Introduction

STUDENTS' PERCEPTION OF THE IMPACT OF AI-PHOTO ENHANCER ON PHOTOGRAPHY

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ABSTRACT

This study examined Prince Abubakar Audu University students' perception of the impact of AI-photo enhancer on photography. The Technological Determinism theory served as the theoretical framework for the study. The study specifically aimed at ascertaining the level of exposure to AI-photo enhancer among Prince Abubakar Audu University students, determining the perception of AI-photo enhancer among the students and suggests how AI-photo enhancer can best be employed to preserve photography as a profession. The study adopted the survey method of research. A sample of 377 was drawn from a total population of 19,225 using *Krejcie* and *Morgan* sampling table. The researcher made use of structured Likert scale questionnaire as the instrument for data collection. Mean and standard deviations were used to analyze the data. The Statistical Package for Social Sciences (SPSS, version 20) was used as the analytical tool. Finding of the study revealed that AI-photo enhancer has garnered awareness and acceptance among the students, with a significant number of respondents being aware of the AI-tools and having some knowledge of how to use it. The study also found that the respondents have a positive perception of AI-photo enhancer in relation to photography as a profession. Finding of the study further suggested that photographers should employ AI-tools for effective service delivery. The study recommended among others that photographers association should organize AI training for their members to ensure they are well-versed in utilizing the tool as a valuable asset in their career.

Keywords: Artificial Intelligence, Photography, Perception, Photo-enhancer, Profession

Visual communication has been valued throughout history and across cultures. It is

usually easier to believe what is seen than what is heard or uttered. It is not surprising, then, that photography has evolved into one of the most powerful mediums of communication, capable of transmitting information, emotions, and tales through visual images. As a result, it has evolved into a creative and rewarding profession for people with the desire, abilities, and talent to shoot and make attractive photos. According to Freeman (2012), the sheer appeal of photos and visual communication to humans means that the field of photography has evolved over time, impacted by a variety of variables such as technology advancements, artistic trends, and social shifts.

Photography has been influenced by technological changes over the years, which have had an impact on the equipment, techniques, and procedures employed in photograph production, as well as the quality of photographs created. One of the most significant technological advancements in photography was the switch from analog to digital photography in the late twentieth century. Digital photography has replaced film with electronic sensors that catch light and save photographs as digital files. Digital photography also allowed photographers to use computers and software to edit, modify, share, and print their photos. Digital photography also opened up new opportunities and difficulties for photographers in terms of originality, quality, accessibility, and ethics (Langford, Fox, Smith & Sawdon-Smith, 2010; Lister, 2013).

Artificial Intelligence (AI) is one of the most recent technological advancements in photography, and it refers to machines simulating human intelligence processes. Smith and Neupane (2018) describe Artificial Intelligence (AI) as systems that may be taught or trained to make judgments and predictions in certain circumstances. AI is capable of performing tasks that would ordinarily need human intelligence, such as learning, reasoning, problem solving, and decision making. In the area of photography, however, AI may enhance photographs by improving their resolution, sharpness, color, contrast, and other elements with the use of complex algorithms that evaluate and process data (Wang, Chen, Hoiem, Huang, Tian & Wu, 2020).

Some examples of AI-based picture editing tools that enhance photos are Remini, Photo-Lab, Gencraft, Vance-AI, Pixsat, Spyne, and Phot-AI, all of which claim to be the best online real-time photo enhancement program. They use cutting-edge AI technology to recover old photos, improve low-quality photos, and generate high-definition images from any source. They also include a variety of functions like face recovery, photo painting, colorization, and animation.

AI-powered photo enhancement programs have been widely used by millions of users worldwide for a variety of objectives, including personal, professional, educational, and entertainment. According to statistics on the Remini website, over 100 million images have been submitted and modified using artificial intelligence. Nigeria has not been left out of the AI photography craze. The Nigerian online realm has recently been flooded with AI-enhanced image uploads across all social media platforms, including Facebook, Twitter, and Instagram, to name a few.

