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Emerging Artificial Intelligence Techniques in the Production of *Jagun Jagun* Movie.

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Abstract
As the world of technology continues to speedily grow, particularly in the area of Artificial Intelligence (AI), the film industry has also begun incorporating AI into all aspects of the filmmaking process, transforming the way in which films are made and seen. AI-driven tools are also influencing the film production phase, making the process more efficient. The evolution of AI in movie production can be said to be encompassing at every stage of production depending on the readiness of specific film industry to embrace it. Hence, this study aims to examine how film producer applied AI techniques in the production of Jagun *Jagun (The Warrior)* movie. This study is anchored on Diffusion of Innovation theory and adopted textual analysis to examine whether there are manifests of Al applications in the movie scenes and establish if those manifests communicate meaning to the production. Findings acknowledge the application of AI techniques in the movie production and the techniques added meaning to the scenes involved but the AI application is still in its very early days as the movie is dominated by techniques that revolve around computer-generated imagery (CGI) and visual effects. As AI continues to permeate various departments in filmmaking, the importance of cross-training cannot be overstated in Nigerian film industry by understanding the capabilities and limitations of these techniques is crucial for the Nigerian film industry, from directors and producers to editors and sound engineers.

Keywords: Artificial intelligence, film, Nollywood, techniques, tools

Introduction

Artificial Intelligence in film production is no longer something that is expected in the future, it is already having a significant impact on the production of films. The integration of AI in the chain of processes and technologies of film production helps to save time and resources and ultimately results in increased revenues. The capabilities that AI avails to filmmakers are undoubtedly groundbreaking. From its genesis, the film industry has been intertwined with technology, constantly innovating to explore new ways to tell stories with notable developments such as the advent of digital cameras, advanced editing software, superior sound and music technology, and increasingly realistic special effects.

Artificial Intelligence is certainly revolutionizing the film industry, from pre-production to post-production and beyond, by making the process more efficient and cost-effective, and introducing new methods of storytelling. Kell (2023) notes that AI enables the creation of realistic images, videos, and text that rival human-made content. He stresses that movies and tv shows have used AI to make actors appear younger, and AI algorithms can generate synthetic voices and faces. "These technologies have the potential to reshape the industry and create new possibilities for character creation and storytelling" (p. 4).

Chase (2024) opines that AI empowers creators to craft realistic, immersive, and cost-effective virtual environments, previously unachievable with traditional methods. The post-production process, once a labour-intensive endeavour, is now being streamlined with AI tools that enhance video content creation. From sound editing and film editing to advanced sound mixing, artificial intelligence is proving to be an invaluable asset. But it is not just about refining what is already there, AI is introducing entirely new capabilities, such as voice cloning and digital re-aging, revolutionizing the very essence of technology in filmmaking.

Osondu (2016) cited in Obiora and Uche (2021), asserted that in today's Nigeria, the local film industry, Nollywood has emerged as an important agent of representation being that it has become a popular media channel amongst the indigenous audience and in the heart of the entertainment in Nigeria (Obiora and Uche, 2021; Obiora and Uche, 2024; Obiora and Chukwuemeka, 2023). Nollywood has always been a beacon of innovation, pushing the boundaries of storytelling, visual effects, and sound design (Andrews, 2023). Odugbemi (2023) asserts that Nollywood's rise to prominence was fueled by the accessibility and affordability of video technology. With the advent of camcorders and digital recording devices, aspiring filmmakers and storytellers were able to create movies with modest budgets, using their ingenuity and resourcefulness. This organic, self-trained film culture led to a flourishing industry that resonated with African audiences and beyond. Hence, with the advent of AI, Nollywood filmmakers can enhance the quality and efficiency of film production, by using computer vision, machine learning, and deep learning techniques to

create realistic visual effects, animations, and computer-generated images (CGI) to achieve believable illusions and compelling meanings in their productions (Kell, 2023).

