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EXPLORING THE IMPACT OF AI TOOLS OF XIAOHONGSHU IN DEVELOPING CREDIBLE CONTENTS SHARING BEHAVIOR AMONG CHINESE POPULATION

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Abstract: With the rapid development of artificial intelligence (AI) technology, social media platforms are increasingly reliant on AI tools in content creation, recommendation, and sharing. This study uses Xiaohongshu, a representative social e-commerce platform in China, as a case study to explore the role and impact of AI tools in promoting users' credible content sharing behavior. The research focuses on how AI-driven technologies such as natural language processing, machine learning, sentiment analysis, and banned word detection enhance content authenticity and user trust, and analyzes their effectiveness in addressing issues such as fake reviews, algorithmic bias, and information opacity. Considering China's unique cultural background, user characteristics (primarily Millennials and Generation Z), and government regulatory policies, this study systematically examines the influence mechanisms of variables such as users' perceived credibility of AI tools, media effectiveness, and socio-cultural factors on content sharing behavior. By addressing six research questions and six research objectives, this paper aims to reveal the potential and challenges of AI tools in building a credible content ecosystem, providing theoretical and practical references for platform governance, AI ethical design, and digital trust construction.
Keywords: Artificial Intelligence (AI); Trusted content sharing; XiaoHongShu; User-generated content (UGC); Algorithmic bias; Media effectiveness; Socio-cultural factors; Chinese social media

1 INTRODUCTION

The increasing proliferation of digital platforms has drastically transformed how information is disseminated and consumed, resulting in widespread challenges related to content credibility, including fake reviews, sponsored bias, and algorithmic misinformation. Social media platforms, characterized by instantaneous and extensive content-sharing capabilities, have become critical arenas for addressing these challenges. In China, where digital engagement is exceptionally high, platforms like XiaoHongShu (Little Red Book) face unique pressures to balance commercial interests with the demand for authentic user-generated content (UGC). As a hybrid social media and e-commerce platform with over 300 million active users, XiaoHongShu has emerged as a pivotal case for examining how AI tools can foster credible content-sharing behavior among the Chinese population. The Chinese digital landscape is shaped by socio-cultural dynamics and stringent regulatory frameworks. The "Guidelines on Strengthening Governance of Online Information" mandate platforms to prioritize truthful and accurate content, compelling them to adopt advanced AI systems for content verification and accountability. While platforms like WeChat and Douyin rely on automated content moderation tools [1], XiaoHongShu distinguishes itself by integrating AI technologies such as natural language processing (NLP), sentiment analysis, and machine learning to enhance the credibility of lifestyle, beauty, and fashion-related UGC. Research by Zhang et al. underscores the effectiveness of AI in curbing misinformation on Chinese platforms, yet challenges persist in aligning algorithmic transparency with user trust.

Traditional AI systems often face limitations in fostering credible content-sharing behavior due to their opaque "black-box" nature, which hampers user acceptance and engagement. Explainable AI (XAI), which emphasizes transparency in algorithmic decision-making, offers a promising solution to bridge this trust gap [2]. However, XiaoHongShu's approach extends beyond XAI, leveraging a combination of collaborative filtering, deep learning, and data mining to personalize content recommendations while maintaining authenticity. These tools aim to detect inconsistencies in UGC, flag sponsored posts, and mitigate algorithmic biases—key steps in aligning platform operations with the Chinese population's high expectations for relatability and transparency. This study investigates how XiaoHongShu's AI tools shape credible content-sharing behavior among Chinese users. By analyzing the interplay between AI-driven content curation, user trust, and cultural values, the research seeks to address gaps in understanding how technological innovations and behavioral factors jointly combat misinformation. Specifically, it explores how XiaoHongShu's unique integration of AI tools fosters a content ecosystem that prioritizes authenticity, particularly among its millennial and Gen Z user base, who value peer-driven recommendations over traditional advertising. The findings aim to provide actionable insights for platforms navigating the dual demands of commercial growth and regulatory compliance in China. Furthermore, this study contributes to global discussions on AI's role in promoting digital trust, emphasizing the cultural specificity of user behavior and the need for adaptive, transparent AI systems in fostering credible content-sharing practices.

