

Futuristic Scenarios: Utilization of AI Technological Settings to Foster the Filmmaking Visual Creation & Mass Production

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Abstract:

AI, or Artificial intelligence, is an innovative information technology that allows for the interaction with machines and proposes human interaction systems. AI computing systems proved to be effective instruments of proposing automated systems by which business operations and activities can be performed automatically without a requirement for human assistance. Since the film industry creation is heavily dependent on programming systems and digital technologies, it has become a leading sector to which AI technology is applicable for implementation. The utilization of AI in the filmmaking mass production would enable editors to create effective and significant movies using human-based systems and programs in a highly efficient manner. The aim of this paper is to review the implications of AI-based film industry practices on the future of the film industry through evaluating the associated opportunities and obstacles. A thorough literature review of credible journal articles is carried out to review the findings of recent papers and to synthesize key facts and information related to AI in the film industry. It is concluded that through the use of AI-based facial recognition programs, editors become capable of effectively analyzing the major characters and sorting out the major scenes for human editors. A myriad of areas within the film industry are amenable to the application of AI technologies, including script writing, estimating a film's commercial success, casting of actors, film promotion and marketing amongst others. In the future, it is expected that current film industry practices will be revolutionized through the utilization of AI technologies and machine learning programs as a result of the digitization of numerous editing and promotion-related procedures. This article outlines the applications of AI technology to the film industry and enhances the understanding and knowledge of AI technologies.

Keywords:

AI, Technology, Film Creation, Innovative Application, Film Mass Production

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1. Introduction:

Artificial intelligence is the latest technology that has the potential to develop human interaction systems where communication with machines and computing devices can be performed easily. AI-based technologies and systems are capable to resolve business problems and enhance efficiency and performance. It is found that AI technologies are capable of understanding areas of larger emotions and highlights for an individual editor for proposing the final trailer. AI is now implemented in the film industry in order to develop effective trailers and movies and perform promotion-related activities effectively (Ali, Abd, & Youssif, 2019). Machine learning is a part of AI technology that is capable to propose effective prediction systems by which the film industry can predict the nature of individuals towards the movies and also propose effective decisions while creating trailers and movies. The major purpose of this research is to review the concept of AI technology and examine the implications of AI technologies on the film industry. It is demonstrated that filmmakers can include AI-based systems and networks for writing scripts, pre-production, post-production, and prediction related activities. This research papers are adopting a qualitative, exploratory methodology

to collect and highlight in summary the developing aspects on the new technology in media and film industry.

Demonstrating AI the film industry:

The Chu, & Roy, (2017) reported that AI and machine learning technologies are now included in the film industry in order to develop new scripts, analyze and review the effectiveness of the story so that significant decisions can be proposed. Hollywood is now using AI and data analytic technologies for analyzing the individual scripts and resolving problems related to promotion and production effectively. In the case of film making, pre-production requires more effort and time that contains scouting location, casting, and other plans (Yasen, & Tedmori, 2019). AI-based machine learning and human robots are capable to streamline the procedures contained in pre-production.

For instance, AI technology helps in the planned scheduling for shooting and performing film-related tasks. Greenman, (2017) agreed and reported that AI, machine learning, and IoT these are major technologies that can be applied in the film industry in order to manage problems and perform film making activities more effectively. It is demonstrated that AI and other computing technologies are capable to help producers, film

makers and directors to select the best actors and monitor the effectiveness of the movies. Jaiswal, & Sharma, (2017) highlighted that AI can be included

in the film industry for analyzing a film’s writing so as to forecast the incomes the movie is likely to receive.

