THE IMPACT OF ARTIFICIAL INTELLIGENCE ON GRAPHIC DESIGN PROCESSES AND OUTCOMES

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Abstract
As technology began to advance in various fields of human endeavours such as medicine, agriculture, aerospace, politics and governance, security, sports, marine, construction and all other aspects and as the process of graphic design continued to grow with the introduction of the digital technology in the domain of computer graphics, artificial intelligence applications unavoidably become inevitable in the processes of the theory and practice of graphic design. In the past, graphic design practitioners did their jobs using the analogue technique with physical tools and inputs. However, the practice of graphic design has gone digital, and artificial intelligence technology is now being applied in the production processes. Various graphic fields, such as photography, computer gaming, corporate identity designs, industrial automobile designs, web and page layout design are now being done using artificial intelligence codes and devices. In this study, the writers brings to focus the nuances of artificial intelligence, the pros and cons of certain graphic design applications and machines running on artificial intelligence and discusses the impact of artificial intelligence technology in the graphic design processes and outcomes. The essay aims at chronicling this aspect of graphic design profession and to contextualize artificial intelligence within the framework of its significance in the visual arts thereby putting it in its right perspective. A qualitative methodology was employed in this study. At the end of the research, it was found out that artificial intelligence remains the key that unlocks future global technological breakthrough in all aspects of human endeavour, and indeed the creative world of which graphic design practice is part.

Keywords: Technology, Artificial intelligence, Graphic design, Applications, Computer.

Introduction

The phrase ‘Artificial Intelligence’ was formally established in the 1950s in modelling human cognition (Ting and Ling 2022). According to them, the term has emerged to refer to applications that rely on profound biochemical brain networks. So, artificial intelligence art refers to artworks made by relationship teamwork between artificial intelligence algorithms and human Artists. Before now, there arose a lot of misconceptions and postulations that artificial intelligence may not stand out in some areas of visual arts such as graphics,

painting and sculpture and thus may not accomplish originality; this also infers that humans have the aptitude to differentiate between artworks that are created by artificial intelligence technology and humans; therefore, it is important to understand the roles of artificial intelligence technology in artworks and artificial intelligence creativity, although it may not be able to fully supplant human's artistic creativity. Conversely, humans just may not be able to comprehend AI's technological artworks expressively as they are being termed "artificial" but in reality, Boden (2004) thinks that there are only a few records of human evaluations on AI technological artworks to appraise how excellent an AI technology artworks algorithm would be; however, not many researchers may have given attention to how a certified artist's personality may affect the decision on AI's works of art.

However, the growing dominance of artificial intelligence in the area of visual arts in form of new software significantly altered what seem to be the fundamental standards like artistic originality and ownership of artworks. This trend in the view of Terzopolus (1999) becomes even more usual in the post-truth period as data become imaginary tale in challenging versions. Although art hitherto has not normally been in search of truths, artificial intelligence puts the whole idea of art in a larger framework and context. In this situation, this descriptive-qualitative study based graphic study which is aimed at talking about the impacts of artificial intelligence on graphics and the issues of originality and ownership, explains the idea of *generative adversarial networks (GANs)* and then ex-rays an example of their impact in graphics with tangible examples. Artificial Intelligence powered by *Generative adversarial networks (GANs)* re-contextualizes the essence of the originality in artistic activities as it occurs anytime a new technology appears and is adopted by different people at different times. Graphic design has undergone major revolution with the advent of digital technologies; with the latest revolution involving the integration of Artificial Intelligence (AI) in design processes, sparking both excitements and trepidation; AI-assisted design tools have become increasingly prevalent, promising enhanced creativity, productivity and design outcomes and so this research examines the impact of AI on the graphic design process and outcome.

Statement of the problem

The graphic design industry faces a critical juncture; as AI threatens to displace human designers. Concerns about job security and ethical considerations have sparked debate about the role of AI in graphic design. Meanwhile, designers struggle to keep pace with evolving technologies and client demands. This paper aims at investigating and so the impact of AI on graphic design by exploring its potential to augment and revolutionize human creativity and transform design processes.

