

ARTIFICIAL INTELLIGENCE CHATBOTS – HISTORY, APPLICATIONS, CHALLENGES, AND FUTURE DIRECTIONS

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DOI: 10.5958/2278-4853.2022.00385.8

ABSTRACT

Artificial Intelligence (AI) chatbots have gained significant attention in recent years, revolutionizing the way businesses and individuals interact. This review paper presents a comprehensive analysis of the current trends, challenges, and future directions in the field of AI chatbots. The paper begins by examining the foundations of AI chatbots, including their underlying technologies, such as natural language processing, machine learning, and deep learning. The review delves into the various applications of AI chatbots across diverse domains, including customer service, healthcare, education, e-commerce, and social media. Furthermore, the paper addresses the key challenges associated with AI chatbots, such as the issue of context understanding, language ambiguity, ethical considerations, and user privacy. It also examines the limitations of existing chatbot frameworks, including their inability to handle complex queries and lack of emotional intelligence. Lastly, the review provides insights into the future prospects of AI chatbots, discussing the potential impact of advancements in natural language processing, machine learning, and deep learning techniques. It explores the possibilities of creating more personalized and empathetic chatbot experiences, as well as their integration into smart home systems, autonomous vehicles, and Internet of Things (IoT) devices and concludes with comprehensive overview of AI chatbots.

KEYWORDS: *Artificial Intelligence Chatbots, AI, NLP, Chatgpt, Bard.*

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