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USING COMPUTER TECHNOLOGY IN THE TEXTILE AND FASHION INDUSTRY, CREATING NEW DESIGNS IN PROGRAMS.

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Annotatsiya

Ushbu maqolaning asosiy mazmuni. Internet texnologiyasining jadal rivojlanishi bilan uning kompyuter yordamidagi funksiyalari ham tez takomillashib bormoqda va kompyuter funksiyalarining o'zgarishi hayotning barcha jabhalariga katta qulayliklar keltirdi.

Kalit so'zlar: Dizayn yaratish, corel draw, adobe photoshop, adobe illustrator, materialning mosligi, yuqori issiqlik, polyester yoki polimer, rangning yorqinligi, eko, to'q rangli matolar.

Abstract

The main content of this article. With the rapid development of Internet technology, its computer-assisted functions are also rapidly improving, and the changes in computer functions have brought great convenience to all aspects of life.

Keywords: Design creation, corel draw, adobe photoshop, adobe illustrator, material compatibility, high heat, polyester or polymer, color vibrancy, eco, dark fabrics.



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INTRODUCTION

The use of computer-aided design (CAD) in the fashion industry marks a pivotal advancement, enabling designers to create, refine, and produce garments with unprecedented accuracy and efficiency. CAD applications streamline the design process by facilitating detailed illustrations, virtual prototypes, and technical patterns. By combining creative freedom with technological precision, CAD tools allow for faster iteration, reduced material waste, and enhanced collaboration in global teams.

Fashion designers utilize CAD to produce everything from flat sketches and technical drawings to intricate 3D garment simulations. These tools are vital in responding to consumer demands for customization, as they support scalable and adaptable designs. Additionally, CAD integrates seamlessly with other innovations such as 3D printing, further transforming how designs are brought to life.

Studying computer-aided design (CAD) illustrations in the fashion industry focuses on how digital tools enhance the creative and technical aspects of design. These tools provide powerful ways to visualize and refine garment concepts, from initial sketches to detailed production-ready patterns.

Textile, apparel, and fashion industries are no exception that has witnessed tremendous growth with the incorporation of automation and computerization at each stage.[1]

Importance of CAD Illustrations in Fashion:

- 1. Precision in Sketching:** CAD tools, such as **Adobe Illustrator**, **CLO 3D**, and **Optitex**, allow designers to create flat sketches with scalable, vector-based precision. These sketches form the foundation of technical designs used in manufacturing.

- 2. 3D Visualization:** Advanced CAD systems enable the creation of 3D garment prototypes, showing fabric drape, fit, and interaction with motion. This helps designers refine designs before physical sampling, saving time and resources.



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3. Digital Fabric and Texture Integration: Tools like **Kaledo** and **Browzwear** simulate fabrics and textures in digital formats, enabling designers to experiment with materials and colors virtually, which is invaluable for presentations and client approvals.

4. Efficiency and Collaboration: CAD software reduces the manual effort involved in revising sketches and creating technical illustrations. Cloud-based platforms also foster seamless collaboration between designers, manufacturers, and clients globally.

Suggested Study Resources:

- **Lectra Kaledo and Optitex:** Known for textile and apparel design capabilities.
- **CLO 3D:** Specializes in creating realistic garment simulations.
- **Digital Fashion Pro:** Offers beginner-friendly tools for digital sketches and templates.

Digital Sketching and Technical Drawings: CAD programs like **Adobe Illustrator**, **CorelDRAW**, and **Digital Fashion Pro** are widely used for creating flat sketches, fashion illustrations, and tech packs. They enable designers to create vector-based designs with accuracy and scalability, often integrated with 3D modeling tools for advanced visualizations.[2]

Using computers to create fashion designs offers several significant advantages that enhance creativity, productivity, and sustainability in the industry. Here's a summary of the key benefits:

1. **Speed and Efficiency:** Computers significantly accelerate the design process, allowing designers to create, edit, and refine designs quickly. CAD tools streamline tasks such as sketching, pattern-making, and fabric simulation.

Revisions can be made easily without starting from scratch, saving time and effort.

