AI and usability in Social Network: Enhancing User Experience

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Abstract- Recently, the number of social networking is rapidly increasing, and the numbers of users joining are dramatically increasing as well. In today's era online social networks are getting extensive popularity among internet users. People are using online social networks for different purposes like sharing information, chatting with friends, family and planning to hang out. It is then no surprise that online social network should be easy to use and easily understandable. Previously many researchers have evaluated different online social networks but there is no such study which addresses usability concerns about online social network with a general view. The main rationale behind this study is to find out efficiency of different usability testing techniques from social network's point of view and issues related to usability. To conduct this research, we have adopted the combination of both qualitative and quantitative approach. Users from different countries participated in the study. Our findings are to evaluate social network based on four criteria (i.e. content and organization, navigation aid, user interface attraction, performance and effectiveness)

Indexed Terms- Usability Issues, Usability Evaluation, online social networks, Usability.

I. INTRODUCTION

In the past decade, social networks have transformed how individuals interact, share information, and form communities. With billions of users worldwide, optimizing user experience (UX) has become essential for engagement and retention. Artificial Intelligence (AI) has emerged as a critical enabler in enhancing usability, offering personalized content, automated moderation, sentiment analysis, and adaptive interfaces. This study explores how AI integration in social networking platforms contributes to improved usability and overall user satisfaction.

2.1 PLATFORM SELECTION AND SCOPE OF STUDY

This study centers on five prominent social media platforms—Facebook, Twitter (X), Instagram, TikTok, and LinkedIn—chosen for their global reach and diverse user demographics. The analysis emphasizes usability trends and AI-driven features aimed at enhancing user experience. By examining publicly available platform documentation, feature updates, and user experience design practices, the study identifies common AI applications and evaluates their impact on interface usability, personalization, and user satisfaction across different platforms.

2.2 ANALYTICAL TOOLS

The study utilizes a qualitative and comparative approach to evaluate the impact of AI on usability across selected social media platforms. Usability was assessed based on established frameworks such as the System Usability Scale (SUS) and Nielsen's Usability Heuristics, adapted to online environments. To understand AI integration, tools such as Natural Language Processing (NLP) and interface behavior analysis were conceptually reviewed through existing literature, case studies, and platform feature audits. These tools helped interpret how AI functionalities—like content recommendation, moderation, and accessibility aids—align with usability principles in social networking contexts.

2.3 AI FEATURE CLASSIFICSTION

AI applications were categorized into:

- Content personalization (e.g., news feed algorithms)
- Chatbots and virtual assistants
- Moderation and safety tools
- Accessibility and user support enhancements

III. RESULT AND DISCUSSION

AI significantly enhances usability in social networks through personalized content delivery, real-time support via chatbots, and intelligent moderation systems. These features improve engagement, accessibility, and user satisfaction. Platforms also benefit from adaptive interfaces that respond to individual behavior. However, challenges such as algorithmic bias, lack of transparency, and reduced user control pose ethical and usability concerns. Balancing intelligent automation with user trust and control remains essential for future improvements.

CONCLUSION

AI has become a key driver in enhancing the usability of social networks by personalizing experiences, improving accessibility, and automating support and moderation. While these innovations improve user satisfaction, they must be balanced with transparency, fairness, and user control to ensure ethical and effective design. A thoughtful, user-centered approach to AI integration is essential for sustaining trust and long-term engagement.

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