Секція 3.
ПЕДАГОГІКА

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METHOD OF AI(GANs) APPLICATION IN DESIGNERS' EDUCATION FOR DEVELOPING CREATIVITY

Teaching design has its peculiarities associated with developing creative activity. That's why design teaching requires the invention and implementation of new innovative methods and pedagogical technologies, as well as continuous improvement in line with contemporary requirements. The modern global market demands from graphic design professionals not only high technical qualifications but also the ability to adapt to new technologies and respond to the challenges and needs of the market, as outlined in the Design Education Manifesto. [4]

The application of AI is a topic with broad scientific resonance. For example, T. Bednarz, R. T. Hughes, and Zhu Liming analyzed the use of Generative Adversarial Networks (GANs) in creative activities, particularly in design.[3] Chen Liuqing, Dong Hao, Han Ji, P.R.N. Childs, Shi Feng, Xiao Jun, Wang Pan, Wu Chao, Yike Guo, proposed an integrated approach to enhance design ideation as a source of innovation and creativity through the application of artificial intelligence. [1] Chen Chih-Ming and Duh Ling-Jiun noted that the education system should provide personalized and adaptive learning programs to improve the learning process using artificial intelligence (AI). [2] However, there is still insufficient emphasis on specific examples of AI application in the educational process of future graphic design professionals.

The aim of the abstract is to observe the method of the development of the creativeness activity through application of AI(GANs) in the education process of future graphic design professionals.

In the joint international education program of Wuhan University of Technology (PRC) and the University of Wales Trinity Saint David (UK), we have implemented tasks that involve the application of Generative Adversarial Networks (GANs) in teaching modules covering various aspects of graphic design, such as illustration, dynamic and static web design, logo design, and concept art.

Method of developing creativeness activity through application of AI (GANs) in the education process of the future graphic design professionals consists of few steps, such as:

Step 1: Research Introduction to GANs. Start with a thorough introduction to Generative Adversarial Networks (GANs), delving into case studies and examples illustrating how GANs are employed in various graphic design contexts, fostering an understanding of their applications.

Step 2: Brainstorming using AI Idea Generation with GANs. Conduct brainstorming sessions focused on generating ideas with the assistance of AI. Utilize GANs as a catalyst to inspire new design concepts and explore unconventional possibilities, nurturing creative thinking.

Step 3: Ideation — Using AI AI-Fueled Ideation Sessions. Incorporate AI tools to enhance the ideation process. Explore how GANs can contribute to generating diverse visual elements, sparking creativity and originality.

Step 4: Feedback Peer and Instructor Feedback. Introduce a feedback loop following the initial ideation phase. Encourage students to share AI-generated concepts for constructive critique, fostering collaborative creative development.

Step 5: Designing Using AI-Generated Pictures as a Base Integration into Design Projects. Assign design projects where AI-generated images serve as a foundational element. Guide students in seamlessly incorporating these images into their design processes, promoting a symbiotic relationship between AI and creative expression.

Step 6: Feedback Iterative Feedback Rounds. Conduct iterative feedback sessions during the design phase, reinforcing the idea that creative refinement is an ongoing process. Emphasize the integration of AI-generated elements as part of the iterative design process.

Step 7: Delivery Finalizing and Presenting Designs. Guide students in finalizing their designs with AI-enhanced elements, emphasizing attention to detail and cohesiveness. Encourage effective presentation skills, enabling students to showcase the seamless integration of AI in their projects with confidence.

It is important to note that content generated by AI can be used as a base of the graphic design project only.

The use of generative adversarial networks not only stimulates the development of creativeness activity and innovation but also prepares future professionals for the challenges of the modern global graphic design industry.

References

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