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AI-Assisted Film Editing and Visual Effects: Craft, Workforce Displacement, and Style Evolution

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ABSTRACT

Artificial intelligence (AI) is rapidly transforming film editing and visual effects (VFX), reshaping creative workflows, aesthetic practices, and labour dynamics within the film industry. This study examines the capabilities of AI-assisted editing and generative VFX tools, focusing on their impact on narrative construction, stylistic evolution, and professional roles. Drawing on film theory, automation theory, and labour-market analysis, the research explores how AI influences editorial decision-making, including pacing, continuity, and shot selection, while also enabling new forms of visual expression through generative models and real-time rendering. The paper further interrogates the ethical, legal, and cultural implications of AI integration, particularly issues of authorship, intellectual property, bias, and representation. While AI systems enhance efficiency and expand creative possibilities, they also introduce risks of labour displacement and stylistic homogenization. Empirical insights from case studies and industry trends suggest that AI is more likely to augment rather than fully replace human creativity in the near term, though its long-term effects remain uncertain. Ultimately, the study argues that AI is not merely a technical tool but a transformative force that redefines the relationship between human agency and machine intelligence in filmmaking. It highlights the need for adaptive policy frameworks, reskilling initiatives, and ethical safeguards to ensure that technological advancement supports sustainable creative practices and preserves the cultural integrity of audiovisual storytelling.

Keywords: Artificial Intelligence, Film Editing, Visual Effects (VFX) ,Creative Labour and Cinematic Style

INTRODUCTION

AI-assisted film editing and visual effects (VFX) tools are emerging that facilitate the editing and post-production of films and videos [1]. These tools permit the automation or semi-automation of parts of the editing workflow, enabling editors to work more efficiently and explore new art forms. Such advances may also lead to job displacement in a profession where automation has not yet made significant inroads [2]. Over the past decade, films and videos have increasingly adopted the aesthetics and techniques of artificial intelligence (AI) in their content creation. AI may now assist with the editing of features, short films, documentaries, or any other screen content [3]. AI editing tools, such as Magisto, Adobe Premiere Pro, and Huobi, employ the analysed visual content of multiple videos in combination with desired spoken or written instructions to generate edited material tailored to user specifications. The results condense selected video footage and increase viewer engagement by anticipating audience preferences regarding timing and continuity [1, 4].

Theoretical Framework and Research Questions

Grounded in film studies, automation theory, and the economics of labour-market disruption, a conceptual framework specifies the research problem and connects its investigation with established scholarship [5-8]. Significant transition to AI-assisted tools for video editing and visual effects (VFX) raises questions about the evolving relationship between automation and skilled craft in artistic work. Neither the technological affordances of AI-enabled tools, automated request for the model, clip editing, parametric frame generation, and stylistic alteration nor their impact on the role and activities of the editor have received rigorous consideration within the

film-technology literature [9-12]. To address these gaps, the formulated questions trace the balance of human and algorithmic agency in audiovisual composition with respect to both creative authority over form and the shifting parameters of cinematographic style [13-16]. AI-assisted tools modernise numerous dimensions of the editorial craft, including speed, precision, continuity, enhancement, and refinement of the intended effect, alongside increasing the collaborative impact of neighbouring disciplines such as cinematography. Framework predicts that machine influence on decision processes will remain supplemental, with the majority of fundamental choices still determined by the editor [17-20]. Evolving AI assistance is expected to convey stylistic conveyance more than in-camera composition and ergonomics. Industry case studies demonstrate AI enhancement of existing material and adaptability of teams to new capabilities, while annotations clarify background and significance. Findings contribute to urgent debates about the interplay of creativity, labour, and technology notably, whether automation complements or displaces human endeavor with implications for policy, education, and the design of future AI systems [21-23].

AI-assisted Film Editing: Capabilities and Workflows

AI-assisted film editing combines humans and AI for visual storytelling. The editor contextualizes hours of raw footage to construct an engaging story meeting stakeholders' technical, aesthetic, and narrative goals. Editing combines a toolkit of methods, including decisions on content trim, temporal order, connections, and graphic design [24-26]. Modern AI video editing tools leverage previous work automating video editing to facilitate the first cut, assist in adjustments, extract insights across a corpus of clips, and enhance textual messages at the shot level or scene level [27-28]. Editing is beginning to undergo a transformation. AI image synthesis generates entire frames and movies, creating, completing, or altering video at composition level. Apart from timelapse, film still requires temporal continuity. AI-enhanced image generation is generating asset and style choices for shots and sequences that move away from traditional imagery [9]. Early generative models focused on individual frames due to high complexity; recent generative framework operates at video level, maintaining logical scene boundaries and enhancing completion with video-awareness [10].

