

Human-Computer Interaction (HCI) and UI/UX Design

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Abstract: *Human-Computer Interaction (HCI) and User Interface/User Experience (UI/UX) design are crucial for designing user-friendly and effective digital systems. With technology developing at a rapid pace, putting the user at the center is of prime concern. This allows for easy and effective use of the system. This paper explores the development of HCI, UI/UX design principles, and the influence of AI, AR, and VR on user experiences. It synthesizes existing research, best practices, and case studies incorporating usability, cognitive load, and accessibility in HCI. The methodology defines user testing for the comparison of UI/UX design models and usability effectiveness, satisfaction, and engagement measures. The discussion offers the results, relates them to existing research, and proposes UI/UX method enhancements. The paper concludes by emphasizing the need for inclusive digital interface design and promoting continuous innovation in HCI and UI/UX practice.*

Keywords: Human-Computer Interaction (HCI), User-Centered Design (UCD), Interaction Design, Usability Engineering, Cognitive Load Theory, Accessibility and Inclusive Design, User Experience (UX)

