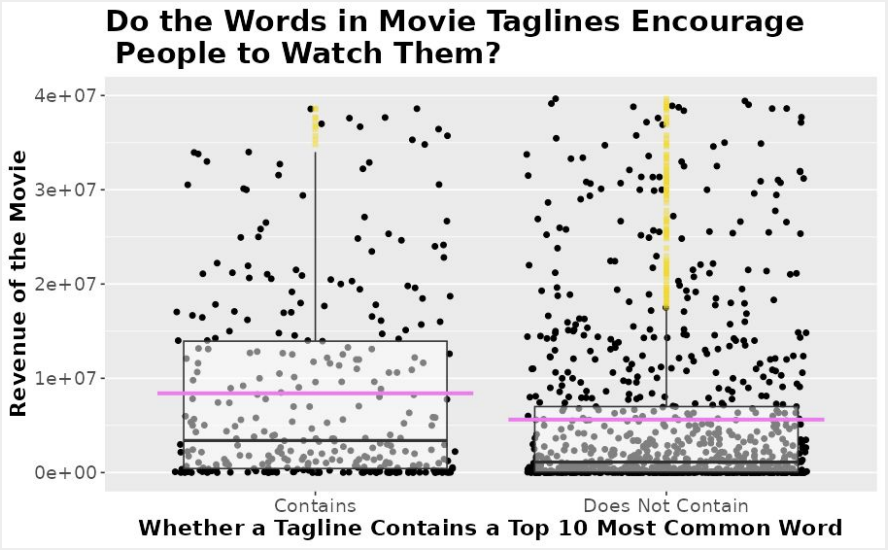
There's a problem here. We can't see our boxplot! Also, how are these data points distributed?

Our Zoomed in Plot

Filtering out outliers removed 311 points from both categories!



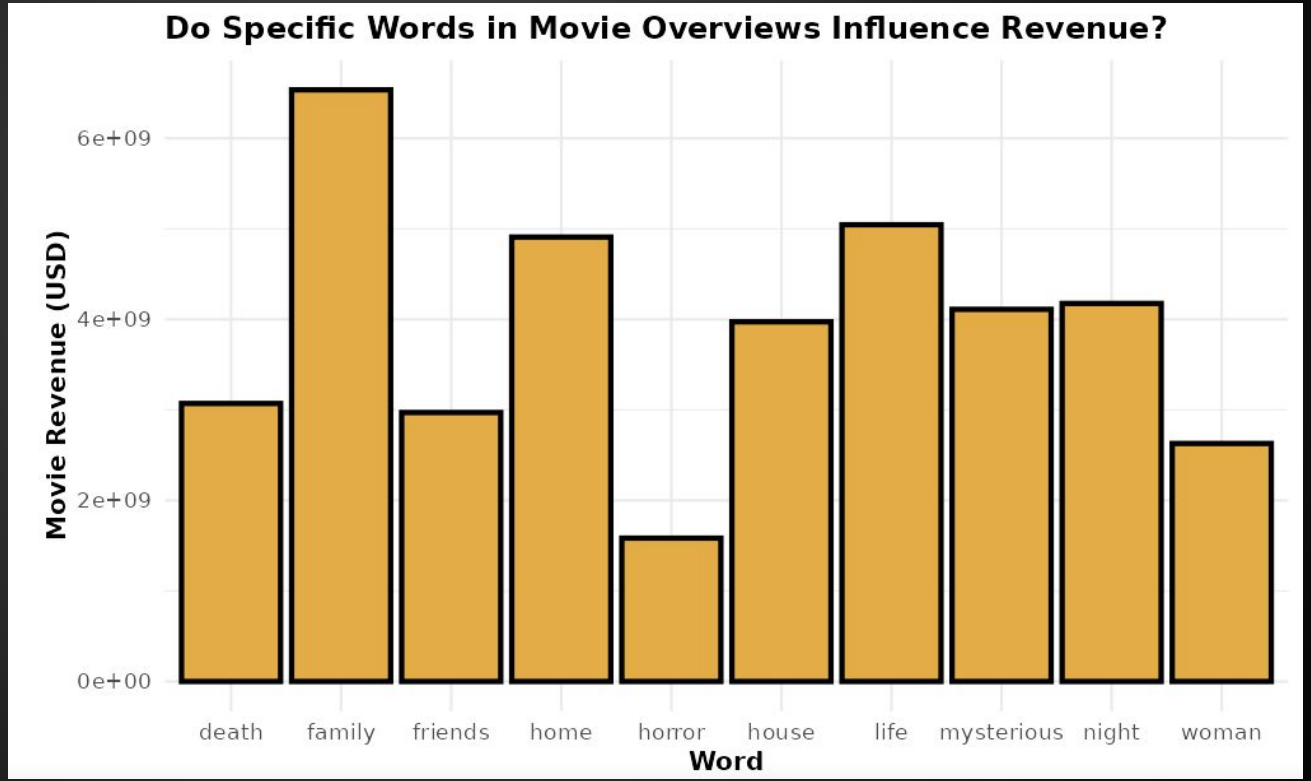
Our Distribution Plot



Do The Most Common Words in Movie Overviews Influence Revenue?

Things to note from the chart:

- Movie overviews that include the words “family”, “home”, and “life” are associated with the highest total revenue
- Movies with the word “horror” have the lowest total revenue



CONCLUSIONS AND DISCUSSION

KEY TAKEAWAYS:

1. Most releases in January, and then October, but no effect on Box Office Revenue
2. Movies with taglines that contain any/multiple of the top 10 most common words have a larger range of revenue but overall do not earn more than movies with taglines without the common words
3. Movies with overviews containing the words “family”, “home”, and “life” have the highest total revenue, outperforming other, more common, words
4. Ratings are fairly stable across genres, with slightly higher scores for some genre blends. Over time, ratings have steadily increased since 2016.

LIMITATIONS:

1. Incomplete Revenue Data
2. Lack of Inflation Adjustment
3. Association does not establish causation!

FUTURE DIRECTIONS:

1. Supplement with other data sets with more reported revenues
2. Repeat our statistics while adjusting for inflation per decade
3. Determine average revenue per word