Brief History and timeline of Artificial Intelligence

Who on planet earth would have thought centuries back that one day, machines will start behaving like humans and undertaking almost all tasks that humans do? Now the reality is right here before our own very eyes. Like was mentioned in the introductory stages of this work, in the year 1956, John McCarthy (1927-2011) coined the term *'artificial intelligence'* and the first AI conference was held in 1969. During this period, noted Norman (2013) a mobile robot known as *Shakey* was built and had the ability to do things with a purpose on instructions. In 1997, Super computer known as *Deep Blue* was built and it overwhelmed the best world chess player in a match and this became a huge milestone by IBM to have conceptualized this computer. In 2002, the first commercially victorious computerized vacuum cleaner was built. Between 2005 and 2019, numerous classes of artificial intelligence

devices were manufactured and just now, there is verbal communication recognition, robotic process computerization (RPC), smart phones and televisions, drones, and other innovative devices. In 2020, *Baidu* released the Linear Fold AI algorithm to medical and scientific teams developing vaccine during the initial stages of the SARS-CoV-2 (COVID-19) pandemic. The algorithm was capable of predicting the RNA sequence of the virus in less than 30 seconds making it 120 times faster than other methods and today, we are in the middle of artificial intelligence expertise in almost every aspect of our lives.

Artificial Intelligence

The integration of Artificial Intelligence (AI) in graphic design has transformed the industry, shifting ideas from automation to innovation and so this paper explores the role of AI in graphic design, examining its impact on creativity, productivity and design outcomes. A review of existing literature reveals that AI-assisted design tools enhances designers' capabilities, streamline workflows and improve design accuracy. However, concerns about job loss and ethical considerations abounds. This paper argues that AI augments human creativity, enabling designers to focus on high-level decision-making and innovative solutions and so embracing AI in graphic design practice requires adaptability, collaboration and willingness to redefine design process.

According to one of the founding fathers of Artificial Intelligence by the name of John McCarthy, it is *"*The science and Engineering of making intelligent machines, especially intelligent computer programs*".*

The Random House Kernerman Webster's Dictionary (2015) describes artificial intelligence as the conjecture and growth of computer systems able to undertake tasks usually requiring human astuteness, such as visual sensitivity, speech identification, decision making, and handwriting and spelling tasks and translating languages.

Whereas Campbell et al (2002) submit that artificial intelligence is the capability of the computer or computer-based machines like the robot to undertake responsibilities that are usually undertaken by humans because they need human aptitude and perspicacity to perform, Anantrasisichai and Bull (2021) are of the opinion that artificial intelligence is the study and practice of building systems that can solve complex tasks in ways that would traditionally need human intelligence and so, AI could be seen as both the study and instruments and equipment arising from the study.

In all the above postulations, the various authorities that proffered different meanings as to what artificial intelligence is are all heading towards the same direction irrespective of the modes of expression and that direction is that of the ability of man-made computer machines to perform the works of humans with respect to their cognitive, affective and psychomotor domains. These systems possess cognitive abilities because they can process and analyze large amounts of data, recognize information and take decisions based on the data and can also learn from experience and adapt to new situations. On the part of affective abilities, even though artificial intelligent machines do not actually express emotions like humans do, they can stimulate empathy and understand natural language related to emotions and can also identify and retort to emotional experience; they also do not have physical bodies and so they do not have psychomotor skills like humans but can control robots or other devices to perform physical tasks. And so, while AI systems have made considerable progress, their abilities are narrow and focused on specific tasks and so do not possess the same range and depth of cognitive, affective and psychomotor abilities like humans. These machines are able to reason like humans, do tasks like humans and at times even as humans

gets tired out due to exhaustion, these machines are never tired unless there are faults in their operating systems.

To summarize and simplify this subject, artificial refers to systems that are not natural, they are systems made by man and that which is made as replica of the original, real or natural thing while intelligence is the ability of a system or machine to calculate, reason, perceive, learn and understand, store and retrieve data from memory, resolve issues, understand difficult ideas, differentiate between things and situation, use normal verbal communication effortlessly, categorize, simplify, and adjust to new situations.

Thorisson (1999) thinks that artificial intelligence is a technique of building a computer or a computer-powered robotics or software to reason cleverly, in analogous conduct like the clever humans do. Artificial Intelligence is therefore accomplished by comprehensively analyzing how human brains articulates, functions, learn, decide, and work while trying to solve a given problem, and then using the outcomes of the research as a foundation of developing smart software and systems. And so the progress of artificial intelligence started with the aim of creating comparable brainpower and astuteness in machines that we get and rate high in humans. The writers feel that artificial intelligence is a subdivision of computer systems and techniques in the sense that the behaviour of artificial intelligence equipments is programmed to mimic human neural and brain systems.