2 BACKGROUND OF THE STUDY

With the rapid evolution of digital technology, artificial intelligence (AI) has become an essential element in shaping online behavior and interactions. Among the myriad applications of AI, its integration into social media platforms has garnered significant attention, particularly in how it influences content creation, curation, and sharing [3]. XiaoHongShu (commonly referred to as "Red" or "Little Red Book") stands out as a unique platform in China, blending social media with e-commerce. With over 300 million active users [4], XiaoHongShu represents a pivotal case study for exploring the impact of AI tools on credible content-sharing behavior among the Chinese population. The rise of XiaoHongShu can be attributed to its ability to cater to a generation of tech-savvy consumers seeking authentic recommendations, particularly in areas such as beauty, fashion, and lifestyle. As a platform, XiaoHongShu emphasizes user-generated content (UGC), allowing users to share experiences, reviews, and recommendations. However, the credibility of this content has been a subject of scrutiny, especially given the prevalence of sponsored posts, fake reviews, and algorithmic biases [5]. To address these challenges, XiaoHongShu has increasingly adopted AI-driven tools, including natural language processing (NLP), machine learning, and sentiment analysis, to enhance content authenticity and user trust.

XiaoHongShu employs a range of AI-driven tools to ensure the credibility and authenticity of content shared on its platform. These tools include Natural Language Processing (NLP) for analyzing and understanding user-generated content, Machine Learning (ML) algorithms for detecting patterns in user behavior and identifying potentially misleading or fake reviews, and Sentiment Analysis to gauge the emotional tone of posts and reviews. Additionally, XiaoHongShu utilizes Disable Words Detection systems to filter out inappropriate or harmful content, ensuring a safer and more trustworthy environment for users. These AI tools work in tandem to create a more transparent and credible content ecosystem, which is crucial for maintaining user trust and engagement [6].

Recent studies highlight the role of AI in mitigating misinformation and ensuring content credibility. Zhang et al. examined how AI algorithms on Chinese social media platforms detect and flag misleading posts, demonstrating a reduction in the spread of false information. Similarly, Liu and Wang investigated the effectiveness of AI-based sentiment analysis in identifying promotional bias in user reviews, emphasizing its contribution to maintaining a transparent content ecosystem. These findings align with XiaoHongShu's ongoing efforts to balance commercial interests with the need for credible content sharing. The platform’s focus on developing credible content-sharing behavior is particularly relevant in the Chinese context, where cultural and demographic factors play a significant role in shaping user expectations and interactions [7].

The study examines several key variables that influence credible content-sharing behavior on XiaoHongShu. These include Informed Action, which refers to the decisions users make based on credible information; Transparent Intention, which reflects the clarity and honesty behind users' content-sharing motives; Perceived Credibility, which measures how users perceive the authenticity of the content they encounter; and Disable Words Detection, which ensures that harmful or inappropriate content is filtered out. Additionally, XiaoHongShu APP Use and Media Efficacy are considered, as they reflect how effectively users engage with the platform and its AI tools [8]. Finally, Social Cultural Factors play a crucial role in shaping how users interact with the platform and perceive the credibility of the content they share and consume. These variables collectively influence the Credible Contents Sharing Behavior By AI Tools, which is the primary focus of this study.

The interplay between AI tools and user behavior on XiaoHongShu is further shaped by the unique characteristics of the Chinese population. The platform’s users, predominantly millennials and Generation Z, place a high value on authenticity and relatability in online interactions. This demographic trend has pushed XiaoHongShu to deploy AI technologies that align with these expectations [9]. AI-driven content recommendation systems on the platform analyze user preferences to present personalized yet credible content. These systems rely on a combination of collaborative filtering, deep learning, and data mining techniques to ensure user satisfaction and trust [10]. Despite these advancements, challenges remain in fostering credible content-sharing behavior among the Chinese population. One significant issue is the tension between algorithmic efficiency and ethical considerations.