These advancements, while intriguing, raise significant concerns for Nollywood and the broader African film industry. It is no doubt that change is often times met with resistance; some industries might exploit technological advancements to commercialize art, while others might reject them to preserve traditional art forms and this is where lies the challenge. There is need to evaluate whether Nigerian film industry has begun the application of AI techniques to their advantage because the true potential lies in the leveraging of new tools to create unprecedented art forms that also achieve commercial success. This study delves into this transformative era to explore how AI tools are applied to enhance meaning in Nollywood film, where machine learning meets human creativity, and the possibilities might be limitless. This inquiry is not just about star-studded casts or groundbreaking cinematography; it is about the integration of AI techniques in a typical Nigerian film. This study seeks to examine how Al techniques are applied in the production of *Jagun Jagun* movie and how the applications enhance meaning making to its audience.

In order to gauge the emerging AI techniques applied in the movie under study, we probe into this study to answer the following questions:

- Are there AI techniques applied to the movie scenes under study?
- Do the applied techniques enhance the expression of meaning in the movie scenes?

Theoretical Framework

This study is anchored on diffusion of innovations theory. It was first introduced by Everett Rogers in 1962. It is a hypothesis outlining how new technological and other advancements spread; from introduction to widespread adoption. The diffusion of innovations theory seeks to explain how and why new ideas and practices are adopted, including why the adoption of new ideas can be spread out over long periods, (Rogers 2003 cited in Ogwu, Emelogu, Azor and Okwo; 2022). This theory provides a systematic framework that elucidates the pattern and stages through which innovations are adopted within a social system. Central to the diffusion of innovations theory is the concept of a bell curve of adoption, which categorizes individuals into different adopter groups based on their

readiness and inclination to embrace novel ideas or practices (Halton, 2023). As Rogers defines the five different adopter groups within this diffusion process: Leading the groups are the innovators, known by their risk-taking nature, they are among the first to adopt new innovations. Following them are the early adopters, who reflects a high level of social influence and often serve as opinion leaders within their communities. The early majority comes next, that adopts innovations after the initial influential groups have embraced them. The diffusion process further spreads to the late majority, a group that adopts innovations with a substantial level of doubt and only after they have been widely adopted by preceding groups. Finally, the last group on the adoption spectrum is the laggards, who are known by a strong struggle to change and are typically the last to adopt new innovations (Halton, 2023). Key factors influencing the adoption of innovations may include relative advantage, compatibility, complexity, trial-ability, and observability, which are critical elements that affect the rate of adoption within a social system (Halton, 2023).

For this study, diffusion of innovations theory provides a valuable framework for understanding the adoption process of AI techniques in Nigerian film productions. It explains the rate at which Nigerian film producers adopt the new AI techniques thereby helping to understand how AI trends occur in contemporary Nollywood productions.

Review of Literature

History of Artificial Intelligence in Film

The **Filmmakers have used AI tools and machine learning in film-making since the early 2000s** especially in computer generated imagery (CGI) and special effects. Technological advancements such as 3D graphics enabled filmmakers to make compelling special effects. Progress in machine language (ML) and computing power has been essential in areas such as facial recognition and motion tracking commonly used in movie sets (Pal, 2023).

Shapiro (2023) notes that the use of AI found a place in special effects and CGI early on, even in popular Hollywood movies such as *Tron* (1992) and popular films such as *The Matrix* series (1999) and *The Lord of the Rings* trilogy (2001-2003). AI's creative

capabilities have also been explored at the story level in movies like *2001: A Space Odyssey*, *The Terminator*, *Star Wars*, and *Her*, which explore the possibility of developing human-like machines that can think, feel, and act autonomously. Since then, AI tools have become increasingly integral to the film industry, with directors using them for tasks ranging from facial recognition technology to writing scripts.

The evolution of Nigeria's film industry has faced numerous stages from plays to video and has witnessed remarkable growth and success over the last couple of decades (Obiora and Odoh, 2020). Nollywood's growth and popularity can be attributed to the rapid evolution of technology itself, specifically consumer video technology. This incredible boom in the industry has been attributed to technological advancements which have yielded better production quality, theatrical releases, and streaming platforms. It is safe to assume that this change will be for the good of Nollywood (Odugbemi, 2023).