The growing popularity of artificial intelligence has major repercussions for the photography profession as a whole. While it can be argued that AI can help photographers deliver higher-quality images to their clients without the use of complicated equipment, it can also lead to an overreliance on technology and a disregard for the development of the skills required to be a good photographer (Lister, 2013). Furthermore, AI has the potential to eliminate the profession of photography because anyone can snap a picture with their mobile device and enhance it with technology. As a result, it diminishes the profession's reputation in the eyes of the general public.

Given the foregoing, it is critical to understand how users of AI-based photo enhancers see the product in terms of photography as a profession. Because AI-photo enhancer are popular among young people, students at Prince Abubakar Audu University provide an excellent pool of users to evaluate whether AI-photo enhancer are beneficial or damaging to photography as a profession.

Statement of the Problem

Photography is a valuable form of art and communication that enables individuals to capture and share particular moments, feelings,

and tales. Photography is also used to teach, chronicle, and preserve history and culture. According to Berger (2019, p.5), photography is "a way of seeing, a way of knowing, and a way of telling". As a result, people rely on professional photographers who possess the necessary abilities, expertise, and imagination to create high-quality and relevant photos. However, as technology advanced, photography became more accessible and convenient for everyone. People may now enhance their images using a variety of programs and software, eliminating the need for expert editing and equipment.

The majority of the most popular and capable AI-powered applications, including Remini, Photo-Lab, Gencraft, Vance-AI, Pixsat, Spyne, and Phot-AI, can recover, refine, and produce features from any image.

The introduction of these AI-photo enhancer may offer a challenge and a threat to photography as a profession, but it may also serve as a godsend. The purpose of this study is to investigate the impact of AI-photo enhancers on Prince Abubakar Audu University students' perceptions of photography as a profession.

Objectives of the Study

The main aim of this study is to examine Prince Abubakar Audu University students' perception of the impact of AI-photo enhancer on photography as a profession. The specific objectives are to:

1. Ascertain the level of exposure to AI-photo enhancer among Prince Abubakar Audu University students.
2. Determine the perception of AI-photo enhancer among Prince Abubakar Audu University students.
3. Examine how *Remini* AI photo enhancer affects Prince Abubakar Audu University students' perception of photography as a profession.
4. Suggests how AI-photo enhancer can best be employed to preserve photography as a profession.

LITERATURE REVIEW

Artificial Intelligence Technologies and its Influence on Photography

Artificial intelligence (AI) has emerged as one of today's most transformational technologies, transforming different industries and reshaping the way people live, work, and interact. AI technologies include a diverse set of tools and strategies that allow machines to mimic human intellect and execute jobs that traditionally required human participation. AI technologies, ranging from machine learning and natural language processing to computer vision and robotics, have demonstrated enormous potential in fields such as healthcare, finance, transportation, and entertainment (Nagrath & Gopal, 2015).

According to Brook (2009), the phrase Artificial Intelligence was invented by John McCarthy in 1956. He characterized it as "the science and engineering of making intelligent machines." AI is a discipline of computer science concerned with the study and design of intelligent agents that sense their surroundings and take actions to maximize their chances of success. Artificial Intelligence (AI) may be summed up as "The ability to hold two different ideas in mind at the same time and still remain the ability to function". However, AI must contain learning from previous experiences, reasoning for decision making, inference power, and speedy response. It must also be capable of making prioritised decisions and dealing with complexity and ambiguity. Artificial intelligence refers to machines that have been trained to perform jobs that, if performed by people, would need intellect. AI's scientific goal is to comprehend intelligence by creating computer systems that display intelligent behavior through symbolic inference, or machine reasoning. AI definition is not time-independent. It delivers a judgment on any system while keeping time in mind.

