


Chapter 5

The Effect of Human– Computer Interaction on New Applications by Exploring the Use Case of ChatGPT in Healthcare Services

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ABSTRACT

Human-Computer interaction (HCI) is a domain that focuses on growing the interaction between humans and computer systems by designing and developing user interfaces that are efficient and delightful to use. In this chapter, the authors focus on the importance of deep human-computer interaction on new applications with an emphasis on using ChatGPT applications in the health services domain. This chapter provides full details on the importance of executing ChatGPT in various health-related scenarios while highlighting the importance of HCI to enhance user

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interactions in personalized medical advice in a ChatGPT application. This chapter concludes that the capabilities of ChatGPT and artificial intelligence applications can revolutionize the healthcare industry by enhancing the accessibility and effectiveness of new media communications between the user and applications while creating innovative resolutions to improve healthcare services.

INTRODUCTION

Human-computer interaction (HCI) has recently become an increasingly critical topic in many dimensions of life (Kaewkitipong et al., 2022; Alkathairi, 2022; Unogwu et al., 2022). The personal computer has become a domain of research that interests academicians who deal with computers, programmers who develop applications and systems, and ordinary people who test the implementation of applications and systems and contribute to their growth. The computer plays a crucial role in improving the speed and accuracy of work, and it is also considered a means of entertainment, recreation, and communication between users. HCI has a significant role in many fields, including healthcare, as it concentrates on creating strategies for human interaction with modern technology to accomplish tasks related to their health and well-being in a safe virtual environment (Li and Xu, 2022; Doshi et al., 2023). This interaction requires cyberspace to protect users' data and privacy from electronic penetrations to control users' data and information. Therefore, companies seek to develop protection applications that rely on artificial intelligence to protect computer data, prevent unauthorized persons from entering, and prevent them from installing malicious programs. The computer is a space, not a tool, as it works to change the relationship that a person has with his environment through vision, hearing, and touch through direct control of the channels that affect human perception. This situation profoundly affects the concept of reality that people believe in by relying on their perception of media. This effect made the computer one of the tools of human interaction. HCI assignments are beginning to grow to a level of maturity that people will accept for testing, research experiments, and business projects, especially healthcare (Dino et al., 2022; Shukur et al., 2023; Hiran et al., 2024).

Technological innovations and applications of artificial intelligence have improved the efficiency of institutions and companies in providing electronic services to all users. Modern methods such as Chatbots, artificial intelligence, ChatGPT, and robots create current practices in providing services efficiently to all users and helping them complete work and projects with high precision and efficiency (Keiper, 2023; Gursoy et al., 2023; Chen, 2023). These practices seek to digitize operations and services and communicate directly with users to acquire essential services and consultations. For example, programmers collaborate with healthcare

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