However, Odugbemi (2023) expressed worry on the potential dilution of authentic African narratives. The essence of African storytelling lies in the cultural richness, diverse perspectives, and unique experiences that are often overlooked or misrepresented by mainstream media. If the African film industry fails to adapt and harness AI responsibly, there is a risk of narratives being homogenized or distorted, eroding the authenticity that defines African cinema. How do we programme these tools of technology to actively seek out diverse voices, perspectives, and stories by promoting inclusivity, cultural sensitivity, and a deeper understanding of Africa's complexities? As AI algorithms continue to advance, there is a fear that certain roles traditionally held by humans may be rendered redundant. It is crucial for creative talents within Nollywood and the wider African film industry to recognize the vital necessity of embracing AI as a tool for enhancing their craft, rather than perceiving it as a threat. Odugbemi (2023) further stressed that in as much as AI technologies keep advancing, it is important for Nigerian film industry to remain wary and practical. It has to understand and leverage the opportunities presented because that is how it can continue to tell authentic African stories, preserve cultural narratives, and empower creative talents.

Various Aspects of Filmmaking that can be Assisted by Artificial Intelligence

Authors and film makers like Arkenberg (2022); Chase (2024); Dhillon (2023); Greggory (2023); Heienickle (2023); Hellerman. (2023), **have highlighted some areas that AI can be adapted in the process of film making and they include but not limited to:**

Scriptwriting and Storytelling: AI-powered software can process copious amounts of data from past films, scripts, and books. This allows it to output different unique plots, dialogues, locations, props, and even characters based on user input. From the generated story, Creative writing and story generating AI software like Sudowrit**e** can help writers stay organized and efficient while they work on scripts.

Colouring and Visuals: Artificial intelligence (AI) can quickly and accurately colour entire scenes using colour grading software, through analyzing and understanding scene contents, colours can be applied automatically, which comes in handy during post-production.

Creating Music: AI can assist directors and musicians by creating low-cost score music that complements any scene.

Casting: AI is also being used to improve the accuracy and efficiency of casting decisions, using past performance data and social media activity, to predict which actors are most likely to be successful in a particular role.

Visual Effects (VFX): AI is being used to enhance realistic, visual special effects, such as digital characters, objects and locations. VFX has always been an integral part of filmmaking, allowing filmmakers to create worlds and characters that would be impossible to capture on camera. Machine language can track and analyze the movement of actors and objects on virtual sets. This helps the production team generate complex special effects and natural-looking scenes that would be challenging using traditional methods.

Sound Effect (SFX): Artificial intelligence (AI) can help video producers and editors enhance and optimize their audio sounds with less effort and more accuracy.

Animation: In the animation arena, AI's influence is palpable. It is refining processes, from character animations to perfect lip-syncing with voiceovers.

Rotoscoping: There is also a revolution in rotoscoping through AI, tackling the problematic area of extracting individual elements from background environments. With the infusion of AI, artists can automate the process while improving accuracy.

Editing: AI-powered video editing tools are making it easier and more efficient for editors. Analyzing the shots, detecting patterns, identifying the best photos, and enhancing the video is now possible using AI-powered solutions. Some of the editing activities include color grading, subtitling, and upscaling.

Virtual Reality: AI can also be used to create more immersive virtual reality experiences for cinema-goers. Through hardware and software engineering, new techniques are currently being developed for improving 3D displays for virtual and augmented reality technologies.

Movie Recommendation: AI-based systems are capable of recommending movies to users, based upon their content watch history and preferences, selecting films for viewing which best fit a person's personal and most current tastes.

Virtual Production: Virtual Production is a method of integrating digital and physical worlds. It was born as a solution to traditional film production's challenges, enabling filmmakers to utilize virtual sets and locations, and thus a more flexible and cost-effective process.