Bojarski (2016) defined Machine Learning (ML) as a subset of AI in which algorithms are trained to learn from data and generate predictions or judgments without explicit programming. Deep Learning (DL), a subset of ML that uses artificial neural networks to interpret complex data, has driven notable advances in image and speech recognition. For example, convolutional neural networks (CNNs) have made significant advances in computer vision, allowing machines to properly recognize objects in photos and movies (LeCun, Bengio, & Hinton, 2015). This has found applications in domains such as

driverless vehicles, where AI-powered systems assess their surroundings and travel safely (Bojarski, 2016).

Natural Language Processing (NLP) is another important AI technique that allows robots to comprehend, interpret, and synthesize human language. This has cleared the door for intelligent chatbots, language translation services, and sentiment analysis software. Models such as BERT (Bidirectional Encoder Representations from Transformers) have greatly improved language comprehension and context recognition (Devlin, 2019).

The introduction of AI technologies into several businesses has resulted in significant benefits. AI-powered diagnostics in healthcare improve early disease diagnosis and therapy planning. For example, IBM's Watson for Oncology helps doctors offer individualized treatment options by evaluating large amounts of medical literature and patient data (Cabitza, Rasoini & Gensini, 2017). AI's predictive powers are also influencing the banking industry, assessing market trends and optimizing trading methods (Tsantekidis, Passalis, Tefas & Kanniainen, 2017). Furthermore, AI-powered virtual assistants such as Siri and Google Assistant make daily activities easier, while recommendation algorithms on platforms such as Netflix improve the user experience by proposing material based on personal interests (Sinha, Swearingen & Willett, 2020).

Despite the potential benefits, AI technologies present issues that must be addressed. One major problem is bias in AI algorithms, which might result in discriminatory outcomes, particularly in decision-making processes such as employment or lending (Sweeney, 2013). Ensuring fairness and transparency in AI models is critical to avoiding exacerbating current disparities. Furthermore, concerns about job displacement due to automation have sparked conversations about up-skilling the workforce to adapt to the changing labour landscape (Brynjolfsson & McAfee, 2014).

AI technologies are driving dramatic shifts throughout industries, allowing robots to do activities previously thought to be limited to human intelligence. Machine learning and natural language processing are changing the way we engage with technology, and the benefits of artificial intelligence extend to healthcare, finance, entertainment, and beyond. As we continue to incorporate AI into all facets of our lives, it is critical to address issues such as bias and unemployment while adhering to ethical principles. This allows us to fully realize AI's promise and create a future in which people and machines work together to benefit society.

The use of Artificial Intelligence (AI) into numerous sectors has reshaped established processes while opening up new opportunities. In the field of photography, AI technologies have had a profound impact on both the creative and practical aspects of image creation and processing. This essay examines how artificial intelligence has transformed photography, including its impact on image enhancement, content development, workflow optimization, and the ramifications for photographers and the industry as a whole (Smith & Neupane, 2018)

One of the most visible effects of AI on photography is image augmentation. AI algorithms, particularly those based on deep learning, have shown extraordinary ability to automatically improve image quality. AI can execute a variety of activities to improve the visual attractiveness of images, including denoising, upscaling, and color correction. Companies such as Topaz Labs and Adobe have created AI-powered tools that intelligently upscale photographs without significantly losing quality, making them important resource for photographers looking to improve their work (Lau, Shi & Bai, 2019).

AI has even moved into content production, producing photographs that appear almost identical to those taken by human photographers. Generative Adversarial Networks (GANs) are an excellent illustration of AI's creative potential. These networks are made up of a generator that creates images and a discriminator that assesses them. GANs may produce incredibly realistic images of people, landscapes, and objects as they learn from one another, paving the way for new forms of visual creativity (Goodfellow, Pouget-Abadie, Mirza, Xu, Warde-Farley, Ozair & Bengio, 2014).