2. **Precision and Accuracy:** Digital tools enable highly precise measurements, proportions, and layouts, reducing errors in designs and patterns.

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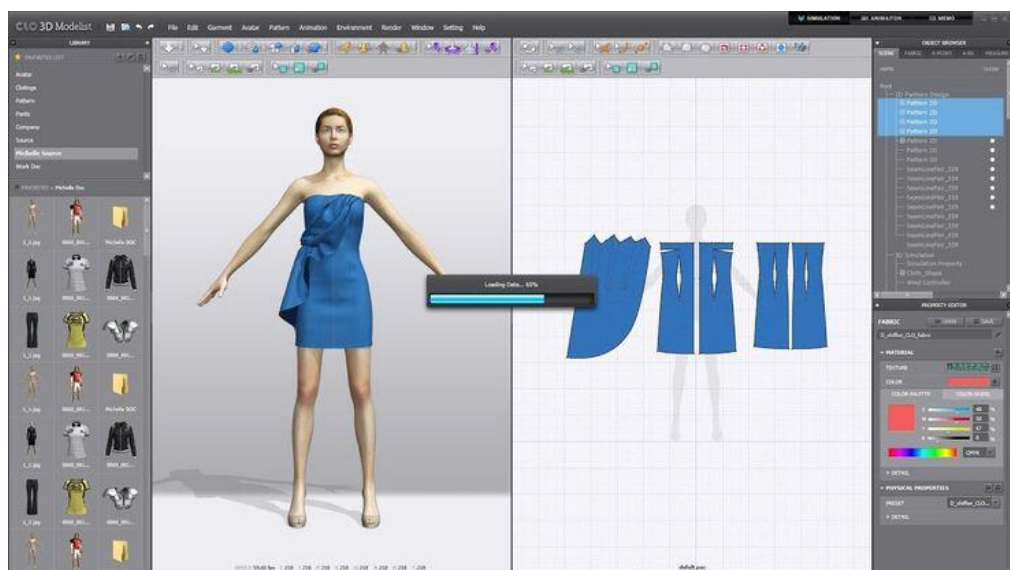
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Technical drawings and specifications are detailed and accurate, ensuring a smoother transition to production.

3. Creative Flexibility: Designers can experiment with various textures, colors, and patterns virtually, enabling them to explore a broader range of ideas without physical constraints.





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Tools like Adobe Illustrator and CLO 3D allow realistic rendering of garments, helping designers visualize the final product.

4. **Cost Reduction:** Digital prototypes reduce the need for physical samples, minimizing material waste and saving costs in the design phase. Collaboration on cloud-based CAD platforms reduces travel and communication expenses.

5. **Sustainability:** By using digital tools, designers can minimize physical sampling and reduce fabric waste. Virtual prototyping supports environmentally friendly practices, aligning with growing sustainability trends.

6. **Collaboration and Accessibility:** Cloud-based CAD platforms enable real-time collaboration between teams in different locations, improving efficiency and ensuring a cohesive design process. Digital files are easy to share, archive, and retrieve, facilitating long-term accessibility.[3]

7. **Customization:** CAD software allows mass customization, enabling designers to tailor designs for individual preferences or unique body measurements. It supports scalable designs for production, catering to diverse consumer needs.

8. **Integration with Advanced Technology:** Integration with AI, virtual reality, and 3D printing enhances innovation. For instance, 3D garment simulations and AI-driven tools assist with predictive designs and trends.

Conclusion

In conclusion, the integration of computer-aided design (CAD) into the fashion industry has revolutionized traditional practices, providing designers with tools to enhance creativity, precision, and efficiency. CAD applications streamline the design process, from digital sketching and technical drawings to 3D garment simulations and virtual prototyping. These technologies not only save time and reduce costs but also support sustainable practices by minimizing material waste and physical sampling.

Moreover, CAD's ability to adapt to emerging technologies such as artificial intelligence, virtual reality, and 3D printing promises a future of personalized, innovative, and environmentally conscious fashion. As designers and students increasingly adopt these tools, they contribute to a global shift towards a more collaborative and technologically advanced fashion industry.



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