Analysing Box Office Hits

Selvam Shwetha (1004637)

Dharmapuri Krishna Sathvik (1004286)

Background

Shadowgraphy, magic lanterns, silent films and theatre are all drastically different but inherently similar, which is to be equally captivating to people. Since pre-historic times we humans have been inexplicably attracted to moving pictures. But what is it that puts certain films at the top of the charts? A great script, renowned cast, first-class production house or state of the art film technology?

Movies might be narratives, but at the end of the day they are an amalgamation of pictures, and hence we must consider its visual characteristics primarily. So, we decided to put an end to this debate by posing the question,

"How are the optical elements of a film predictive of a box office success?"

In this research we go about answering the question by collecting frames of box office hits and comparing them against each other according to certain parameters.

Significance

We picked trailers to form our dataset because they are usually one of the first few promotional materials to attract an audience. Thus, they are crafted to look attractive and top-notch, making them eligible to answer the research question directly. Frames aren't just stills depicting a random scene, but certain techniques may be applied at that point in time which complements the mise-en-scène as a whole. This brings about a uniqueness in cinematography which in turn creates hype among potential movie-goers—as a result, employing stills as a specimen is valid and helpful.

Films being moving pictures the most appropriate way for it to be analysed is through ImagePlot. This is because its primary purpose is to inspect and categorise images according to their features. Furthermore, it is more advanced than the naked eye in identifying the intricacies of a still, which makes it ideal. Therefore, its efficiency eclipses that of traditional close reading. This is advantageous as it informs both researchers on the evolution of successful films and the choices that can be made by Tinseltown in the future.

Results

There are more brighter frames from 1977 to 1998 as compared to from 1999 to 2019

A wider variety of colors are used from 1977 to 1998 as compared to from 1999 to 2019

Standard deviation of brightness is greater from 1999 to 2019 as compared with 1977 to 1998