In addition to creative advantages, AI has simplified photography procedures. Photo sorting, tagging, and organization have traditionally been time-consuming processes, particularly for professional photographers who work with large collections. AI-powered software can automatically categorize photographs based on content, recognize faces,

and even predict user preferences, simplifying image management and retrieval (Koch, Zemel, Salakhutdinov & Birchfield, 2019). This not only saves time, but also enables photographers to concentrate on the creative parts of their work. The incorporation of AI into photography poses significant problems and challenges. On the one hand, AI's capacity to automate processes and improve photographs can help photographers reach their artistic goals more effectively. Concerns concerning the uniqueness of AI-generated content, as well as the potential loss of a photographer's personal touch, are real. Furthermore, the ethical implications of AI modifying reality and even disseminating misinformation via modified visuals must be carefully explored (Hosu, Goldlucke & Saupe, 2019).

Artificial intelligence has transformed the field of photography by reinventing image improvement, content development, and process optimization. The creative potential of AI-powered technologies, combined with the automation of routine activities, is altering how photographers approach their profession. As AI advances, photographers and the business will need to strike a balance between creative aid and the preservation of artistic authenticity. The future promises tremendous opportunities for photographers, with AI serving as a collaborator to improve their talents and push the frontiers of visual storytelling (Lau, Shi & Bai, 2019).

Empirical Review

Olajide and Martin (2021) investigated the opportunities and hazards of using artificial intelligence in recruitment and selection. The goal of this research is to add to the body of knowledge about the opportunities and risks associated with the use of artificial intelligence (AI) in recruiting and selection by investigating the viewpoints of recruitment professionals in a multicultural multinational organisation. This exploratory study followed a qualitative method. Face-to-face, semi-structured in-depth interviews were conducted with ten professional recruiters from a multinational firm. The studies demonstrated that AI improves the efficiency of everyday jobs through automation. However, the use of AI technology in recruiting and selection is loaded with pitfalls that instill dread and distrust among recruiters. The efficient use of AI can improve recruitment techniques. However, cynicism arises because of concerns about job losses due to automation, despite the fact that the participants believed their positions will continue to exist because recruiters should always be people. The article offers a unique look at the benefits and hazards associated with using AI for recruiting and selection in human resource management. The benefits include delegating ordinary jobs to AI and confirming the critical function of experienced recruiters.

Khan and Mazhar (2017) conducted a study into the effects of photojournalism on reader exposure and retention. This research investigates the selective retention and selective exposure ideas. The study also intends to demonstrate that pictures have a significant impact on the recall and selection of news content. The study develops the selective exposure and selective retention theories using an experimental research approach on the population of Bahauddin Zakariya University in Multan. The study found that graphics related to the text of the news report have a high level of knowledge retention. Photos that are extraneous to the text have an intermediate level of information retention. And news that is merely text has a low level of knowledge retention. The study also shows that visuals have a significant impact on the selection of news stories to read initially. News with images is more likely to be selected first for exposure. The size of the photograph is also a significant consideration in the choosing of news stories. News with larger images are chosen first for exposure, but images with lesser sizes are less likely to be chosen first.

Alam, Hasan, and Mousuf (2022) investigated the impact of artificial intelligence (AI) on education: changing paradigms and approaches. The fundamental concept behind this study was to use Artificial Intelligence (AI) technology to make human existence easier and more trouble-free while also contributing to the improvement of human development. The researchers proposed that integrating and applying AI in the classrooms will improve teaching and learning by assisting teachers and students in the process through the use of robotic technology and sensors. AI-based technology promotes inclusive and equitable quality education while also enabling universal access to lifelong learning for all people throughout the world. Furthermore, the

researchers posited that AI technology has advanced and sophisticated enough to recognize students' gestures and understand their mood and ease during the lecture, as well as read students' facial expressions and posture to understand the difficulties and problems they are experiencing in the lecture and recommend changing the lesson. An AI-based evaluation system can be used to evaluate students' knowledge, comprehension, abilities such as teamwork and perseverance, and qualities such as confidence and motivation. AI technology has enabled speech-to-text transcription, predictive text, and facial recognition, implying a more inclusive future for all learners.