V**oice Cloning and Synthesis:** The technology can recreate the voices of actors who may no longer be available, ensuring continuity in series or sequels. Beyond mere replication, voice synthesis offers the tantalizing possibility of generating entirely new voices or subtly modifying existing ones. AI-powered software like Speechify can mimic an actor's voice and synchronize the dubbed voices with the actor's mouth movement.

Audience Analysis: In an industry where understanding the audience is paramount, Advanced algorithms can sift through enormous datasets, from social media interactions to box office trends, to gauge what resonates with viewers. This data-driven approach allows filmmakers and studios to tailor their content more precisely, ensuring that each video script hits the mark.

Marketing: The importance of marketing in a film's promotional campaign cannot be underestimated and AI is becoming ever more important in the analysis of data to help studios target their marketing, public relations and distribution efforts more effectively.

Translation: AI also plays a crucial role in translating and re-recording dialogue in different languages for foreign consumption. With machine language techniques, it is now possible to adjust the mouth movement of actors while translating the movie to another

language to make it more natural. This makes it easier to translate and distribute movies in different languages.

Subtitling: The role of AI and Machine Learning in modern subtitling is transformative. By automating and improving the accuracy of the subtitling procedure, these technologies make audiovisual content more accessible and enjoyable to global audiences

De-aging: De-aging actors with stunning results is also very feasible. Filmmakers face less tedious manual processes such as retakes and editing, which can be time-consuming.

The integration of AI promises some quick positive effects in some phases of production. Nevertheless, Greggory (2023) highlighted that there is a potential risk of human displacement. Its impact on traditional roles, such as script analysts and color correction, can reduce the demand for professional input. Voice cloning, deep fakes, and synthetic video and image production are some areas actors and filmmakers will have to collaborate with AI and may require reduced human input. There is bound to be a shift in skill requirements and there may be issues about intellectual property through unintentional duplication. It is possible to manipulate what actors say and do on a movie set, leading to misrepresentation. Finally, AI technologies do not necessarily understand how people think, feel, and interact. As a result, artificial intelligence may struggle to create convincing characters and compelling storylines that connect with audiences emotionally.

On the other hand, Pal (2023) argues that generative AI, in its current state, cannot autonomously craft a compelling story with intricate characters. While it can produce content, it remains a tool that requires the touch of a human - a person with the experience, skill, and understanding to create a script that resonates with audiences and meets the demands of a high-quality production.

Empirical Review

Obiora and Uche (2024) examined two Nollywood films: *National Crisis* and *The Last Kidnap* to ascertain the manner at which Nigerian film productions have portrayed the

issue of violent attacks in Nigeria and determined whether these movies educate the Nigerian audience on how to make Nigerian society a safe society. The study was hinged on social representation theory and applied textual analysis. Findings reveal that the films depicted violence committed in various forms and that filmmakers ensured plots reflect actions that could be taken to limit violence. This study did not focus not the application of AI in projecting the violent attacks depicted in the movies that were read.

Chow (2020) examines the nascence of artificial intelligence (AI) applications in the Hollywood film industry at the greenlighting stage, where decisions are made as to the feasibility and earning potential of film projects. Through a qualitative analysis of company case studies, interviews, and media discourse, Chop interrogate and tease out the ethical, cultural, and industrial implications emerging from the use of AI in influencing decisions about film production, particularly the ways the use of AI might influence notions of creativity, labour, and reception. The article sets out possible research agendas for the future to critically engage with this emerging phenomenon. Chow looked applied case studies and interviews to examine AI application in Hollywood film at eh early stage but not Nollywood film produced in recent time.