Automation in Editing Decision Processes

Automated systems can now wade into the creative whirlwind of clip selection, pacing, cuts, and continuity checks, which introduces new modes of narrative structure and pacing and affects rhythm, tension, and audience alignment [3]. AI-driven effects generation and time-consuming VFX integration have become two critically intertwined burning issues. The increasing demand for visual effects has resulted in drastically longer production timelines to accommodate artistic experimentation [4]. There is a fundamental contradiction in the commercial philosophy of trying to do more with less. Automated editing, the first step in shaping the narrative and dramatically compressing postproduction time, is a key target in this pursuit [5].

Impacts on Narrative Structure and Pacing

Automation in editing decision-making affects narrative structure and pacing. Automation of clip selection, pacing, cutting, and continuity checks influences the film's rhythm, tension, and alignment with audience expectations [2]. Editing rhythm informs the overall energy of a film and its engagement with viewers. This rhythm entails a combination of shot duration, number of shots per unit time, and the temporal distance between different viewing angles, set-up changes, spatial shifts, ellipses, and other factors. As such, editing rhythm interacts with a broader framework of temporal dimension in cinematic storytelling [3]. Films are temporally relentless, subjectively drawing-in its viewer with a seeming prospect of completion; break distractions to adhere viewer attention to the primary story; expressions like poetically quick presentation of events. Clips selection, duration, cut order, and other decisions affect editing rhythm [4]. Audience mystery is sculpted through editing and the release of tension is strongly tied to cinematographic elements. Outright exposition lets the viewer truly become free from uncertainty and attends closely the rest of the story-building, and where to linger upon details and where to deliver are crucial; organisation where blocks of suspense become clear to hold constant the viewing-attention[5]. When control points of narrative-plot are reached, the viewer becomes free of mystery upon certain plot-points but curious to wonder further development, that being another dimension of narrative-tension; how much plot is narrated? Clips selection still takes part heavily upon this field [6].

Case Studies of AI-enhanced Editing

AI-enhanced editing tools have begun to emerge that either use AI to assist human editors or operate fully autonomously [1]. Several case studies illustrate these capabilities and their implications. In the autonomous editing systems examined by [1], shot detection and segmentation divide long videos into smaller clips, and the software models the editing style of an existing video, including its shot choice, pacing, and color grading [2]. When users supply an unedited video and a model video, the AI generates an edited version, preserving the story while implementing the new style [3]. The authors invite participants to evaluate the finetuned models against a baseline model, and user feedback shows that models trained on professionally edited videos yield significantly more favorable scores[4]. These results indicate that the generated edited videos reflect artists' intentions, aligning the model more closely with human editing norms and producing more coherent and engaging works. To

assess the quality of unedited videos, the authors introduce a script-embeddings-based metric for estimating story completeness and increasing the video's potential for subsequent editing [4, 5]. Another approach analyzes editing decisions from a variety of professional editing styles and automatically transfers them from a reference video to longer user footage [3]. When shown edited results along with the reference video, industry professionals report a strong preference for the AI-assisted editing. Insertion of actors' dialogue snippets from the initial footage is also identified automatically using natural language processing, enabling cuts to be made while retaining dialogue consistency [6]. Model-driven automation is applied to cinematic video editing for video highlight detection and selection. After gathering a dataset of videos and highlights, model performance is evaluated with respect to human-selected highlights [7].

AI-driven Visual Effects: Generation, Integration, and Realism

AI-based technologies reshape film production, enhancing editing and visual effects (VFX) tasks. Editing capabilities prosper at multiple levels: high-level creative decisions; low-level choices concerning shot-connectivity, rhythm, and pacing; and, at intermediate levels, applying cuts, pacing, scene linking, and continuity checks [4]. Generative models assist VFX by fabricating textures, assets, and detailed 3D environments. Generative Adversarial Networks and Diffusion Models permit creation of synthetic elements that seamlessly blend into existing frames, augmenting virtual realism [5]. Real-time rendering mitigates discrepancies between previsualization and postproduction rapid feedback fosters creative exploration [6]. Generative systems and image-to-image transfer invoke style change in simultaneous as well as cross-project contexts [7]. Color scheme, composition, textures, lighting, and atmospheric rendering evolve across individual studio productions. Style adaptation varies by genre, Documentary and Green-Screen effects script activation and augmentation illustrate systematic visual shifts [8].

Generative Models in VFX Pipelines

For animated films, pre-visualization models support the early design of environments, characters, and movements [6]. Generative models simplify asset creation by producing character meshes from 2D input, generating geometries, and providing texture maps that conform to a reference [7]. Scene augmentation incorporates 3D elements such as props, effects, and characters to a frame or sequence while retaining the original look [8].