Whilst humans began to exploit extra-sensory perceptions in trying to solve complex and high-end problems, there were certain aims behind this quest and this include:

1. To construct skillful systems; the systems that displays and exudes intellectual conduct and manners, that learn, demonstrate, explain, correct and instructs its users.
2. To replicate and implement human intelligence in machines and so creating systems that comprehends, do logical reasoning and behave like humans.

To this end, Artificial intelligence, according to Boden (2004) is philosophically a science and knowledge based on study areas such as Computer Science, Chemistry, Biology, Psychology, Logic, Linguistics, Mathematics, Engineering, Medicine, Agriculture, Warfare and of course almost all areas of human learning. Newell (1990) stress that the most important driving force behind artificial intelligence technology is the advancement of the computer functions connected with the human intelligence, such as reasoning, logical and critical thinking, creative abilities, learning, and seamless problem solving capabilities.

Computer software with artificial intelligence can proffer solutions to specific and non-specific questions it is meant to solve; it can take in new modifications by putting highly self-regulating pieces of information together hence a user can transform even a microscopic piece of information of its program without tampering with its configuration. Artificial intelligence technology is capable of rapid and uncomplicated adjustment of programs.

Interestingly, it is difficult to pinpoint specific domains where artificial intelligence has or is gaining prominence especially in our present day-to-day life but it would be appropriate at this stage of study the methodologies to itemize the most ubiquitous aspects of life that artificial intelligence has gained prominence. Such areas include:

Mental picture transformations.

These are the systems that recognize, interpret, and figure out image key-in on the computer; for example, a spy airplane or drone that is digitally and remotely propelled takes photographs which are used to figure out aerial information or map of some areas for the purpose of surveillance against enemy attacks and terrorism.

Doctors use clinical expert artificial intelligence system to diagnose their patient's ailment. Examples of these are machines like the magnetic resonance imaging (MRI), computed

tomography (CT) scan, 3D 4D ultrasound sonography scans, and hysteroscopy and laparoscopy diagnostic imaging technology. With these artificial intelligence machines, diagnosis is precise and accurate.

The Police also use computer software with artificial intelligence programs that can recognize the face of criminals with the stored portrait made by forensic artist. They also use close Circuit Television systems (CCTV) with artificial intelligence codes to monitor what goes on in a particular area.

Speech Recognition

The ability to speak or use vocalizations to communicate is known as speech. Some of these intelligent systems have the capability to hear and understand any language regarding statements and their meanings. They understand various accents, slangs, words, and background noise, and changes in human's sound due to weather conditions; an example is the translation device system used in multi-lingual international conferences.

In the area of commerce, artificial intelligence technology optimizes products, plans inventory and logistics. It helps in giving useful content to users; it uses bar codes and QR codes to translate and interpret prices at supermarkets; it also helps in tracking user interaction on website. This is most visible in the sense that AI being a simulation of human intelligence is machine automated to think like humans.

Gaming

Artificial Intelligence plays a fundamental task in tactical games such as chess, tic-tac-toe, poker, 7D virtual movie game and others where machines can think of huge quantity of probable positions based on problem-solving comprehension. Simple computer games like solitaire and motor and bike racing are all powered by artificial intelligence technology. Very lately, artificial intelligence technology have been introduced by FIFA, EUFA, CAF, CONCACAF and other continental sport bodies to detect the veracity or otherwise of certain decisions taken by referees, umpires and other officials in the course of a game. The Video Assistant Referees stationed in their cubicle, radios the centre referees and other officials to review such decision via the screen stationed by the pitch or place of the game. Artificial intelligence technology brings out the minutest details in real time and in most cases, converts the video clip into vector image to actually bring out the true situation; and also very recently the Olympic Games hosted by France between the 26th of July and 11th of August, 2024, employed the use of artificial intelligence technology in all the sports listed in the games schedule.

Expert Systems

There are some programs that combine appliance, software, and exceptional information to teach logic and advice. They offer clarification and suggestion to the users; from *Gmail's* smart compose that recommends what next to type to Facebook's recommendation of who to tag by detecting the faces in the photos to *Siri* (Speech Interpretation and Recognition Interface) being able to understand voice prompts and creating responses to the changing of a particular user's voice to the voice of different kinds of animals and birds or the voices of other humans using different intonations and auto spelling correction, biometrics of fingerprints and face recognition of smart phones, Google maps and aeronautic navigation systems, all these makes use of the power of artificial intelligence. Spell checks, colour balancing and plagiarism checkers are all done with the artificial intelligence technology.