Sreekumar and Vidyapeetha (2015) examined the role of mise-en-scene elements like décor, lighting, space, costumes and acting, in understanding the mood and meaning of the film. The researchers discussed how these five elements were used in the Iranian film 'The Song of Sparrows' to analyze the role of interpretation in effectively narrating a film. A study of how these elements were adopted in some of the other films from different eras is also done to denote the various contexts in which they can be employed. Specific scenes from the Iranian film 'The Song of Sparrows'to identify and discuss each of the five elements of mise en scene (light, and their importance in the storyline and its possible effects on the audience are analyzed using content analysis. The paper concludes that meanings can be created through the interpretation of these five mise-en-scene elements. A close observation and analysis of these elements in the film could lead to a much-enhanced film-watching experience. This study emphasized on mise-en-scene elements but not Al

applications on mise-en-scene in an Iranian movie while this work is set out to look at the application of AI on mise-en-scene and sound in a typical Nigerian movie, *Jagun Jagun.*

Synopsis of the Movie

Jagun Jagun (The Warrior) is a Yoruba epic film released in 2023. It was produced by Femi Adebayo Salami, directed by Adebayo Tijani and Tope Adebayo Salami; and was distributed by Netflix. It tells the story of a warlord, Ogundiji who feels undermined with the presence of his apprentice, Gbotija; who is a young warring trainee at Ogundiji's training camp with the aim to get fortified and avenge his father's death. On the training camp, the bold Gbotija speaks on behalf of fellow trainees on poor food service which causes him punishment from Ogundiji's only child, Iroyinogunkitan, who later falls in love with him because of his confidence. After many training sessions, trainees including Gbotija are sent out to fight in a war. The warriors on the battlefield are primarily young and inexperienced, so they are losing, so Ogunjimi sends out a mystical slayer, Agemo to save the loss on the war front. Wehinwo, a warrior, goes against Ogunjimi's command to give food to the absent officials under Ogunjimi's punishment, which leads to his death by burning. News of his demise reaches home, infuriating his betrothed, who seeks help from some gods to kill Ogunjimi's wife. Fortunately, Gbotija saves Ogundiji's queen which gets him some respect among other trainees. Ogunjimi gets to hear of Gbotija's fame which makes him jealous and decides to get rid of him by using Gbogunmi, his high rank warrior who rejects his command to carry out the killing. So, he proposes that Gbotija fights to the death with Gbogunmi but Gbotija wins. With the promise of a promotion, Gbotija undergoes several challenges. On his final challenge, he realises that he has being played and lots of secrets surround the cruel warrior, Ogundiji; he is left with no option than to confront Ogundiji, fight ensues where only one can come out alive.

Method

This study adopted textual analysis which involves a close examination of the film's various elements aimed to identify patterns, themes, and motifs that manifest AI application in the film and to understand how they contribute to the film's meaning, (Team, 2023).

According to Gururaj (2023), the use of AI in filmmaking is perhaps most evident in the post-production process. Hence, the researchers paid attention to the mise-en-scene and

sounds in relations to the repertoire of AI elements to analyze scenes from the movie, *Jagun Jagun.*

Manifests of Al applications in scenes are identified as those scenes that are have been manipulated beyond human capability and natural form in production. So, **Mise-en-scene** which refers to all the elements that have been arranged within the camera frames which include setting and set design, costume, props, make up, performance, décor, lighting, choreography, colour, camera placements and angles as well as **Sound** which refers to any form of auditory output from the film like dialogue, music, sound effects among others, are taken to be AI integrated when they appear manipulated beyond what a character can do ordinarily or obtainable naturally. Hence, scenes which manifest any form of assisted Al technique is identified and analysed to decipher how such scenes communicated meaning. Data is presented thematically relying on literature which has provided various aspects that AI can assist in film making.

Data Analysis and Interpretation

All the findings are interpretations of the researchers, which is intended to give a better understanding of the film. Scenes identified to have been aided by AI practices have been identified and analysed under the following aspects:

Virtual Production: The illusion of placing a character in an environment that is not really there. In the movie, the castle of Ogundiji built on a rock is not a real mansion rather it is an image produced with the assistance of CGI that aligns with the era that the movie projected. It appears as the most important and dominant building in the kingdom, being the largest residential unit and the focal castle. Everything in it revolves around Ogundiji as the most accomplished one, reflecting his political, social, and religious values. The quality of the castle image echoes Ogundiji as someone who is proud of his culture, traditions and heritage as seen with the images of bronze casting, terracotta and wood sculpting filled the courtyard. The war axe Ogundiji used to chop off Jigan's hand was also a created illusion assisted with CGI as well as the coffin containing Gbotija that sunk in the river.