Ying and Yiyi (2019) did a study on" "Is a picture worth a thousand words? An empirical investigation of image content and social media engagement". The authors used data sets from Twitter (now X) and Instagram to experimentally assess the influence of image content on social media engagement. After controlling for selection bias in the inclusion of picture material, the authors discover a strong and robust positive mere presence effect of image content on user engagement in both product categories on Twitter. They also discovered that high-quality, professionally shot images consistently result in better engagement on both platforms for both product categories. However, the impact of color differs by product category, and the appearance of a human face and image-text fit can increase user engagement on Twitter but not on Instagram. These findings shed light on how to increase social media engagement with image content. The studies "Is a picture worth a thousand words?" An Empirical Study of Image Content and Social Media Engagement" by Ying & Yiyi (2019) and the "Impact of AI Photo Enhancer on Prince Abubakar Audu University Students' Perception of Photography as a Profession" share a point of convergence in their exploration of the role and impact of images, albeit in different contexts. Both studies emphasize the importance of visual content, specifically images, in altering impressions and engagement. The authors investigate how image content promotes engagement on social media platforms, most likely focusing on the visual qualities that capture and hold users' attention. Similarly, the proposed study on the AI-photo enhancer looks into how AI-enhanced photographs affect students' perceptions of the photography profession.

The reviewed studies paid attention to and acknowledged the impact of Artificial Intelligence in different areas such as education, recruitment and selection, none of the studies explore Artificial Intelligence and Photography with a particular attention to how undergraduate students of Prince Abubakar Audu University perceived the impact AI-photo enhancer on photography as a profession.

Theoretical Framework: Technological Determinism Theory

Marshal McLuhan proposed this theory in 1962. He defines technological determinism theory by arguing that communication technologies impact how we as individuals in society think, feel, act, and operate as we progress from one technology innovation to the next. This idea holds that changes in communication modes mainly impact the trajectory of history. This demonstrates that the expansion of information technology would be accompanied by cultural, social, and economic changes. Williams (1990), as referenced in Thomas (2017), went on to state that the core belief of this theory is that technologies would inevitably produce widespread societal change.

Proponents of technological determinism say that technological growth influences and shapes society. It must evolve and adapt to new technology and developments. The negative repercussions of technical advancement are the product of people's improper use of technology, not the technology itself. Toffler saw technology as a driver of all developments that had a devastating impact on all aspects of human life. The computer has the power to take over the entire mechanical age. Today's condition is referred to as the "third wave," which is characterized by considerable changes and an acceleration of living pace caused by technological advancement. He believes that changing societies have a significant impact on the human psyche and refers to the "shock of the future" (Toffler and Alvin, 2008).

Technological determinism hypothesis emphasizes the medium's importance and, as a result, its influence on the audience. McQuail (2010) refers to it as media centric theory, arguing that it sees mass media as a fundamental driver of societal change,

propelled by unstoppable advances in communication technologies. Schement and Curtis (1995) in McQuail (2010) present us with a detailed "timeline" of communication technology inventions, which they describe as "conceptual or institutional" (such as computers and satellites). History reveals several obvious trends, most notably a shift over time toward increased speed, larger dispersion, a broader reach, and increased flexibility. They emphasize the increased ability of communication to bridge time and space obstacles.

The theory of technological determinism is highly relevant to the study exploring the impact of the AI-photo enhancer on Prince Abubakar Audu University students' perception of photography as a profession. Technological determinism posits that technological advancements have a substantial influence on societal change and development. In this context, the theory suggests that the introduction and adoption of the AI-photo enhancer can potentially shape the way students perceive photography as a profession. The AI-photo enhancer represents a technological innovation that alters the traditional methods of photo enhancement and manipulation. By applying advanced algorithms and artificial intelligence, the enhancer can significantly improve the visual quality of photographs. This technological advancement has the potential to influence how individuals, particularly students, perceive the practice of photography as a profession. Hence, since the technological determinism suggests that the introduction of innovative tools like the AI-photo enhancer can reshape individuals' perceptions, students who are exposed to this technology may develop altered perceptions of photography as a profession due to the enhanced visual outcomes.