While AI tools can effectively promote credible content, their opaque decision-making processes often raise concerns about transparency and fairness. According to Huang et al., AI algorithms used in Chinese social media platforms, including XiaoHongShu, sometimes exhibit biases that disproportionately amplify certain types of content over others, potentially undermining user trust. Moreover, the commercialization of XiaoHongShu introduces complexities in distinguishing between organic and sponsored content. The integration of AI tools for content labeling and verification has made significant strides in addressing this issue [11]. XiaoHongShu’s AI systems use machine learning models to detect inconsistencies between user-generated posts and known product information, flagging potential cases of misinformation. However, the effectiveness of these measures depends on continuous advancements in AI technology and their alignment with user expectations.

The broader implications of AI-driven credible content-sharing behavior extend beyond XiaoHongShu, reflecting a global trend in how digital platforms navigate trust and authenticity. In the Chinese context, where government regulations and public opinion play a critical role, platforms like XiaoHongShu must balance innovation with compliance [12]. The "Guidelines on Strengthening Governance of Online Information" released in 2020 by the Cyberspace Administration of China emphasize the importance of truthful and accurate online content. These regulatory frameworks further compel platforms to adopt robust AI systems to enhance content credibility and accountability, particularly in fostering credible content-sharing behavior among the Chinese population [13]. This study seeks to

explore the impact of AI tools on XiaoHongShu in developing credible content-sharing behavior among the Chinese population. By examining the interplay between AI technologies, user behavior, and cultural factors, this research aims to provide insights into how AI can be leveraged to enhance content credibility and trust in a rapidly evolving digital landscape.

3 STATEMENT OF PROBLEMS

The rise of XiaoHongShu as a prominent Chinese social media platform has significantly influenced how its predominantly millennial and Generation Z users interact with content, shaping their behaviors around sharing, consumption, and community building [14]. With the integration of artificial intelligence (AI) tools, XiaoHongShu has aimed to enhance user experience by improving content discovery, personalization, and platform functionality [15]. However, these technological advancements have also introduced significant challenges in fostering credible content-sharing behavior. One critical challenge is the potential for AI tools to inadvertently facilitate the spread of misinformation. While AI-driven personalized recommendation systems are highly effective in tailoring content to individual user preferences, they can also create a "filter bubble" effect [16]. This phenomenon occurs when users are predominantly exposed to information that aligns with their existing beliefs and interests, potentially reinforcing biases and limiting exposure to diverse perspectives. Zhao et al. further emphasize that AI systems in content curation may struggle to detect nuanced signals of misinformation, which can erode trust in the platform [17]. Additionally, the use of AI in content creation, such as automated reviews or fabricated guides, has raised concerns about the authenticity of information, leading to increased skepticism among users and a decline in trust within the platform's ecosystem.

These challenges are particularly pronounced in areas where accurate and reliable information is crucial, such as health advice, beauty trends, and product endorsements [18]. The reliance on AI tools in these domains highlights the need for continuous refinement of algorithms to ensure they prioritize credibility and transparency, thereby fostering a more trustworthy environment for users. In addition to these concerns, the issue of algorithmic bias presents a significant obstacle to ensuring content credibility and diversity. AI systems are trained on large datasets that often carry inherent biases, which can inadvertently shape content recommendations in ways that reinforce societal stereotypes and hierarchies.

Female users may be disproportionately exposed to beauty and fashion content, while male users may see more technology and sports-related posts, perpetuating gender norms. Furthermore, XiaoHongShu's lack of transparency regarding how its AI algorithms prioritize, rank, and filter content deepens user mistrust. Without clear insights into these processes, users may suspect that certain content is promoted or suppressed based on commercial interests rather than objective criteria [19]. This lack of accountability is compounded by regulatory gaps, as the rapid pace of AI development has outstripped existing governance frameworks. According to Zhang and Li, the absence of robust AI regulations creates opportunities for misuse, including content manipulation, privacy violations, and the dissemination of harmful or deceptive material, all of which threaten to undermine the platform's credibility and user trust. Beyond algorithmic and regulatory challenges, AI's impact on user well-being and its alignment with XiaoHongShu's cultural and demographic context are pressing issues [20]. The platform's AI-curated content often amplifies idealized lifestyles and curated experiences, contributing to feelings of inadequacy, anxiety, and even depression among users.