Real-time Rendering and Postproduction Efficiency

In recent years, film production has seen a trend toward concurrent workflows. Rapid advances in generative AI and real-time rendering are driving further convergence between previsualization and postproduction by making it possible to render and integrate complex visual effects (VFX) on set [11]. AI-supported VFX generation enables real-time creation of 3D assets, textures, and scenes, as well as the integration of naturalistic visual elements into live-action photography. Generative VFX models offer a wider range of art styles, which can lead to stylistic divergence across films and projects [12]. Generative networks facilitate diverse asset creation, allowing rapid exploration and adaptation of stories and designs. Nevertheless, significant open-ended iterations and refinements remain in the postproduction stage [13]. The widespread adoption of multiple rendering engines, hybrid workflows, and universal scene description standards mitigates interoperability challenges associated with these large models [14].

Style Transfer and Artistic Evolution in VFX

AI-driven visual effects generation facilitates the creation of visually rich films through a variety of processes, such as the generation of assets, textures, and entire scenes [10]. Subject to the same pressures as other elements of the filmmaking process, the use of AI for VFX aims to enhance productivity by streamlining supply-chain bottlenecks and addressing the considerable demand for VFX in contemporary cinema. Style transfer integrates distinct artistic aesthetics into images, video clips, and other forms of graphic media [9, 11]. With a purely synthetic image that retains no ground-truth content and a stylizing video that preserves the same semantic scene throughout, generation does not explicitly materialize as a consequence of style transfer [12]. Instead, the transformational application of extensive historical reference material from a single class, genre, or aesthetic produces the intended effect [10, 13]. Succeeding such experiments, stylistic modification that transfers a prevailing graphic or pictorial medium emerges between products from different projects, studios, or broad spans of time: artwork, advertisement, television, and film collectively build graphical vernaculars that characterize epochs and cultural trends [11, 14].

Craft and Technique: Changes in the Filmmaker's Toolkit

Filmmakers are integrating artificial intelligence technologies into the enhancement of film editing and the generation of visual effects [6]. Editing and VFX are becoming intertwined with the broader landscape of machine learning because emerging approaches, both generative and enhancement-focused are shifting workflows and augmenting creative decision-making [7]. Automated editing tools prioritize select scenes or visuals, assist with pace, and imply narratives through stylistic associations [12]. AI-generated VFX insert content into live footage, recreate styles, finely tune surface characteristics, or augment locations. Rather than relying on an extensive tail of a pre-existing gig economy, the democratization of access yields almost immediate and expansive

opportunity [8]. Machine learning has the potential to displace labor through automation and augmentation, yet cinematic edition and VFX pipelines exhibit distinct characteristics within workflows, decision processes, and the individual artist's contributions [9]. Film has historically attracted demand across labor markets, and reductions have become highly structuring even within broad creative domains. In order for the AI-equipped filmmaker to retain agency and for artistic evolution to continue, the editing discipline will depend on practices of upskilling and constant collaboration with a transparent framework of tools, guidance, and critique [10, 11, 12].

Skill Sets and Training Requirements

AI technology influences creative practices within the film industry, yet the roles of editor, VFX artist, and post-production supervisor remain essential [3]. Machine learning models assist with footage selection, pacing, cut determination, and continuity checks; enable asset, texture, and scene synthesis; and facilitate compositing and rendering [4]. AI's novel, emergent capabilities assist various editing and VFX directives and integrate into project-specific feedback workflows, modifying narrative construction and aesthetic evolution. Although awareness of AI's potential is growing, the design of projects and the smooth development on the broader trajectory of artistry still constitute the essence of these roles [5].

Collaboration Between Artists and Algorithms

AI-assisted editing relies on automated systems to process and organize media. In contemporary film production, it focuses on decision-making steps rather than technical operations, offering more intuitive workflows for creators. In more complex pipelines, human feedback guides generative systems that produce initial results [6]. Such collaboration helps refine outputs while preserving the artist's signature style and larger creative vision.AI generates thousands of cinematic VFX shots each year. Automated processes improve efficiency by augmenting artists' skills, replacing repetitive tasks, and facilitating experimentation [3]. Time savings range from hours to several weeks, enabling studios and independent creators to explore more concepts. Collaborative approaches enhance stylistic control across different projects and serial productions. Feedback loops between artists and AI allow studios to shape unique visual aesthetics [5].These hybrid setups necessitate new capabilities for human contributors. Editors, supervisors, and artists must comprehend automated models to interact productively with algorithms and refine generated outputs at varying levels of detail. Models capable of generating first drafts across different domains further broaden these interactions [6].

Workforce Displacement and Labor Market Dynamics

Automation technologies can have a profound effect on job availability, skills demand, and compensation structures [4]. Automation technologies can endanger jobs by substituting for tasks performed by workers, while technologies that lead to greater productivity and efficiency might also endanger jobs [5]. Policy choices concerning investment can help determine how to prioritize and combine different approaches to automation, helping to avoid a dystopian future in which the human dimension of work gets rapidly eroded [13]. The speed, intensity, and complexity of the changes brought about by automation will also be highly variable across sectors. The film industry has changed dramatically; while some changes have opened up new niches for creative input, many activities associated with film, television, and entertainment have been diminished morphed or transformed into other kinds of interactions[14]. In the editing and VFX sectors, employment levels show different patterns. In feature film VFX, where attention has been focused recently, there are signs of long-term decline since around 2007. The ARC analysis focuses on retention-adjusted earnings, applying an earnings measure that typically correlates with demand for different jobs across different domains [15]. Adjusted earnings for editing positions across feature films and episodic long-form series have decreased rapidly, suggesting that demand in editing is not necessarily contracted. Rather, demand is measured by how much work is available to different types of jobs and creative professionals through different types of projects and genres within a workforce segment [14].