METHODOLOGY

The study adopted the survey method of research. A sample of 377 was drawn from a total population of 19,225 undergraduate students of Prince Abubakar Audu University, Anyigba using *Krejcie* and *Morgan* sampling formula. The researcher made use of structured Likert scale questionnaire as the instrument for data collection. The research instrument was subjected to content validity and reliability test was done using test retest method. To confirm the reliability, same instrument was administered to the same respondents at two intervals. The obtained data from the responses were calculated using the Guttman scale of coefficient to evaluate the instrument's reliability. A reproducibility coefficient of 0.94 was calculated which implies that the instrument was considered reliable for the research. Copies of questionnaire were administered using multi-stage sampling technique. The Mean and standard deviations were used to analyze the data. The Statistical Package for Social Sciences (SPSS, version 20) was used as the analytical tool.

FINDINGS

Out of the 377 copies of questionnaire distributed, only 370 were returned and considered valid for analysis as shown below:

TABLE 1: DISTRIBUTION OF RESPONDENTS ON THE LEVEL OF EXPOSURE TO AL-PHOTO ENHANCER

Statement	A	SA	D	SD	N	Mean	Standard	Decision
I have never heard of AI photo enhancer.	95	27	140	150	370	2.70	.909	REJECTED
I am aware of several AI-photo enhancer to a very large extent.	140	127	10	47	370	2.32	1.303	ACCEPTED
I know at least one of AI-editing apps such as *Remini, Photo-lab Gencraft, Vance-AI, Pixsat, Spyne, Phot-AI*	112	107	69	72	370	2.26	1.269	ACCEPTED

I have used at least one of AI-editing apps such as *Remini, Photo-lab Gencraft, Vance-AI, Pixsat, Spyne, Phot-AI*	103	107	78	82	370	3.12	1.278	ACCEPTED
Cumulative mean						3.11		

Source: Field Survey, 2024

Table 1 above provides data on the level of exposure to AI-photo enhancer among Prince Abubakar Audu University students. The table reveals that a substantial portion of the students are aware of AI-photo enhancers. They had knowledge of at least one of *Remini, Photo-lab Gencraft, Vance-AI, Pixsat, Spyne, Phot-AI* and they made use of them to enhance their photos.

Table 2: Distribution of Respondents on their perception of AI-photo enhancer

Statement	**A**	**S**	**D**	**S**	**N**	**M**	**St**	**De**
I have a positive perception of AI photo enhancer.	103	107	88	72	370	3.26	1.213	ACCEPTED
I have a negative perception of AI photo enhancer.	25	37	149	159	370	2.79	.909	REJECTED
AI photo enhancer is a valuable tool for enhancing photo quality.	134	159	38	39	370	3.18	1.245	ACCEPTED
AI photo enhancer makes photos look artificial and unnatural.	97	72	113	88	370	2.96	1.142	REJECTED
AI photo enhancer is easy to use and user-friendly.	103	107	88	72	370	3.26	1.213	ACCEPTED
Using AI photo enhancer is a common practice among photography enthusiasts.	103	107	78	82	370	3.26	1.213	ACCEPTED
Cumulative mean						3.12		

Source: Field Survey, 2024

The analysis of Table 2 sheds light on the perceptions of PAAU students towards AI-photo enhancer. It reveals a generally positive perception among a significant portion of respondents, with a substantial number agreeing or strongly agreeing that they have a positive perception of AI-Photo enhancer. A substantial majority of students viewed AI-photo enhancer as a valuable tool for enhancing

photo quality, indicating its perceived utility. A notable majority considers AI-photo enhancer AI easy to use and user-friendly, suggesting that its accessibility may contribute to its popularity. Additionally, a significant number of respondents believe that using AI-photo enhancer AI is a common practice among photography enthusiasts, indicating its prevalence within this demographic. Overall, these findings illustrate a positive perceptions and attitudes towards AI-photo enhancer among PAAU students.

Table 3: Distribution of Respondents on how AI-photo enhancer affect Prince Abubakar Audu University students' perception of photography as a profession.