Colouring and Visuals: It is the strategic use of colour in visual storytelling to create emotional associations that resonate with viewers. The colouring of sunset and sunrise on a mountain top when Gbotija journeys down to Ogundiji training camp depicts that the journey was not just a day journey rather it is a journey that took him days. This echoes the strength of Gbotija as a resilient aspiring warrior who traveled (walking, jogging) day and night without rest to achieve what he has set his mind on not even distance stood on his way. This same colouring visual was adapted during the battle with Iwon kingdom to reflect that the battle lasted till sun set.

Visual Effects (VFX): This is the act of creating or manipulating imagery outside the context of a live action shot in filmmaking aimed to create a realistic imagery. The movie *Jagun Jagun* is filled with VFX. The mysterious appearance of Ogundiji when he chooses to be somewhere, like his sudden appearance when he chopped off the hand of Jigan in Keto Kingdom and his appearance in the prison where he bound his three chief warriors that neglected going to war front as assigned when Wehinmo was feeding them against his order, both scenes depict Ogundiji as a dreaded Warrior who possesses some supernatural powers that aid his ability to appear and disappear to wherever his intuition leads him and that sensitivity never failed him.

Ogundiji was also portrayed with the assistance of VFX, as that warrior who controls the physical world to his advantage. This was reflected when he chopped off Jigan's hand by throwing the war axe which chopped off Jigan's hand as assigned, the war axe fell on the body of a tree and without Ogundiji moving an inch the war axe moved right back to his hand. He was also seen commanding the wall in his chambers to reveal to him the situation at the battle field to confirm his intuition, of course, he saw he was losing the war and hence he evoked Agemo the spiritual warrior to the rescue.

Moreover, the visual effect applied to depict the war-hungry spiritual being and blood thirsty warmonger, Agemo, reflects its mythical warring prowess, whose eyes are fire and slays in multiples with the fire slaying sword. The magnitude of his ruthlessness is demonstrated as he exudes in flames. It can be called fire clothed in a masquerade veil. This might imply as the reason the fire quenched immediately when Gbotija conquered it with a

wood stab from the tree, it became powerless, lost its supernatural prowess and it was at that point its unmasking was possible. Even when Ogundiji was still trying to control it from his chambers as usual, the visual representations of its prowess disappeared and that informed Ogundiji that there was trouble with Agemo.

Visual effect was also adapted to assist in depicting Gbotija as that resilient warrior who has lived and dined with the trees in the forest, who knows the names of every tree and can command them to his advantage because as a child his father asked a tree to protect him and the tree swallowed him up (VFX). It was also depicted when a huge tree fell across his path on his way to Ogundiji's training camp and he commanded the tree by calling its name to get out of his way and the fallen tree rose, standing tall and fell back when he had passed.

Without visual effect, the ability to reflect how the coffin that was having Gbotija sunk into the river would not be possible. Also, the portrayal of Ogundiji as a warrior who possesses supernatural power and cannot be fought physically as he evokes fire balls as weapons to fight the battle against the warring trainees is his camp. This was further depicted in the way he was killed as his queen took the warring club from the dead Agemo and stabbed him with it; the fire in him consumed him and that was when the physical stabs from Gbotija and another trainee penetrated his physical body and he was killed.

Sound Effects (SFX): It is used to make an effect be it dialogue, sword, sword fighting and other background action sound louder to capture audience's attention. This is evident in the scene where Ogundiji had intuition in form of liquid pouring out which depicts the flowing of blood of Ogunidiji's warriors who are being sword-slain on the battle field connoting defeat. Another sound effect is that of the presence of Agemo; its footsteps, body movement and actions connote a super heroic being with great valour, strong, fierce and ruthless. The sound depicts the anxiety of the warriors as some of them freeze in awe at Agemo's presence and ferocity. Gbotija's pain was also well orchestrated in the sound effect when he realizes that the love of his life is the being behind the veil of Agemo whom he just conquered by death.