Employment Trends in Editing and VFX

The share of the workforce employed in film editing has steadily declined for approximately 20 years to reach its lowest point in 2022[5]. The total number of editors fell even more sharply, while the number of assistant editors has remained fairly stable. The average number of editors, assistant editors, and VFX artists per film has also fallen, while the demand for editing and VFX workers is now higher than at any time during the previous decade, and compensation has shown dramatic increases across multiple metrics [6]. Editing positions are expected to suffer considerable disruption in the next 10 years, along with other creative occupations deemed at high risk for change. Editing VFX replacement models also present urgent supply challenges, making the status of both fields increasingly precarious [7]. VFX employment also reflects a mixed picture characterized by high demand, actual worker shortages, and regional disparities. VFX workers number slightly more than they did a decade ago; however, the proportion of films employing them is significantly lower [8]. Studios migrate VFX work to low-cost hubs such as Canada to maximize profitability, leading to the briskest freelance markets in locations such as London and Los Angeles. Yet early job projections suggest a 10% decline in positions by 2030, modestly offsetting past growth [3]. Despite these contradictory trends, index modelling projects sizeable demand reductions for both indicators during the same period [6].

Re-skilling and Policy Considerations

AI has transformed the global economy over the past two decades, reshaping workflows, upending job descriptions, and altering the nature of work itself. Instead of simply promoting efficiency, it has redefined industries, raised new policy challenges, and prompted critical reevaluation of human labor [2]. Empirical evidence suggests at least ten million current U.S. jobs are vulnerable to AI-assisted automation, and for a significant share, the potential productivity impact is substantial [3, 14]. This research examines AI-assisted film editing and visual effects (VFX) generation, addressing investments in workforce displacement, the evolution of craft and technique, and related policy considerations [3]. Video editors work with hours or terabytes of raw footage to assemble narratives across time, space, voice, and genre. Meanwhile, VFX artists dedicate thousands of hours to refining scenes based on intent, style, and realism, often iteratively ensuring accuracy and consistency [4]. Each discipline benefits from multiple forms, signals, and tools, often graphically or acoustically evocative. Emerging AI tools that influence both disciplines invite scrutiny of changing roles, reskilling needs, and conventional creative control [5]. Job displacement from AI-assisted editing and VFX is uncertain. Demand for video editing services in the U.S. is diversifying and growing, while employment and earnings in both fields have risen; yet early indicators suggest broader labor-market disruptions, particularly for roles involving lower-level skill requirements and significant task redundancy[6]. The increasing ability of AI tools to assume conventional editing functions further supports speculation about role erosion. Editing and VFX generation are nonetheless complementary dimensions of film construction, and AI-enhanced versions of both may even spur greater demand for both crafts [7]. Despite identifying potential future states, this research refrains from predicting outcomes, given the non-linear and emergent nature of sociotechnical change and the uncertainty surrounding technology adoption and policy trajectory [8]. Existing education and training opportunities have been cataloged [9]. A set of competencies has been identified that experts characterize as desirable for continued relevant engagement. Production-led demands on video editors and VFX artists appear to contain core elements artistic, interpretative, critical, and technical associated with established creative disciplines, supporting the possibility of continued involvement with and influence over editorial and VFX practice into the near future [7, 10].

Ethical, Legal, and Cultural Implications

The integration of artificial intelligence (AI) in creative practices encounters both promise and peril. By automating tasks historically assigned to film editors and visual effects (VFX) artists, the technology holds the potential to expand creativity; nonetheless, concerns persist that it will rein in artistry, compromise fairness, and dilute design integrity [11]. Without careful stewardship, AI might ultimately undermine the industry's creative core [15]. AI techniques are already capable of underwriting entire film projects; other automation tools might augment existing practice rather than seizing creative dominion. With generative deep-learning models generating images, sound, texture, and speech, the field of creative AI is growing rapidly [14]. However, the use of these technologies involves contextual nuances; any adoption must remain cognizant of the ethical issues they represent, irrespective of the potential they provide to broaden the possibilities of social good [15]. Concerns about the attribution of rights, the boundaries of authorship, and the nature of intellectual property rub against increasingly evident transformations of the own visual language in response to cultural phenomena raised by AI-enhanced processes [16]. Other issues span the dimensions of social representation and under-representation endemic to the rise of body-, face-, and voice-swapping techniques; the coordinates of such automated aesthetic have ramifications for the way film ultimately exerts influence [17].