Natural Language Processing
The use of artificial intelligence technology has made it possible to interrelate with the computer that understands normal language spoken by people; this also includes the translation of one language to another by merely clicking on certain prompt. In international conferences, artificial intelligence technology is employed to translate one language to series of different other languages thereby making communications seamless at such environment of diverse cultural and linguistic setting.

Handwriting Recognition
The handwriting identification software read the manuscript printed on paper by a pen or on monitor by a stylus. It can decode the shapes of the alphabets and change it into editable content. This is particularly useful in crime situations to detect criminals writing threat messages and letters.

Intelligent Robots
Robots would be able to carry out tasks ordered by humans; they are mounted with sensors to identify material data from the actual world such as bump, temperature, light, movement, heat, pressure and sound. They also have competent processors, numerous sensors and massive memory to display intelligence. Also, they have the capability of learning from mistakes made by them and they can adjust to the new surroundings. They are used in heavy duty industries like nuclear plants, automobile assembly plants and others. Added to the above are the automated teller machines (ATM), petrol and gas metering machines, point of sale (POS) mobile banking systems and a lot of other devices like smart phone's finger prints and facial recognition systems.

Medicine and Medical Practices
According to Lidstromer and Ashrafian (2022) AI has significantly impacted medicine in various ways by transforming the healthcare landscape as follows:

a. Medical Imaging Analysis: AI algorithms help interprets x-rays, CT (Computed Tomography) scans, MRI (Magnetic Resonance Imaging) scans and ultrasound sonography scans, assisting doctors in diagnosing conditions more accurately and quickly.
b. Predictive Analytics: AI predicts patient outcomes, identifies high-risk patients and forecasts disease progression in order to enable early interventions.
c. Personalized Medicine: AI helps streamline treatment plans to suit individual patients based on genetic profiles, medical histories and lifestyle factors.
d. Disease Diagnosis and prognosis: AI-powered chat bots and symptom checkers help diagnose diseases and so reducing misdiagnosis and improving treatment outcomes.
e. Robot-Assisted Surgery: AI-controlled robots assist surgeons during operations to enhance precision and minimizing recovery time.
f. Clinical Decision Support Systems: AI provides doctors with real-time, data-driven insights to inform treatment decisions.
g. Medical Research: AI acts as catalyst to accelerating drug discovery, identifies new treatments and streamlines clinical trials.
h. Patient Engagement: AI-powered chat-bots and virtual assistants improve patient engagement, education and empowerment.
i. Mental Health: AI-driven tools help diagnose and treat mental health conditions such as depression and anxiety.

j. Telemedicine: AI enhances remote healthcare services thereby expanding access to medical care especially for underserved populations.

As artificial intelligence continues to evolve, more innovative applications in medicine are to be expected.

How artificial intelligence technology affect humans

Nowadays, in everything we do, we are directly or indirectly under the service of artificial intelligence technology; from our air and land travel navigational system to banking and finance, photography, medical diagnoses and treatment, industries and agriculture, as graphic artist and visual artists in general, academic works and so on, artificial intelligence is constantly playing a very important role in our lives.

How Artificial Intelligence technology impacts graphic design

Technological advancements over the past few decades according to Karaata (2018) have made tremendous improvements to work processes in almost every profession and artificial intelligence is about the most exciting of these technological advancements. With AI technology, automating graphic design processes become very seamless; for instance, *Adobe Sensel* software uses AI to hasten up processes of filtering through stock photos to discover the ideal images, editing facial features without distorting them and smoothening out jump cuts during video sessions. Web developing programs like *Squarespace, Wix* and *Grid* employ AI to generate websites even without needing the help of experts; here users can upload images and text and choose from a collection of colour combination and design options to create a unique website in easy steps. Autodesk *Dreamcatcher* program lets designers input specific design objectives into the tool which in turn uses AI technology to generate a number of design alternatives that meet such specification and so designers can then select the best option in or redefine the parameters to generate new ideas in easy steps. *EyeQuant* makes use of eye-tracking technology which is AI driven to forecast what type of banner advert that will effectively catch people's attention; the advert visibility score uses an algorithm that will analyze the image uniqueness of an advert, scoring it from value of zero to hundred so at the end, the AI technology will automatically produce an eye-catching advert that are most likely to be 90% effective. *Netflix* has estimated tedious role tasks such as product localization and creating the same graphics in multiple languages using AI to automate the processes therefore designers now only need to check the graphics and manually adjust them if need be.

