

Future Prospects. The development of 3D printing technology for home construction is ongoing, with companies like WinSun exploring the construction of multi-story buildings and aiming to eventually construct numerous affordable homes using 3D printed materials. [5]

The potential for 3D printing technology to disrupt the traditional construction industry and provide affordable, sustainable housing solutions is a key area of interest and investment for various organizations and innovators.

The use of 3D printing technology for building homes holds significant promise for addressing housing challenges, offering sustainable, cost-effective, and resilient housing solutions for the 21st century and beyond.

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## AI IN THE INTERIORS OF THE FUTURE

Artificial Intelligence (AI) is making significant strides in various industries, including interior design. With the potential to revolutionize the way we approach design, AI offers exciting possibilities for the interiors of the future. Here are some key areas where AI is being utilized:

1. Design Inspiration and Visualization: AI algorithms can sift through vast databases of images, colors, and textures to provide designers with curated selections of ideas and inspiration. AI-powered tools can generate mood boards, suggest complementary color palettes, and propose unique design elements. [1]

2. Virtual Staging and Visualization: AI technology enables virtual staging, where users can place rendered objects into a room virtually to create a mockup and visualization of the interior space. This eliminates the need to physically move and layout furniture, making it attractive to buyers and enhancing the selling process. [2]

3. Optimized Layout and Lighting: AI can optimize the layout of furniture based on how people move through a space and adjust lighting levels according to their needs. This requires capturing devices trained on data, which can provide insights to interior design companies for solving layout problems quickly. [3]

4. Project Management: AI tools oriented toward project management can assist designers in keeping track of budgets, timelines, and other crucial information to ensure smooth and effective project execution. [4]

5. Enhanced Client Interaction: AI can bridge the understanding between designers and clients by collecting data from clients regarding their preferences and connecting them to like-minded interior designers for better guidance. This can improve the overall client experience and satisfaction. [5]

It's important to note that while AI offers valuable assistance and optimization in interior design, it cannot replace the human touch and the ability of designers to connect with clients on a personal level. The future of interior design lies in the collaboration between AI and designers, leveraging the power of technology to enhance creativity and efficiency while maintaining the human element. [5]

As AI continues to advance, we can expect even more intelligent and sophisticated tools and technologies to shape the interiors of the future. The integration of AI in interior design presents endless opportunities for innovation and development, allowing designers to create beautiful, functional, and personalized spaces.

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## ROBOTICS IN THE CONSTRUCTION OF MODERN HOMES

The variety of needs and tasks grows in direct proportion to the development of the social component. At the same time, the variation of robot classifications is increasing, the components of a modern robot are becoming more refined and equal to the cosmic level.

Currently, the field of robotics is divided into consumer, production, and educational fields. Consumer demand for various cleaning robots or drones that help conduct aerial surveys for reconnaissance during hostilities is unabated. [1]

The educational field of robotics in Ukraine is also growing rapidly. More and more often, educational projects are appearing, where you learn to design and program robots with the help of special sets of robotics. With the help of robots, Nova Poshta, Fozzy Group, and medical institutions throughout Ukraine perform their work processes at a first-class level.

Let's consider what kind of robots there are by example: some are sharpened for assembly work they cannot be easily adapted for other applications. In this case, it is called a folding robot.

Works that perform seam welding and have welding equipment along with other material handling facilities such as rotary tables and others as a single unit. Such an integrated robotic system is called a "welding robot". And those jobs that manipulate huge loads are called "heavy duty jobs". [2]