Attribution, Authorship, and Intellectual Property

Cinematographic practices are facing new disruptions as generative artificial intelligence (A.I.) gains traction in the creation, direction, production, and post-production of film and video [10]. Thanks to large-scale and diverse datasets, deep learning systems have become proficient at integrating numeric and multimedia data into governing models, capable of generating images, audio, and text [11]. When film and video are combined with A.I. systems, the result is the premature emergence of film structures, as input D.I.Y. A.I. codes that is, A.I. commands yielding fully segmented script treatment structure. While assembly editing serves to secure frame continuity and link disparate elements together, it hinders film revisualization [12]. When precreation of film and video materials becomes so early that outline description can be fully circularized in screenplays, decisions on photographic language, shoot-style, cutting style, retouching, screen direction, and aesthetic can be described, decided upon, and materialized before image generation and the start of shooting [13]. The film-editing panorama is experiencing a major overhaul. A.I. editing and V.F.X. A.I. spinoff applications promise significant benefits as they automate standard procedures [14]. Platforms like Pymetics use numerous editing A.I. modes to provide quick cuts based on tens of thousands of context-relevant short films uploaded and displayed on platforms such as TikTok. These automatic processes can be done much more crudely than at present and still yield desired results [15]. The editing community has ignited ongoing material dialogues across many fields of the art of film editing, sampling both masculinely-naturist foundations and femininely-impressionist conclusions on physical and ideal forms. A shift from subjective narration (editing for storytelling purposes) to the more objective arrangement of time, space,

movement, rhythm, and music that lies at the edge between A.I. and non-A.I. creates an endless array of gendered, millennial dialogues about gender fluidity and the evolution of bodily formation [16].

Bias, Representation, and Societal Impact

AI-generated content may incorporate existing biases and stereotypes from training data, potentially reinforcing derogatory societal views or misrepresenting marginalized communities [17]. Accordingly, AI-driven content creation potentially reproduces biases evident in previous artistic expression, such as film, theatre, literature, or similar media [17]. Research indicates substantive gender bias in Hollywood film dialogues, including the representation of various occupations, interpersonal relationships, and additional underlying social indicators. Many biases stem from underlying contextual factors, which combine to produce a total mass bias [18]. AI in film editing, VFX, and other creative environments can thus entrench the same established patterns of bias, classification, or differential representation already evident in human artistic practice. The ramifications extend beyond formal artistic attributes of individual works toward broader sociocultural effects stemming from the displacement or augmentation of professional practitioners and the standardization of artistic styles [19].

Style Evolution: Aesthetics in an Era of Automation

AI-based tools increasingly influence film editing and visual effects (VFX) creation. These technologies assist in the selection of sound, video, or other multimedia material, enabling virtually instant generation of high-quality images, video, audio, text, or 3D models from simple prompts [3]. Such tools are rapid, making them attractive in time-sensitive projects and within formats such as TikTok, Instagram Reels, or YouTube Shorts, where a timely response can attract a wider audience. Algorithms help produce large volumes of material, thus augmenting creators' possibilities, and support in the identification of timely trends [19]. Attention on editing and VFX has intensified during 2023, stirred by analytics on ChatGPT-related trends, claims concerning imminent automation of the film and television workforce, and news on industry-generated style adaptations and recognition of experimental feature films realized by AI[18]. Automation influences the ways in which edit decisions are made, in addition to determining the governance of such frames. Examples encompass automated assistance in the selection of material, pacing, cuts, rhythm, and the preservation of continuity while integrating various production modes, such as cinema and livestreaming [20]. Such functionalities radically reshape the structures of narrative and pacing across the industry, influencing rhythm, tension, and audience alignment. Audio-visual works receive an abundance of material, constituting an information overload on top of the deficiencies of each form 21. The process of selectivity thus steers edit choices, with editorial decisions closely interlinked and affected by such premises [21]. Tying into wider contextual shifts, film and television editing constitute by no means rigid attributes across time or format but continually evolve. Shot choice, ordering, or juxtaposition mark just a few facets of an ever-changing landscape [19]. Those particulars together help to form a line of narrative and the connection to aesthetic evolution connects unequivocally with current VFX practice and procedures. The current exploration inspects how edit styles adapt to, and are appropriated by, AI-assisted tools and the long-term implications of such shifts on the broader craft, along with VFX, methodology, and ethics. Graph-based, indicator, and video-track alignments permit the collection of distance measurements across film works and point towards detectability through input queries [18]. The selection of particular reference works enables them to act not merely as material, but also as exemplary agents from which algorithms strive to learn and gain feedback on evolving craft and modality. Such analytical setups permit the gathering of fundamental further evidence, grounded detail on widely addressed frameworks, and firm linkages with other prevailing aesthetics both today and during the past decades [11].