Subtitling: It is the condensed translation of a dialogue from an original language to another language which is always projected at the bottom of the screen. This was done to near perfect as proverbs, incantations, dirge, wise sayings, dialogue are all well translated from the spoken Yoruba language to English language on the screen for anyone who does not understand the original language. This cannot be so fine-tuned without the presence of an AI assisted software.

Movie Recommendation: This applies to Netflix platform that distributed the movie, as the movie might be recommended to you based on one's past viewing history and another movie related to it can also be recommended because one watched *Jagun Jagun*.

Discussion

This study has revealed various aspects of film production that can be assisted with AI tools which include but not limited to scriptwriting, virtual production, visuals and colouring, visual effects, sound effects, marketing, movie recommendation, subtitling, translation, animation, de-aging, voice cloning and synthesis, audience analysis among others. This supports the view of Kell (2023) who notes that AI enables the creation of realistic images, videos, and text that rival human-made content.

Just as Chase (2024) opines that AI empowers creators to craft realistic, immersive, and cost-effective virtual environments, previously unachievable with traditional methods, making it a luxury no longer exclusive to mega-studios but accessible to independent filmmakers too. It is evident from the scenes of the movie under review in this study that AI techniques were applied to project virtual environment (Ogundiji's castle) which may not have been achievable with the traditional methods. Although they were mostly computer-generated images (CGI) and machine learning designs, the fact remains that the practice has been established and proven it is possible and that Nollywood industry is capable of embracing the AI technology as Andrews (2023) noted that Nollywood has been a beacon of innovation, pushing the boundaries of storytelling, visual effects, and sound design.

The various CGI techniques applied in the forms of virtual production, SFX, VFX, Coloured visuals and subtitling helped to drive meanings to scenes in the movie, *Jagun Jagun*. This

confirms the view of Odugbemi (2023) who asserts that the advent of AI, Nollywood filmmakers can enhance the quality and efficiency of film production, by using computer vision, machine learning, and deep learning techniques to create realistic visual effects, animations, and computer-generated images (CGI) to achieve believable illusions and compelling meanings in their productions. This also allays Odugbemi's worry on the potential dilution of authentic African narratives when he cautions that if the African film industry fails to adapt and harness AI responsibly, there is a risk of narratives being homogenized or distorted, eroding the authenticity that defines African story. The VFX adapted to the movie, *Jagun Jagun* aided in promoting inclusivity the cultural sensitivity, and a deeper understanding of Africa's mythological complexities.

The findings in this study indicate that Nigerian film industry may be tagged as late majority within the spectrum of diffusion of innovation theory considering the view of Pal (2023) who noted that **filmmakers have used AI tools and machine learning in film-making since the early 2000s es**pecially in computer generated imagery (CGI) and special effects. When you compare this with its counterpart Hollywood who used CGI to produce Tron as far back as 1992, (Shapiro, 2023).

Conclusion

It is clear that AI tools are set to play transformative role in Nigerian film industry as evident in *Jagun Jagun* movie. The efficiency gains are undeniable; tasks that once took hours can now be completed in a fraction of the time, leading to significant cost reductions. But it is not just about cutting corners or saving money; AI is also opening up new avenues for creative expression. With tools that can assist in everything from scriptwriting to post-production, Nigerian filmmakers have more freedom to focus on the artistic aspects of their work. The integration of AI in Nollywood is more than a trend; it is a paradigm shift that is reshaping the very fabric of filmmaking as evident in the movie, *Jagun Jagun*. While these tools offer unprecedented efficiency and open up new creative possibilities, they should not be replacement for human ingenuity and emotion. As we move forward into this new era of Nollywood. Nigerian filmmakers need to learn how to collaborate with different AI-powered tools and leverage them and should imbibe the culture of learning and re-learning,

training and re-training, and taking the risk of trying new AI techniques. It is crucial to find a balance; embracing the technological advancements while preserving the essence of human creativity that makes films resonate with audiences.

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