30 % of the frames are either blue or black in colour primarily

Average brightness and hue have a decreasing trend from 1977 to 2019

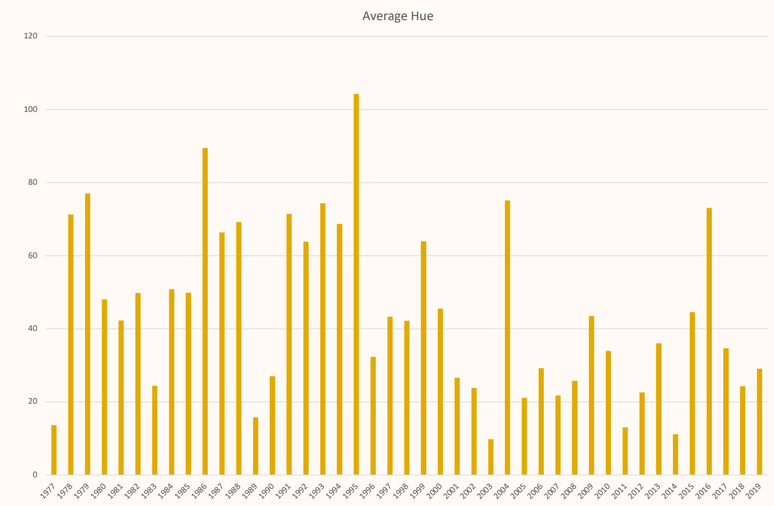

Fig 1: Year vs Average Hue

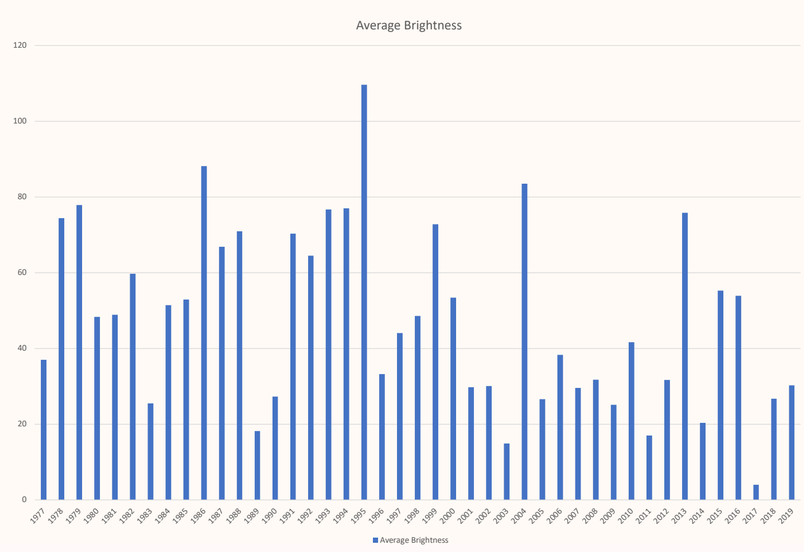

Fig 2: Year vs Average Brightness

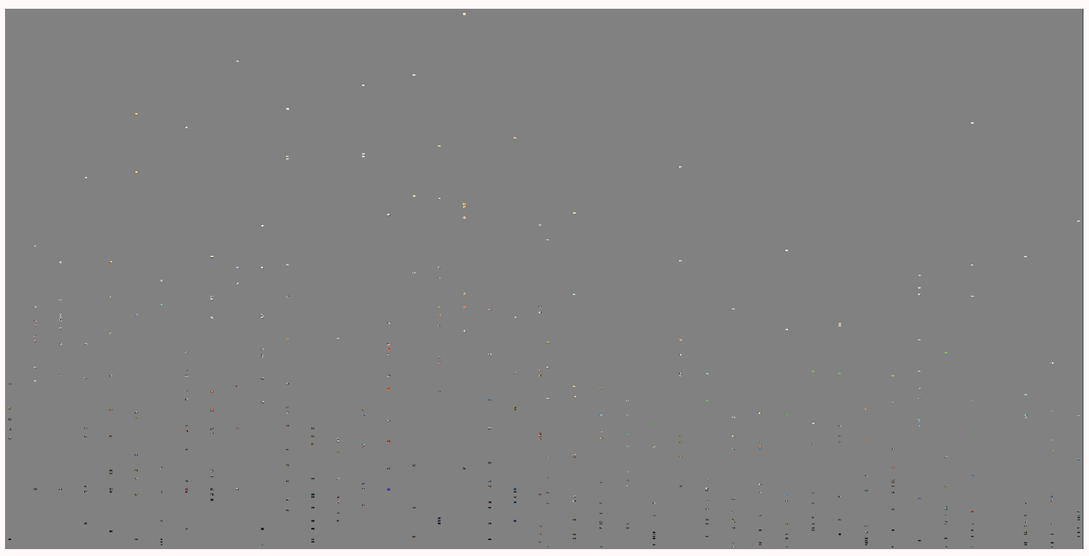

Fig 3: Visual Plot of Median Brightness of Stills from 1977–2019

Related Research

For example, a trend of Diney films appearing in this list was seen briefly which can be supported by the article "Digital Surrealism: Visualizing Walt Disney Animation Studios" by Kevin Ferguson, where it was cited that in the 1990s period, animated films dominated the showbiz. Moreover, "The Narrative Experiment That Is the Marvel Cinematic Universe" by Maya Phillips reports that screen tests done with a sample audience helped filmmakers gauge cinematic choices. As a result, a "blueprint" comes into play which directors use to their advantage by making films of a particular style and thereby spawning a sustained viewership. Additionally, Scorsese's controversial comments late last year regarding MCU reinforces that certain films are made with only monetay returns in mind while the true spirit of filmmaking is overlooked. Thus, this further explains why specific films make it to the list.

Conclusions

This research, nonetheless, has proven to be beneficial in visualising the frames of movie trailers. These graphs may aid movie buffs with a deeper insight on blockbusters while the statistics shown in the plots may also assist filmmakers in terms of stylistic choices that can be taken to best suit their target demographic. Despite a few shortcomings present in the research, we have conducted this study to the best of our abilities and it is our hope that along with these observations, advancements in technology, may aid to possibly generate an algorithm to create the most visually appealing movie for the masses in the near future.

SCAN ME

to see more
of our findings!