Shifts in Visual Language and Audience Expectations

Articulating their own film language, directors have always sought to adapt the work of peers [1]. The history of aesthetics is replete with changes linked to the adoption of new instruments and principles; painters exchanged ideas through pastel, while writers were inspired by new techniques, peripeteia, montage, antithesis, and twist ending [7]. Today, audiovisual creators adapt to changing tools, yet the outline of the transformation remains unclear. Video editing is reshaping narratives, and the advance of generative AI is pushing the expansion of audio-visual content. Techniques and tools apply scientifically tested principles; microwave ovens favor the simple over the complex, and standard drives impede the use of color, depth, and reflection [8]. Since the advent of digital cinema, editing has evolved. Images capture and project more light, promoting shadowless lighting and colored lighting [9]. Postproduction also applies fast-forward and slow-motion effects, color grading, and stabilization, influencing narrative comprehension and empathy. AI will likely further change the art of film editing and the relationships editors maintain with directors. The establishment of timely communication within the industry has received ample attention [1].

Case Studies of Stylistic Change across Genres

The visual language of cinema has evolved considerably since its inception, fundamentally distinguishing commercial film from earlier moving-image media [1]. Factory-made systems of narrative construction and visual articulation gradually emerged, and these systems of semiotic signification have continuously mutated since

viewers settled into a broad understanding of how visual narratives work [10]. Several factors influence shifts in audiovisual style, including the byproducts of technological developments and creative choices about form, content, and representation [11]. The implementation of film-style generative models can alter artistic evolution, and studying stylistic shifts in the early 1920s, mid-1950s, and early 2000s provides a historical framework for understanding and classifying style changes in the contemporary period [12]. Contemporary audiovisual style is shaped by an interaction of systemic factors and artistic decisions. This research examines the influence of AI-enabled generative editing and VFX on institutional style shifts across distinct periods and genres [13]. In practice, developments in film technology, including AI-based systems, embody complex and shifting system–art interface relationships [13]. The early 1920s witnessed an interaction between the introduction of professional-grade cameras and projectors and the rise of factory-conventional content style, the mid-1950s was characterized by the emergence of television and related generative standards, and the turn of the 2000s saw the consolidation of non-linear editing systems. In these periods, the evolution of pattern-based audiovisual rhetoric unfolded alongside an expanding generative toolkit [14].

Methodology and Evidence

Worldwide growth in the volume of video content is outpacing the resources, talent, and time available to produce and edit it [14]. The well-publicized shortage of well-trained workers to produce visual media supplements this long-standing disparity of supply and demand [15]. Such difficulties prompt exploration of novel systems that help creators to imagine, propose, and communicate new ideas both during the conception and realization phases of the creative process. New systems amplify the creativity of their users rather than diminish it, as automated tools were expected to do. Each of the following frameworks addresses a different aspect of the editing pipeline, including language, video, audio, and human control within the system [16]. The emergence of powerful, flexible, and widely available AI authoring tools (e.g., ChatGPT, DALL-E, MidJourney) has intensified scrutiny, analysis, speculation, and even anxiety about the future of creative expression, and particular genres such as advertisement, news, music videos, art, and training videos lack adequate annotation. Rapid adoption rates of new tools often offer insights into each tool's relevance and accessibility over time [17]. Data gathered from Faces of Film, an online repository of short videos from various genres, conducts a systematic investigation of the extent to which StyleGAN's ability to generate synthetic or altered images impacts the aesthetic and perceptual dimensions of contemporary filmmaking. Data are hence generated from tool-free, off-the-shelf analyses, using readily available online benchmarking datasets and scores across both editing and VFX pipelines to guide further research [18].

Data Sources and Analytical Approach

AI-assisted video editing is witnessing a surge of products that improve productivity by applying algorithms to various aspects of the editorial process [2]. In the creative realm of film production, the "rough-cut" stage remains essential, characterized by shot selection, sequencing, the establishment of rhythm and structure, and the unattached juxtaposition of clips. Accordingly, ongoing research explores how largescale machine learning (ML) architectures may be leveraged to accelerate editorial workflows at these levels. Existing inquiries focus mainly on outlining the capabilities of available tools and the modifications to creative practices they induce [3]. The analysis of trends in AI-assisted video editing follows two lines of investigation. First, there is a need to map the scope and outline the functionality and impact of current AI-enabled editing tools [3]. Second, empirical studies have documented labour-market disturbances instigated by digital automation, artificial intelligence (AI), and other transformative technologies; applying lens to the film industry may reveal parallels and extend practical implications. While disruptions in audio-visual media are often linked to formats, viewing platforms, and access, the editing and visual-effects (VFX) domains represent an alternative entry point [18]. Observing the evolution of the craft and associated workflows illuminates the intricate relationship between editing practices and visual narratives across diverse styles, contexts, and audiences. Such analyses can generate comparatively granular insights into ongoing and anticipated shifts stemming from the adoption of AI-driven tools, whether enhancements or disruptions [19]. Research on the automation of visual-editing details the modification of prepared narratives intended for final assembly. Subject to extension, these inquiries inform the integration of AI-assisted techniques into major labels across different cinematographic gossier and provide parallel observations concerning generative visuals. Various case studies featuring editorial pipelines enriched by AI-driven automation have emerged [20]. These investigations advance automatic editing exploration by linking content-analysis algorithms to sought-after practices, thereby calibrating AI technologies to the creative needs of editors [3]. Other works tackle the correspondence between editors' intent and existing aesthetic conventions, facilitating recommendations consonant with personal styles [1]. The descriptive studies, however, prioritizing metrics and the transformation of generative visual narratives remain largely unexplored [21].