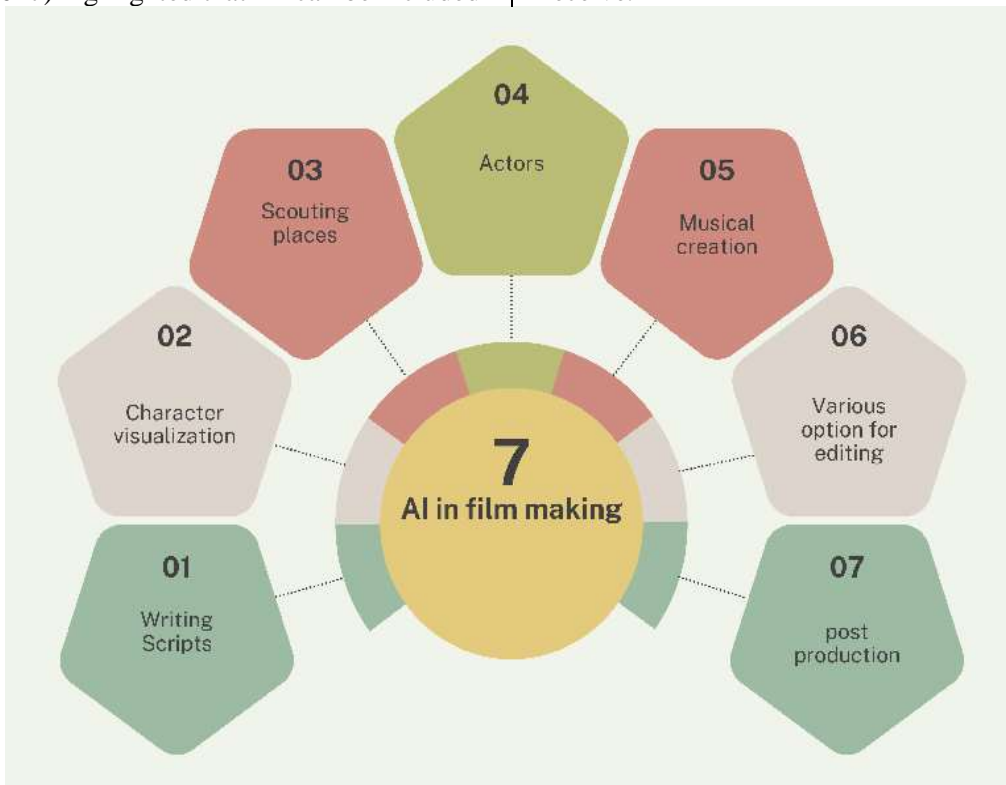


Figure (1): Leveraging AI in film making process, (Source: Adapted from Jaiswal, & Sharma, 2017)

Though algorithmic extrapolations may not continuously demonstrate to be totally accurate, they’re previously appealing growing attention from chief film studios (Li, et al., 2018). For instance, Warner Bros. has twisted to Cinelytic AI-based system for predicting the achievement of its cinemas and box office revenues. In terms of effectiveness, AI technology is more effective by which performance and effectiveness of the film industry can be improved. However, there are several challenges linked with AI technology that negatively impacts on the film industry for example higher operational and maintenance costs, requires proper knowledge, lack of understanding, and unemployment concerns.

- AI and Language Technology: Many breakthroughs in multiple different application areas
- Focus Film Industry
- Massive Potential like editing trailers, writing scripts, recommenders

(Source: Adapted from Li, et al., 2018)

Futuristic aspect of AI in filmmaking:

Although concerns remain around the automation of the creative process of filmmaking, many media and filmmaking companies find a potential for AI in enhancing originality rather than destroying it; rather than identifying patterns and replicating them in future scenarios and scripts, the identification of

those patterns can instead help in avoiding them. Therefore, the utilization of AI within filmmaking, and ultimately, the future of AI in cinema will depend on new ways by which the vast array of information that AI carries can be used. One perspective that can inform the value AI carries when applied to the film industry is through a Kantian fine arts lens. Since Kantian art places a large amount of value on the expression and experience of a work, the premises on which AI is based, such as examinations of user interactions, become pivotal when assessing AI’s significance to cinema.

AI subjective methods:

Mutlu, (2020) reported that the AI-based systems are capable to create novel musical outlines based on the examined data. It can likewise make templates for contextual notches based on the condition or the category required. For instance, the AI procedure can comprehend patterns utilized in jumpscare audios to make templates that can be utilized in such situations in future movies (Phorasim, & 2017). It is demonstrated that editing-related activities can be performed through AI, machine learning and IoT enabled technologies and deliver proper assistance to the filmmakers and editors. With the help of AI programs, areas of



larger actions can be reviewed and analyzed effectively. Another major issue with the use of the conventional film methods in VR storytelling is the language of the jump cuts or even the series of shortcuts for focussing the attention of the audience on the crucial characters or even the moments within any scene (Nassar, S, 2021). There are few other areas of the film industry where AI technology can be applied for example promoting movies, casting actors, and many more. In the future generation, AI technology will enable the film industry to perform film making activities more significantly and reduce problems in less time.



