

FACTORS FOR CREATING A DRESS DESIGN USING ARTIFICIAL INTELLIGENCE

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ANNOTATION: this article presents various methods of applying artificial intelligence to clothing design, including generative design, personalized design, and automation processes. With AI, clothing designers are able to work faster and more efficiently, being justified by the presence of feedback and feedback on ensuring the stability of the fashion industry and effective resource management.

KEY WORDS: artificial intelligence, fashion, 3D dress, designer, clothing design, transformer, automation, technology.

INTRODUCTION

Although research into artificial intelligence has been ongoing since the mid-20th century, public interest in it increased dramatically in 2012, when deep learning demonstrated its superiority over other artificial intelligence methods, and in 2017, with advances in transformer architecture. The field has been booming in the early 2020s, with many companies, universities, and labs making significant advances in the field of artificial intelligence.

Artificial intelligence has now become a major part of the technology industry, offering solutions to many of the most challenging problems in computer science. Artificial intelligence research is a highly technical and specialized field, often “deeply” divided into subfields that do not communicate with each other. Subfields have emerged around solving specialized problems, using specialized institutions, the work of individual researchers, and the use of very different tools and long-standing differences of opinion about how to implement artificial intelligence.

The fashion industry is changing rapidly with the rapid development of technology. Artificial intelligence (AI) technologies are creating new opportunities in this field, helping to make the design process more efficient and faster. AI offers clothing designers new ways to work, while also facilitating the automation of production processes, fashion forecasting, and efficient use of materials. Below are some of the key aspects of creating clothing designs using AI:

1. Clothing designers and AI. AI is changing the design process significantly. For example, algorithms can help designers streamline their creative process, generate new ideas, and quickly generate multiple options in their brains. AI can be a great help, for example, in creating new clothing models or analyzing the market.

2. Machine learning and data analysis. Machine learning (ML) algorithms allow designers to track trends in clothing. Decisions about what new clothing should look like are made based on data from the fashion market. For example, ML is used to predict which colors, shapes, or fabrics will be popular. This helps designers create fashion trends.

3. Create 3D clothes using SI. With the help of 3D modeling technologies and artificial intelligence, designers can model clothes in a digital environment before creating them. With these technologies, it is possible to more accurately imagine the appearance of clothes, fabric changes, and appearance. Designers can work faster and more efficiently with 3D modeling.

4. Personalized design with AI. AI technologies allow for the creation of personalized clothing designs based on the requirements of individual customers. With the help of artificial intelligence, it is possible to develop clothes that match the customer's size, color preferences, and personal preferences. This also allows for the creation of unique and individual products, instead of the standard clothes that are often repeated in the fashion industry.

5. Wearable technologies. Artificial intelligence technologies are used not only in clothing design, but also in the field of functionality and technological capabilities of clothing. Nowadays, clothes should not only be aesthetically beautiful, but also practical and have high-tech features for people. For example, creating interactive clothes with sensors integrated into the clothes and the ability to connect to the Internet.

6. AI-powered fashion forecasting. High-quality AI algorithms make it possible to predict trends in the fashion industry in advance. For example, famous brands can use AI to predict which designs and colors customers will prefer before creating their new collections. This, in turn, helps designers and brands respond to market demand.

7. Efficiency and production optimization. AI can be used to optimize production processes and increase efficiency. If a clothing design is to be released to the public, artificial intelligence can analyze each stage of production and ensure the best results. This is especially useful for projects that require high-volume or rapid production of clothing.

8. Customer Interaction: SI systems help customers choose personalized clothing designs through online stores. They also provide personalized recommendations by analyzing user data.

9. One of the biggest innovations in the fashion industry is artificial intelligence (AI). Using machine learning algorithms, AI can help identify current and future fashion trends. These algorithms can predict which colors, shapes, materials, and styles of clothing will be popular based on customer shopping behavior, online searches, and social media posts.

10. Artificial intelligence can help optimize not only the design process but also the production of clothing. With the help of AI, errors in production processes can be reduced, production efficiency can be increased, and materials can be used more efficiently.

The dress frees the body from artificial things like corsets, crinolines, and corsets, liberating the female body and changing the old idea of elegance.

The figurative expressiveness of clothing is now achieved using different means than before, that is, the silhouette changes frequently, the lines are capricious and not constant: it finds expression in the dynamics of the relationship between the body and the dress - at first glance, the dress clings to the body, sometimes barely touches it, and sometimes completely escapes from it. In the formation of clothing, design, based on serviceability, that is, the artistic design of industrial products, plays an active role. Materials and colors play a very important role in creating clothing.

Designers need to choose the most suitable fabrics for a garment. These materials ensure the appearance, comfort, and functionality of the garment. For example, light and breathable fabrics are chosen for summer clothes, while thick and warm fabrics are chosen for winter. Colors are also important in creating a design, as they help to make the garment more aesthetically pleasing and modern.

Artificial intelligence (AI) has brought new opportunities and innovations to the fashion industry. Through trends forecasting, material and color selection, personalization, 3D modeling, and manufacturing optimization, AI is opening up new possibilities for the future of fashion. These technologies help designers generate new ideas and develop clothes that meet the needs of customers. The role of AI in clothing design is felt at every step, helping designers create more efficient, innovative, and individual styles.

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