ITEMS	A	SA	D	SD	N	X (Me	SD	DEC
AI-photo enhancer has made me more interested in pursuing photography as a profession.	106	111	72	79	370	3.29	1.232	ACCEPTED
AI-photo enhancer has a negative impact on the authenticity of professional photography.	17	62	188	103	370	2.86	1.023	REJECTED
AI-photo enhancer has improved my perception of photography as a profession.	102	107	78	82	370	3.12	1.134	ACCEPTED
AI-photo enhancer has reduced the need for professional photographers.	156	149	37	25	370	3.21	1.221	ACCEPTED
AI-photo enhancer will improve the job of traditional photographers.	102	107	78	82	370	3.12	1.134	ACCEPTED
Cumulative Mean						3.12		

Source: Field Survey, 2024

Table 3 provides data on how AI-photo enhancer affect Prince Abubakar Audu University students' perception of photography as a profession. While many students view it positively as a tool that sparks interest in photography and enhances the profession's image, there are concerns about its potential to compromise authenticity and reduce the demand for professional photographers. This highlights the importance of considering the tool as a complementary rather than a substitute tool within the photography profession. It also underscores the need for ethical guidelines and discussions on the role of technology in photography to maintain the profession's integrity.

Table 4: Distribution of Respondents on how AI-photo enhancer AI can best be employed to preserve photography as a profession.

Statement								

AI-photo enhancer should be used as a complementary tool to enhance professional photography.								
There should be educational programs teaching students how to use AI-photo enhancer in professional photography.								
Professional photographers should collaborate with AI-photo enhancer to create authentic photo-enhancing options.								
There should be ethical guidelines for using AI-photo enhancer in the field of professional photography.								
Cumulative mean					3.205			

Source: Field Survey, 2024

Table 4 above provides data on how AI-photo enhancer AI can best be employed to preserve photography as a profession. The table indicated a generally positive and forward-looking attitude among respondents regarding the employment of AI-photo enhancer in photography as a profession. They see potential

in using the tool as a complementary means to enhance photography, particularly through educational programs and collaboration with professional photographers. However, there is a clear recognition of the need for ethical guidelines to ensure that the integration of AI technology aligns with the profession's values and principles.

DISCUSSION OF FINDINGS

The first research question seeks to ascertain the level of exposure to Al photo enhancers among Prince Abubakar Audu University students. Table 1 provides answers to the research question. The table reveals that a substantial portion of the students are aware of AI-photo enhancers. They had knowledge of at least one of *Remini, Photo-lab Gencraft, Vance-AI, Pixsat, Spyne, Phot-AI* and they made use of them to enhance their photos. This finding affirmed the tenets of the technological determinism theory which noted that advancement in technology will take over

The second research question seeks to determine the perception of AI-photo enhancer among Prince Abubakar Audu University students. Table 2 provides answers to the research question. The findings from the table reveal a positive perceptions and attitudes towards AI-photo enhancer among students of Prince Abubakar Audu University, Anyigba. The students viewed AI-photo enhancer as a valuable tool for enhancing photo quality, indicating its perceived utility. A notable majority considers *AI-photo enhancer* AI easy to use and user-friendly, suggesting that its accessibility may contribute to its popularity. Additionally, a significant number of respondents believe that using *AI-photo enhancer* AI is a common practice among photography enthusiasts, indicating its prevalence within this demographic. This finding emphasized the need to adopt AI in every sphere of life. Supporting this emphasis, Olajide & Martin (2021) noted that AI facilitates the effective performance of routine tasks through automation. Also emphasizing the need for AI, Alam, Hasan & Mousuf (2022) posited that the integration and application of AI in the classrooms will make teaching and learning effective by supporting teachers and learners in the process through the usage of robotic technology and sensors.