Figure (2): Morgan Trailer made by Watson IBM using AI technologies

Chow describes how ‘technological solutionism’, the idea that modern technologies can overcome most obstacles humans regularly face, can be applied to the film industry as well. Specifically, it can provide a more reliable and accurate method based on a number of variables to reflect the box office movies measurement of success for producers and studio investors. These AI-powered technologies not only have the power eliminate such laborious and mundane tasks when performed by humans, but also offer a less subjective and more robust method that is accurate and informed by a wide array of knowledge therefore eliminating unnecessary uncertainty and risk-taking. Chow then illustrates two AI-powered companies

that offer analytical metrics and solutions for filmmakers. The first one, ScriptBook, can offer its filmmaker clients with accurate analytics regarding the commercial value of films based on their screenplays. It is important to note that such tools do not replace the human decision-maker, but rather provide a robust foundation of information and data that make such a human decision more informed and accurate. Another company, Cinelytic, requires more input information from users and provides recommendations on marketing and distribution of films. It is also worth noting, that such AI-based tools allow smaller independent film companies to gain access to information that usually require the resources, in terms of time and money, that have historically been available for large Hollywood companies.

Obstacles over the AI utilization:

Chow discusses several drawbacks associated with the integration of AI-based systems into filmmaking especially in Hollywood. One such drawback is highlighted through the reluctance of studios and film companies to publicly disclose their utilization of such technologies since filmmaking is often seen as a creative process that recruits human thinking, emotions, and expertise. Therefore, many entertainment companies are cautious in their approach to such technologies as they believe it may compromise the authenticity and creativity of their films. As a result, the need to forward the concept design is very crucial. In these objectives, the main focus is to utilise development for achieving better performance. (Nassar, S. 2022) However, the fact that these technologies assist filmmakers through providing copious amount of information leaving the final decision be one made by the human user may offer greater opportunities for the integration of AI into the filmmaking process. Other obstacles include the fear of AI technologies replacing human specialists that comprise key roles in filmmaking such as in special effects. However, this trend being constantly propagated in public media does not address the limitations of AI-based systems and the limited power it possesses, keeping the human element still required. AI also presents itself to be problematic through the fears of it leading to the standardization of films since it only recommends ‘successful’ movies for film studios and producers, preventing more creative and risky projects from ever making it to the screen. Chow highlights that since the existing AI algorithms utilize historical templates,

deviations from previous ideologies and narratives will be associated as potential failures, propagating previous inequalities that recent efforts have attempted to break free from leading to a biased homogenous film culture. Therefore, such a dilemma requires the elimination first of the biases within the data from which algorithms learn and base their predictions on. Although AI-based systems may prove effective and time-efficient for providing market predictions and business analyses, fears of AI affecting the creative aspect of filmmaking (and therefore affecting ideologies normalized and adopted worldwide) through those end goals are valid critiques that require careful examinations.

In short, the introduction of AI to filmmaking, will subject AI-based technology to accept the same power that filmmaking historically has, in influentially affecting mindsets around the globe, which requires the data behind such ‘intelligent’ technologies to be carefully assessed.

Watson system and AI implementation:

As one of the most important and early run-through tryouts to implement the AI in the real filmmaking was when IBM specifically Watson robot to create a cognitive movie trailer for a horror movie “Morgan”. Reasoning was to execute and elevate the sense of horror among the viewers.

Makes allowances that this genre depends on the perception of the audience and their own previous experience. In order to apply this challenge and complete the trailer, Watson or the AI system was asked to go through and understand different types of emotions that been evolving around the subject. Therefore, machine learning techniques was applied to enter 100 movies trailers, using scenes fragments and using three types of analysis.