In the view of Liu et al (2021) the graphic design practice will definitely gain speed alongside development of artificial intelligence-based designs; for instance, the period spent at the printing press, manual poster design, web and animations are grossly reduced. The time graphic designers expend previously for especially time-consuming tasks has been shortened by AI technology. As graphic design procedure needs knowledge, it obviously involves aesthetic and artistic considerations; the graphic designer creates his designs based on his technical know-how and understanding and absolutely inputs his original knowledge but artificial intelligence brings in finesse and a cutting-edge finishing. Here, what artificial intelligence does not exhibit is creative responsiveness, which may be a fleeting hitch capable of being overcome in short time with techniques like artistic learning or incorporating brain networks of the humans to artificial intelligence systems. There are a lot of filters in design programs like *Adobe Photoshop, Illustrator, Premiere Pro* and other design and animation software like autodesk maya that brings the fine touch to a work in graphic design, the computer being the major tool that propels these AI programs. With tools like *Dreamcatcher,*

designers can make designs more rapidly and also cheaper than ever before making use of data to make adjustments and incremental improvements and like many other industries, AI serves to develop and enhance the graphic design process and also offer new and exciting opportunities for job prospects. In the aspect of graphic illustrations, artificial intelligence has made it possible to transform natural photograph into other genre of art like impressionism, abstract expressionism, cubism, solarization and texturization. Artificial intelligence helps graphic designers create images that are ordinarily most unlikely possible; this is done by analysis of users groundwork and creating logos and designing full layout of websites with the help of the cognitive ability of the AI technology.

In this context, as artificial intelligence is used often in graphic design, so more imaginative designs above the ability of artificial intelligence may be required. Graphic design education may just need to be restructured and as the practice domain of artificial intelligence grows, the need for instructors of design programs that work on artificial intelligence and machine learning may grow in graphic design training. In addition to design theory, basics of typography, and creative thinking techniques, AI-running programs which are designed on the foundations of graphics problem solving techniques of the past need designers with a command of basic design principles to excel. Today, designers that use these programs must have knowledge of design principles and rules of typography; otherwise, these programs will only lead to pollution in design. With the integration of artificial intelligence and machine learning, this phenomenon becomes easier in terms of usage and will accelerate the design processes and outcomes. With AI-running web page design software, graphic artists will in the very near future abandon time-consuming businesses and have ample time for content innovations. Periodical templates like magazines and newspapers can be uploaded into the program that uses artificial intelligence to generate publications in a faster manner than a real person according to the predetermined design template. Packaging design may be another example; a designer can generate a die line and the superimposed typographic and visual elements of the package of a chocolate brand with six flavors and packages of the five remaining flavors may be quickly prepared for printing by artificial intelligence. Programs that create logos with artificial intelligence, which generally does not accomplish anything beyond a beautifully written brand name, can minimize the time spent on the time-consuming stage of presentation of the logo to the client on various surfaces like design of business cards, billboards, screen printing and others.

The major reason technological knowledge exists and continues to grow is that it affords people opportunity to work less and have more time; therefore, people create machines and systems that will help them with everything. In graphic design, artificial intelligence will reduce the amount of time-consuming work and leave designers more time for the creative process; in this case, designers must try to be more creative and follow technological advancements. AI-running graphic design programs of our time are devoid of creativity, Therefore, the graphic design career does not appear to be under threat; conversely, designers have more time than ever to be creative.

Plate 1. Felix Osaigbovo: Photoshop interface of photo transformation

Plate 2. Felix Osaigbovo: Original composite photograph

This has shown the development of graphics from the time of the analog to the present digital era. Plate 1 above shows the processes of photo transformation with the use of Photoshop software with artificial intelligence filters using the same composite (Plate. 2) photograph to achieve different variants.

AI-Assisted Design Tools

AI-assisted design tools according to Barnbaum (2017) have become part of graphic design and so they do works like offering automated layout projections, colour palette generation and typography suggestions. These tools streamline workflows, reduce repetitive tasks and enhance design accuracy in which case, designers can focus on cutting-edge creative decisions while AI handles the technical aspects.

