

# Enhancing User Experience through Adaptive Human-Computer Interaction

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**Abstract:** *Human-Computer Interaction (HCI) plays a crucial role in designing intuitive and user-friendly interfaces, ensuring efficient and effective interaction between humans and computer systems. Traditional HCI approaches focus on general usability criteria, but with the increasing complexity of modern computer systems and the diverse needs of users, a more personalized and contextually relevant approach is necessary. This research paper explores adaptive approaches in HCI and their impact on enhancing the user experience. The paper begins by providing a background on HCI, emphasizing its significance in today's technology-driven society. It highlights the importance of designing interfaces that meet user expectations and discusses the evolution of HCI from usability-focused approaches to the need for adaptive strategies that cater to individual user needs and preferences. The research objectives are outlined, focusing on investigating the benefits and challenges of adaptive HCI in enhancing user satisfaction and engagement. The paper addresses specific research questions, including the impact of adaptive HCI strategies on user satisfaction, the accommodation of diverse user needs and preferences, and the technical and implementation challenges associated with adaptive HCI*

**Keywords:** Human-Computer Interaction

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