- Visual analysis to identify people, scenery and props.
- Audio analysis to connect and link scenes with voice tones and musical notes.
- Analysis to the scene’s composition to spot and recognize the directing styles for this type of movies.

Afterward, these analyses the AI system was introduced to the complete film, which eventually was able to recognize 10 moments that ranked as the best to feature the movie.

This system has its expertise being the selection of moments for a trailer and not the editing of those selections. This feature can be complemented by having the editing process performed by a

filmmaker who creatively arranges the order of such selections and chooses appropriate music.

Although Watson was able to reduce the labor-intensive and time-consuming process of choosing appropriate scenes for the trailer, editors may choose to modify the selections. For example, editors may add additional scenes or remove scenes that do not fit coherently with other scenes destined for display in the trailer. Nonetheless, this process which typically takes 10-30 days was reduced to just 24 hours when Watson was used to create a trailer for the movie “Morgan”. Such an achievement highlights how promising AI technologies within the film creative industry and mass production. Therefore, AI technologies may not always compromise and threaten human creativity in the filmmaking world. Instead, they may enrich and work to complement this creativity and human expertise so that implementation of ideas is more efficient, highlighting how the filmmaking industry is quite amenable to the utilization of AI and machine technologies.

Discussion:

It is found that AI is one of the significant technologies that can be implemented in the film industry for improving performance and effectiveness. In terms of effectiveness, AI and machine learning are more effective technologies that are capable to provide effective prediction and production-related facilities to filmmakers (Smith, et al., 2017). It is demonstrated that AI-based programs are now implemented in the writing scripts of the movies that help the filmmakers to deal with scripting related tasks significantly. Machine learning programs are also helpful for analyzing the data, evaluating the production and other film activities. A Gestalt way to deal with dramatic plan is to focal point is on the future rather dealing with the presents and appears to give some prepared and stable clarifications for various issues in the grand expressions. Gestalt fills in as the hypothetical base for various tests in brain research whose discoveries seem to outline the standards of craftsmanship to be utilized in scene plan. The basic thought of gestalt hypothesis recognizes a significant undertaking for the part of the scene fashioner (Nassar. S, 2022). There is no doubt that AI as a technology has brought in much major modifications in life of the people and is certainly transformative technology. (Nassar. S., 2021). It is true that predicting and promoting movies both are

major parts of the film industry where AI and machine learning technologies can be implemented in order to review the success or failure of the movies along with the market trends.

Conclusion:

This paper has reflected the significance of merging the AI technologies in the filmmaking industry, it may be concluded that AI is an effective computing technology that will change the film industry in future generations and provide reliable programs and automated systems to filmmakers. This research helps enhance knowledge about AI technology and its implications on the film industry. It is demonstrated that AI and other computing technologies are capable of helping producers, film makers and directors to select the best actors and monitor the effectiveness of the movies. In the case of film making, pre-production requires more effort and time that contains scouting location, casting, and other plans. AI-based machine learning and human robots are capable to streamline the procedures contained in pre-production. AI procedure can comprehend patterns utilized in jump scare audios to make templates that can be utilized in such situations in future movies. Therefore, it is recommended that filmmakers should move towards AI and machine learning programs so that performance and effectiveness can be improved. Future research will review applications of AI and machine learning in the filmmaking industry. In addition, and while we are facing a process of development and shift in the current traditional usage in the film industry, we cannot also deny that few controllers in this industry might find another face to the coin and push the digital technology, only for the sake of lowering the costs for certain human position especially in script writing and pre-production. This might create new zones that consider the film industry as technical projects more than human being effective projects, which contain a high impact methodology since the old start-ups for drama that shaped this industry. Therefore, the recommendation is to highlight the importance of continuing with research on the analysis of different perspectives of AI stages in the film industry, for the purpose of examining the long-term development of this tool and its impact on the industry. Suggested results indicate that strategies and educational methods on designing methodologies should be implemented for designers to align with the new design concepts (Nassar S., 2021) Such necessary research and examinations will also clarify the actual significance of the AI decision-making on creative industries as cinematic approaches in filmmaking. Finally, we should embrace that this industry is unlike others in that it is not only human creativity but also expression of subjective human emotions

and feelings rather than suggestions made solely by machines based on data and facts.

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