



## ПЛАТФОРМА 1 МИСТЕЦТВОЗНАВЧІ ТА КУЛЬТУРОЛОГІЧНІ ЧИННИКИ ДИЗАЙНУ

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### MODERN ARTIFICIAL INTELLIGENCE TOOLS FOR INTERIOR DESIGN

BORODCHENKO Nataliia  
Chernihiv Polytechnic National University, Chernihiv, Ukraine  
[n.borodchenko@gmail.com](mailto:n.borodchenko@gmail.com)

*The development of Artificial Intelligence (AI) has transformed various industries, including interior design. AI-driven interior design tools revolutionize the visualization, planning, and execution of design ideas and student projects, making the process more efficient, personalized, and accessible. These tools leverage AI capabilities to analyze patterns, understand preferences, and create design solutions, once only achievable with professional assistance. This research explores modern AI tools in interior design, their impact on visualization, realization of design ideas, and their potential to enhance both professional and enthusiast design activities.*

**Key words:** artificial intelligence, interior design, visualization, innovations.

#### INTRODUCTION

The evolution of Artificial Intelligence (AI) has brought about significant transformations across diverse industries, and the field of interior design is no exception. AI-driven tools have revolutionized how design concepts, including those of students, are conceptualized, visualized, and materialized. These tools leverage AI capabilities to analyze patterns, comprehend preferences, and formulate design solutions, democratizing the design process that was once reliant on professional expertise.

This research delves into the contemporary advancements of AI tools in interior design, exploring their profound impact on the visualization and implementation of design ideas, as well as their potential to augment the practices of both seasoned professionals and aspiring design enthusiasts.

#### PURPOSE

This study seeks to explore the current landscape of artificial intelligence tools in interior design, examining their impact on visualization, implementation processes, and their potential to enhance both professional designers' practices and the engagement of design enthusiasts.



## RESULTS AND DISCUSSION

Artificial intelligence-powered interior design tools encompass a spectrum of software applications. They range from AI-driven design generators that create room layouts based on user inputs to complex platforms that use augmented reality to virtually position furniture in spaces. These tools commonly offer features such as 2D/3D visualization, furniture arrangement, color/material selection, and personalized design suggestions. By automating many intricate aspects of interior design, these tools empower users to concentrate on creativity and make informed decisions about their spaces.

Smartdraw, an online tool recognized for its user-friendly interface and diverse design templates, streamlines the creation of intricate floor plans and room arrangements. Whether conceptualizing a cozy home interior or optimizing an office layout, Smartdraw equips users with tools to materialize their ideas effortlessly. Its intuitive drag-and-drop functionality facilitates professional-grade designs without necessitating specialized design skills, while its extensive library caters to various design projects.

Foyr Neo stands as a comprehensive solution for crafting 3D floor plans and interior designs online, expediting the workflows of interior designers. Boasting a repository ready-to-use 3D models of furniture and accessories, Foyr Neo boasts an intuitive interface that requires no prior training, enabling swift transitions from floor plans to polished visualizations.

DecorMatters emerges as an AI-infused interior design application featuring an extensive furniture and decor library. Serving as a collaborative platform, DecorMatters enables users to share projects, gather feedback, and draw inspiration from a vibrant community. Leveraging AI and augmented reality technologies, DecorMatters delivers lifelike project renderings and hosts design competitions to engage and inspire its user base.

Homestyler [4] is a dependable and user-friendly platform that empowers users to craft 2D and 3D interior design projects effortlessly. It boasts an extensive collection of furniture and decor items sourced from genuine brands, facilitating users in designing with genuine products. Its 3D visualization feature permits users to inspect their projects from various angles, thereby constructing a lifelike spatial perspective.

Homestyler transcends being just a design tool; it serves as a community hub for design enthusiasts to connect, share projects, receive feedback, and draw inspiration collectively. This collaborative ethos renders Homestyler invaluable for both professional designers and design enthusiasts seeking learning and development opportunities. Key functionalities encompass a 3D mode for flexible project inspection and access to an extensive library of furniture and decor items from authentic brands.

Midjourney [5] stands out as an AI-driven image generator acclaimed in the spheres of artificial intelligence and design. Serving as a vehicle for crafting design concepts, this tool disrupts conventional norms for professional designers and design aficionados alike. It offers users a foundational framework for interior design projects, encouraging exploration of fresh design avenues and expansion of creative boundaries. The tool's capacity to yield unique and imaginative projects



distinguishes it from conventional design utilities. It transcends mere design provision, aiming to unlock creativity and stimulate users to embrace unconventional perspectives.

Moreover, Midjourney's commitment to enhancing humanity's creative potential ensures continuous evolution. This dedication guarantees users perpetual access to novel and compelling design prospects, sustaining the design process as dynamic and captivating. Key features encompass AI-driven design generation, innovative design concepts, and versatility for exploring new design vistas.

Interior AI [6] is a platform designed for automated interior design creation utilizing artificial intelligence (AI). It expedites the generation and exploration of diverse interior layouts for various spaces through automated layout generation and 3D visualization. Users can upload photos of their spaces and customize parameters such as wall colors, furniture, and accessories.

Neural networks aid interior designers in several aspects:

1. Accelerating workflow: Utilizing the service enables designers to rapidly generate various interior design options without the need for manual layout creation.
2. Enhancing work quality: The service employs AI to produce more precise and realistic layouts, assisting designers in obtaining an accurate representation of their projects.
3. Saving time and resources: Implementing the service allows designers to save time and money on layout creation, as well as on purchasing materials and furniture for idea testing.
4. Interior offers a limited free version and several paid plans, providing additional features and capabilities.

### **CONCLUSIONS**

In conclusion, the evolution of artificial intelligence has profoundly impacted interior design, ushering in an array of innovative tools. This discourse explores five AI-equipped interior design utilities offering myriad functional capabilities, facilitating the creation of personalized spaces for both professionals and students alike. Irrespective of objectives—be it envisioning novel concepts, generating unique ideas, or collaborating on projects—these utilities proffer a broad spectrum of features and opportunities. Harnessing the power of artificial intelligence, virtually limitless resources become attainable for realizing student projects in the realm of interior design.

### **REFERENCES**

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