

AI Innovations in UI and UX Design: A Systematic Literature Survey

The integration of Artificial Intelligence (AI) into User Interface (UI) and User Experience (UX) design is revolutionizing how digital products are crafted, making them more intuitive, personalized, and accessible. This study aims to perform a thorough survey on the evolution of AI in UI/UX design. Therefore, a Systematic Review of the literature was conducted by the researcher, it reviews the existing literature and decided to take a sample of $n = 15$ articles published between 2021 and 2024. It reviews key trends, methodologies and practical implementations where AI has made a major difference to design processes and their outcomes. The findings emphasize how AI can help improve usability by enabling dynamic and user centric interfaces that change depending on the individual needs and behavior. Furthermore, design workflow has been changed by AI powered tools that will automate all repetitive tasks, will generate design variations and will create predictions to increase creativity and efficiency. Yet, there are some challenges with integrating AI in UI/UX. Areas of critical concern are identified through this survey, ranging from ethics with regards to data privacy and algorithmic biases, to technical shortcomings involving the system interoperability and scalability. This review provides insights that are useful for researchers, designers and developers to effectively apply AI for inventive and user centered design solutions. It also provides directions for future research, pointing out that the adoption of interdisciplinary solutions is necessary to surpass existing impediments and make full use of AI in designing the future of UI/UX design.