The third research question seeks to examine how AI-photo enhancer affects Prince Abubakar Audu University students' perception of photography as a profession. Table 3 provides answers to the research question. Findings revealed that the students viewed AI-photo-enhancer positively as a tool that sparks interest in photography and enhances the profession's image. However, there are concerns about its potential to compromise authenticity and reduce the demand for professional photographers. This highlights the importance of considering the tool as a complementary rather than a substitute tool within the photography profession. It also underscores the need for ethical guidelines and discussions on the role of technology in photography to maintain the profession's integrity. This is in line with Koch, et al. (2019) assertion that AI-powered software can automatically categorize images based on content, recognize faces, and even predict user preferences, simplifying the process of managing and retrieving images.

The fourth research question seeks to suggest how AI-photo enhancer can best be employed to preserve photography as a profession. Table 4 provides answers to the research question. The findings revealed that the students see potential in using AI-photo enhancer as a complementary means to enhance photography, particularly through educational programs and collaboration with professional photographers. However, there is a clear recognition of the need for ethical guidelines to ensure that the integration of AI technology aligns with the profession's values and principles.

CONCLUSIONS

The findings of this study indicate that AI-photo enhancer has emerged as a significant tool with the potential to play a constructive role in the preservation and evolution of photography as a profession. These findings reflect a multi-faceted perspective on AI-photo enhancer within the context of the surveyed individuals. Firstly, it is evident that AI-photo enhancer has gained considerable awareness and acceptance, with respondents acknowledging its potential as a means to enhance and restore old photographs. This suggests that AI-photo-enhancers can serve as a valuable resource for photographers seeking to preserve and improve the quality of their work. Secondly, the majority

of surveyed students exhibited a positive perception of AI-photo enhancer. They view it as a valuable tool for enhancing photo quality and consider it user-friendly. Additionally, the presence of AI-photo-enhancer in the photography enthusiast community implies a degree of acceptance and adoption, which can contribute to its integration into the field. Furthermore, AI-photo enhancer has had a generally positive impact on students' perceptions of photography as a profession. It has not only increased interest in pursuing photography as a career but has also improved the overall perception of the profession. Importantly, it is not widely perceived as undermining the authenticity of professional photography, but rather as a tool that can complement and enhance traditional photography practices. Lastly, the study highlights the importance of thoughtfully integrating AI-photo-enhancer into photography education and practice, guided by ethical standards. These recommendations underscore the potential for AI-photo tools to coexist harmoniously with the principles and authenticity of professional photography. The findings suggest that AI-photo enhancer holds promise as a valuable tool in the preservation and advancement of photography as a profession, offering opportunities for enhanced creativity, education, and preservation while respecting the core values of the field. Further exploration, collaboration, and ethical considerations will be essential as AI-photo enhancer continues to shape the landscape of professional photography.

RECOMMENDATIONS

Based on the findings of the study, here are the recommendations:

1. Given the positive perception and acceptance of AI-photo enhancers among the surveyed individuals, it is essential to promote education and training on how to effectively use them in the field of photography. Educational programs and workshops can be organized to help photographers, especially students and enthusiasts, develop skills in using the tools to enhance and restore photographs.
2. To ensure AI tool's effectiveness and authenticity, it is recommended that collaboration between AI-photo enhancer developers and professional photographers should be encouraged. Professional photographers should be involved in the design and testing of the tool to create authentic and high-quality photo-enhancing options that align with industry standards.
3. To address concerns about the potential artificial look of enhanced photos, it is crucial to establish ethical guidelines for using AI-photo enhancer in the photography profession. These guidelines should emphasize maintaining the authenticity and natural aesthetics of photographs while utilizing AI technology to enhance them.
4. Building on the positive perception of AI-photo enhancer and the desire for educational programs, AI-photo enhancement should be integrated into photography curricula. Universities and photography schools should incorporate training on AI-photo enhancement as part of their coursework, ensuring students are well-versed in utilizing the tool as a valuable asset in their future careers.
5. Photographers should be encourage to view AI-photo enhancer as a complementary tool that enhances their creative process rather than replaces their skills. Emphasize responsible and thoughtful usage of AI to augment the quality and preservation of photographs, while still valuing the expertise and artistry of professional photographers.

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