Creativity and Innovation

Meggs and Purvis (2021) submit that AI augments human creativity, enabling designers to explore novel ideas and innovative solutions. AI-driven design tools generate unique design options, fostering experimentation and creativity and so designers can collaborate with AI, leveraging its capabilities to push boundaries and challenge design conventions. Figure 3 is a typical example of AI generated designs.

Productivity and Efficiency

AI-assisted design tools significantly save design time, enabling designers to meet tight deadlines and handle multiple tasks. Liu et al (2022) are of the opinion that AI automates repetitive tasks thereby freeing designers to focus on complex design challenges which in turn increases productivity and enables designers take on more projects and expanding their scope. Artificial Intelligence application can generate designs within few seconds thereby giving the artist enough comfort in his design process.

Plate. 3. Felix Osaigbovo: AI generated advert designs. Source Meta AI, 2024

Problems of artificial intelligence technology in contrast to traditional graphic design

Shan (2020) observes that since the emergence of artificial intelligence (AI) in the graphic design field around the year 1973, it has posed a harsh threat to the conventional graphic design vocation and its practitioners. In this precarious circumstance, how the conventional graphic design business will grow has become the hub of apprehension for many practitioners in the graphic design industry. Hence, the potential progress pathway of graphic design is viewed from the standpoint of Artificial Intelligence in this paper, which largely includes four rubrics as follows: the multi-dimensional expectations of graphic design, the incorporation of novel technologies in graphic design, the interdisciplinary development of talents and the positioning and encouragement of graphic designers. It is expected that the analysis of these four aspects can provide some orientation for the future growth and expansion of the graphic design business. But quite unfortunately, in spite of all the lofty advantages of artificial intelligence to humankind, the same humans that are beneficiary of these advantages have constituted themselves into cyber criminals using artificial intelligence to defraud people of billions of their money, kidnap unsuspecting people, they manufacture lethal weapons and equipment to destroy lives and introduce viruses that causes pandemic to mankind.

On the side of ethical considerations, Tomic, Juric, Dedjier, and Ademovic (2023) expresses concern about job security persisting as AI threatens to displace traditional designers and giving room for non-professionals to engage fully in the profession, making it an all-comers affair. Arising from this, designers must adapt to this new technology in order

to develop skills compliments AI capabilities and so ethical guidelines must be established to ensure responsible AI integration by prioritizing human oversight and accountability.

Conclusion

Artificial Intelligence is an extremely powerful and exciting field; it will only become more important and ubiquitous with time, moving forward and will certainly continue to have very significant impacts on modern society. Artificial neural networks (ANNs) and the more complex deep learning techniques are some of the most capable AI tools for solving very complex problems, and will continue to be developed and leveraged in the future. The integration of AI in graphic design has transformed the graphic design industry and shifting from automation to innovation; AI-assisted design tools enhance creativity, productivity and design outcomes while augmenting human capabilities and so, embracing AI requires adaptability, collaboration and a willingness to redefine the design process and as AI continues to evolve, designers must also navigate this new landscape while harnessing AI's potentials to create innovative and impactful designs that resonate with clients world-wide.

Rather than see AI as a threat to their livelihood, Campbell et al (2002) are of the view that Graphic designers should embrace the new technology as an opportunity to spend more time on the creative and strategic parts of their jobs and allow AI automate more monotonous, tedious and time-consuming tasks. The fear that AI will completely replace all traditional aspects of graphic design is most unlikely with the feelings of the writers because there are certain tasks that the AI might not be able to perform for instance AI do not have emotional capability like love, empathy and fear; therefore, even though AI cannot completely replace the human factor graphic design, it can most certainly empower them to excel in their profession by streamlining manual processes.

In the very near future, graphic design will get more immersive and interactive as paperwork will most likely become obsolete; in other words, almost all designs will develop into digital and have a website experience and these designs will have to have layers to permit users connect fully into designs and allow people sell their products and services without pitching.

In conclusion, AI technology has impacted graphic design in the area of automated design tasks, design assistance, generative designs, image editing and enhancement, font and logo creation, colour palette generation, design analysis and feedback, animations, cartoons and motion graphics, virtual design assistance, accessibility enhancements and new design possibilities.

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