This is particularly concerning for XiaoHongShu's audience, which values authenticity and relatability in online interactions. The inability of AI tools to fully capture the nuanced cultural preferences and behaviors of this predominantly millennial and Gen Z demographic risks alienating users and further diminishing the perceived credibility of shared content. Moreover, the addictive nature of AI-driven personalized recommendations can lead to excessive platform use, exacerbating mental health concerns. Addressing these intertwined challenges requires a balanced approach that combines technological innovation with ethical safeguards, greater transparency, and a deeper understanding of user needs and cultural nuances. Only by tackling these issues can XiaoHongShu leverage AI to create a trustworthy and inclusive content-sharing ecosystem that aligns with the expectations of its user base.

4 RESEARCH QUESTIONS

The challenges presented by the integration of artificial intelligence (AI) tools on XiaoHongShu raise critical questions regarding the platform's ability to foster credible content-sharing behavior among the Chinese population. This study seeks to address the following research questions to provide a comprehensive understanding of these issues:

RQ1: How do AI tools influence content-sharing behavior among XiaoHongShu users?

RQ2: How does users' perceived credibility of XiaoHongShu's AI tools influence their content-sharing behavior?

RQ3: How do socio-cultural factors influence users' content-sharing behavior when using AI tools on XiaoHongShu?

RQ4: How effective are AI tools in detecting and filtering inappropriate content (e.g., fake reviews, misleading information)?

RQ5: How does users' media efficacy influence their content-sharing behavior on XiaoHongShu?

RQ6: How does the balance between personalization and content diversity in AI-driven recommendations influence users' content-sharing behavior?

5 RESEARCH OBJECTIVES

Building upon the identified research questions, this study aims to achieve the following objectives to explore the

impact of AI tools on XiaoHongShu in fostering credible content-sharing behavior among the Chinese population:
RO1: To explore the impact of AI tools on content-sharing behavior among XiaoHongShu users.
RO2: To assess the influence of users' perceived credibility of AI tools on their content-sharing behavior
RO3: To analyze the influence of socio-cultural factors on users' content-sharing behavior when using AI tools.
RO4: To evaluate the effectiveness of AI tools in detecting and filtering inappropriate content
RO5: To explore the influence of users' media efficacy on their content-sharing behavior
RO6: To examine the balance between personalization and content diversity in AI-driven recommendations

6 SIGNIFICANCE OF THE STUDY

The integration of AI tools into social media platforms has transformed content creation, curation, and sharing, particularly in user-generated content (UGC). This study focuses on XiaoHongShu, a leading Chinese social media and e-commerce platform, to explore AI's role in fostering credible content-sharing behavior. The research has theoretical, practical, and societal implications, addressing gaps in existing literature and offering actionable insights for stakeholders. This study contributes to understanding AI's role in shaping online behavior, particularly in credible content sharing within a culturally specific context. It bridges gaps by analyzing the interplay between AI, user behavior, and cultural factors unique to China. The research also addresses ethical and algorithmic challenges, such as the "black-box" nature of AI, algorithmic bias, and the psychological impacts of AI-curated content on user well-being. By focusing on XiaoHongShu, the study provides a nuanced perspective on balancing algorithmic efficiency with ethical considerations.