Limitations and Avenues for Future Research

Widely deployed AI tools are already contributing to workflow efficiency in the industry. All-in-one solutions like Magisto, shortcut, and Camtasia bundle captioning and speech enhancement algorithms with editing capabilities [20]. Systems like Shotstack offer high-level programmatic access and cater to a range of video-making use cases.

Around the world, video editing is still seen as a demanding profession [21]. Even within a video-centric world, work-force records and limited cooperation between institutional sectors reaffirm editing's status as a specialty. If similar characteristics tinge the editing environment today, one can surmise AI assistance remains in its infancy, both in widespread adoption and in technical capabilities [3].

CONCLUSION

The integration of artificial intelligence into film editing and visual effects represents a profound shift in the structure and practice of audiovisual production. AI-assisted tools are redefining workflows by automating technical processes, accelerating post-production timelines, and enabling new forms of creative experimentation. At the same time, these technologies are reshaping narrative construction, visual aesthetics, and the broader language of cinema. While concerns about workforce displacement and the erosion of artistic control remain valid, current evidence suggests that AI functions primarily as an augmentative force rather than a wholesale replacement for human creativity. Editors and VFX artists continue to play a central role in guiding narrative intent, refining stylistic choices, and ensuring coherence in storytelling. However, the nature of these roles is evolving, requiring new technical competencies and adaptive forms of collaboration with intelligent systems.

The ethical and legal challenges associated with AI particularly those relating to authorship, intellectual property, bias, and representation, underscore the need for robust regulatory and institutional responses. Without such frameworks, the rapid adoption of AI risks reinforcing inequalities, standardizing creative outputs, and undermining the diversity of cultural expression. Looking forward, the trajectory of AI in filmmaking will depend on how effectively the industry balances innovation with responsibility. Investment in reskilling, interdisciplinary collaboration, and transparent AI design will be critical to sustaining both creative excellence and professional livelihoods. As AI continues to evolve, its role in film production should be understood not as replacing human artistry, but as reshaping and extending it within a dynamic and increasingly hybrid creative ecosystem.

REFERENCES

1. Frey, N., Chi, P., Yang, W., & Essa, I. (2021). *Automatic non-linear video editing transfer. arXiv.* arXiv:2105.06988.
2. Sanz-Aznar, J., Bruni, L. E., & Soto-Faraco, S. (2023). Cinematographic continuity edits across shot scales and camera angles: An ERP analysis. *Frontiers in Neuroscience, 17*, 1173704. doi:10.3389/fnins.2023.1173704.
3. Soe, T. H. (2021). *AI video editing tools. What editors want and how far is AI from delivering? arXiv.* arXiv:2109.07809.
4. Tong, Y., Cao, W., Sun, Q., & Chen, D. (2021). The use of deep learning and VR technology in film and television production from the perspective of audience psychology. *Frontiers in Psychology, 12*, 634993. doi:10.3389/fpsyg.2021.634993.
5. Gu, R., Li, H., Su, C., & Wu, W. (2023). *Innovative digital storytelling with AIGC: Exploration and discussion of recent advances. arXiv.* arXiv:2309.14329.
6. Inie, N., Falk, J., & Tanimoto, S. (2023). Designing participatory AI: Creative professionals' worries and expectations about generative AI. In *Extended abstracts of the 2023 CHI Conference on Human Factors in Computing Systems* (Article 82, pp. 1–8). Association for Computing Machinery. doi:10.1145/3544549.3585657.
7. Epstein, Z., Hertzmann, A., Herman, L., Mahari, R., Frank, M. R., Groh, M., Schroeder, H., Smith, A., Akten, M., Fjeld, J., Farid, H., Leach, N., Pentland, A., & Russakovsky, O. (2023). *Art and the science of generative AI: A deeper dive. arXiv.* arXiv:2306.04141.
8. Ye, Y., Hao, J., Hou, Y., Wang, Z., Xiao, S., Luo, Y., & Zeng, W. (2024). Generative AI for visualization: State of the art and future directions. *Visual Informatics, 8*, 43–66. doi:10.1016/j.visinf.2024.04.003.
9. Dushkoff, M. (2016). *A temporally coherent neural algorithm for artistic style transfer* [Thesis, Rochester Institute of Technology]. RIT Repository.
10. Ruder, M., Dosovitskiy, A., & Brox, T. (2018). Artistic style transfer for videos and spherical images. *International Journal of Computer Vision, 126*, 1199–1219. doi:10.1007/s11263-018-1089-z.
11. Chen, Y., Shao, G., Shum, K. C., Hua, B.-S., & Yeung, S.-K. (2023). *Advances in 3D neural stylization: A survey. arXiv.* arXiv:2311.18328.
12. Viveiros, P. (2017). Multi-task cinema, or a "whatever style". *International Journal of Film and Media Arts, 2*(1), 52–60.
13. Frank, M. R., Autor, D., Bessen, J. E., Brynjolfsson, E., Cebrian, M., Deming, D. J., Feldman, M., Groh, M., Lobo, J., Moro, E., Wang, D., Youn, H., & Rahwan, I. (2019). Toward understanding the impact of artificial intelligence on labor. *Proceedings of the National Academy of Sciences, 116*(14), 6531–6539. doi:10.1073/pnas.1900949116.

14. Chen, N., Li, Z., & Tang, B. (2022). Can digital skill protect against job displacement risk caused by artificial intelligence? Empirical evidence from 701 detailed occupations. *PLOS ONE*, *17*(11), e0277280. doi:10.1371/journal.pone.0277280.
15. Holzapfel, A., Jääskeläinen, P., & Kaila, A.-K. (2022). *Environmental and social sustainability of Creative-AI. arXiv*. arXiv:2209.12879.
16. Sarkar, A. (2023). Exploring perspectives on the impact of artificial intelligence on the creativity of knowledge work: Beyond mechanised plagiarism and stochastic parrots. In *Annual Symposium on Human-Computer Interaction for Work 2023 (CHIWORK 2023)* (17 pages). Association for Computing Machinery. doi:10.1145/3596671.3597650.
17. Cave, S., Dihal, K., Drage, E., & McInerney, K. (2023). Who makes AI? Gender and portrayals of AI scientists in popular film, 1920–2020. *Public Understanding of Science*, *32*(6), 745–760. doi:10.1177/09636625231153985.
18. Singh, S., Roy, P., Sahoo, N., Mallela, N., Gupta, H., Bhattacharyya, P., Savagaonkar, M., Sultan, N., Ramnani, R., Maitra, A., & Sengupta, S. (2022). Hollywood identity bias dataset: A context oriented bias analysis of movie dialogues. In *Proceedings of the Thirteenth Language Resources and Evaluation Conference* (pp. 5274–5285). European Language Resources Association.
19. Chatterjee, A. (2022). Art in an age of artificial intelligence. *Frontiers in Psychology*, *13*, 1024449. doi:10.3389/fpsyg.2022.1024449.
20. Darda, K. M., & Cross, E. S. (2023). The computer, a choreographer? Aesthetic responses to randomly-generated dance choreography by a computer. *Heliyon*, *9*(1), e12750. doi:10.1016/j.heliyon.2022.e12750.
21. Svanera, M., Savardi, M., Signoroni, A., Kovács, A. B., & Benini, S. (2019). Who is the film's director? Authorship recognition based on shot features. *IEEE MultiMedia*, *26*(4), 43–54. doi:10.1109/MMUL.2019.2940004.
22. Egbo MN, Bartholomew DC. Forecasting Students' Enrollment Using Neural Networks and Ordinary Least Squares Regression Models. Journal of Advanced Statistics. 2018 Dec;3(4).
23. MN E, Bartholomew DC. A Discriminant Function Analysis Approach to Country's Economy Status. Journal of Advanced Statistics. 2017 Dec;2(4).
24. Egbo MN, Bartholomew DC, Okeke JU, Okeke EN. Markov chain approach to projection of secondary school enrolment and projection of teachers. Open Journal of Statistics. 2018 May 9;8(03):533-55.
25. Nkechi EM, Chekwube BD, Paul OC, Chizoba KL. A Monte Carlo simulation comparison of methods of detecting outliers in time series data. J. Stat. Appl. Probabil. 2022;11:819-34.
26. Egbo I, Egbo M, Onyeagu SI. Performance of Robust linear classifier with multivariate Binary variables. Journal of Mathematics Research. 2015 Dec 1;7(4):104.
27. Egbo MN, Nwafor GO, Owolabi TW, Onukwube OG, Okechukwu BN, Ofodile OR. Statistical Analysis of Suicide Rates Across WHO Regions. Sch J Phys Math Stat. 2025 Jul;6:240-5.
28. Okafor U, Anichebe, Ezeora, Asogwa, Obayi, Onwuamaeze, Mba, Egbo MBA. The identification of influential groups in linear regression models via an influence matrix approach. Mathematics and Statistics. 2025;13(5):413-419. Published by Horizons Research Publishing. Available from: Horizons Research Publishing

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