The study offers actionable insights for XiaoHongShu and other platforms to enhance content credibility and user trust. It evaluates the accuracy of AI tools in detecting credible content and provides recommendations for improving algorithmic performance [21]. The research emphasizes the importance of aligning AI tools with cultural and demographic characteristics, particularly for XiaoHongShu's millennial and Gen Z audience, who value authenticity. It also highlights the need for ethical AI deployment, proposing frameworks to address privacy, data security, and fairness concerns. The study promotes digital literacy and responsible content-sharing behavior in China. It underscores the need for media literacy campaigns to help users critically evaluate information and addresses the psychological impacts of AI-curated content on mental health. The research advocates for responsible AI practices that prioritize user well-being and contributes to the discourse on digital trust and authenticity in China. It also provides insights for policymakers to develop frameworks that promote transparency and ethical AI use.

While focused on China, the study's findings are globally relevant. AI-driven content curation is a worldwide phenomenon, and platforms globally face challenges related to misinformation, algorithmic bias, and user trust. The research offers lessons for platforms operating in diverse cultural and regulatory environments, emphasizing the importance of ethical AI practices and user well-being.

7 SCOPE OF THE STUDY

The scope of this study is carefully defined to ensure a focused and comprehensive exploration of how AI tools on XiaoHongShu (XHS) impact credible content-sharing behavior among the Chinese population. This research is situated at the intersection of artificial intelligence (AI), user behavior, and content credibility, with a particular emphasis on China’s unique socio-cultural and digital landscape [22]. The geographic focus of this study is the People's Republic of China, where the rapid growth of digital platforms and social media has significantly transformed how information is created, shared, and consumed. China’s digital ecosystem is distinct, characterized by a blend of government regulation, market-driven innovation, and the dominance of homegrown platforms such as WeChat, Weibo, and XiaoHongShu. The study will specifically examine how Chinese users engage with content on XiaoHongShu, a platform renowned for its integration of AI tools in content curation and user interaction. Given the platform’s unique position as a hybrid of social media and e-commerce, the study will explore how AI-driven features influence users’ perceptions of content credibility and their sharing behavior. This geographic and platform-specific focus allows for an in-depth analysis of how Chinese users, who often navigate between curated content and user-generated posts, interact with credible and non-credible information. The study focuses on the behavior of XiaoHongShu users, particularly those who actively engage in content creation and sharing. It examines various demographic factors, including age, gender, education level, and geographic location (urban vs. rural), to understand how these characteristics influence users’ interactions with AI tools on the platform. Special attention is given to younger users, who are typically more active on social media and play a significant role in driving content trends. Additionally, the study considers the role of media literacy and digital proficiency in shaping users’ ability to discern credible content. By incorporating a diverse demographic scope, the research aims to provide a nuanced understanding of how different user groups engage with AI-enhanced features and their impact on credible content sharing.

The technological scope of this study centers on the AI tools integrated into XiaoHongShu, such as personalized content recommendation algorithms, image recognition systems, and automated content moderation. These tools are examined for their ability to enhance content credibility and influence user behavior. The study investigates how features like transparency, interpretability, and user trust in AI-driven decisions affect users’ willingness to share content. Furthermore, the research explores the design of user interfaces and the overall user experience, evaluating how effectively AI tools communicate credibility assessments to users. While AI tools are increasingly prevalent in social

media platforms, this study focuses on their unique implementation within XiaoHongShu and their potential to foster credible content-sharing behavior. The conceptual scope of the study is structured around key variables, including user trust in AI tools, perceived content credibility, transparency of AI-driven decisions, and the intention to share credible content. These variables are operationalized to ensure precise measurement and analysis. The study also considers the role of cultural and ethical factors, such as privacy concerns and algorithmic bias, in shaping user behavior within the Chinese context. By examining these variables, the research aims to uncover the mechanisms through which AI tools on XiaoHongShu influence credible content-sharing behavior.

The temporal scope of the study focuses on the current state of XiaoHongShu's AI tools and their impact on user behavior, reflecting the contemporary challenges of misinformation and content credibility in China's digital landscape. The research period captures data during a time when the proliferation of user-generated content and the need for credible information are critical concerns. While the study does not address historical shifts in content-sharing behavior, it provides a timely analysis of how AI tools can address present-day challenges in fostering credible content dissemination. By focusing on these dimensions, the study aims to offer valuable insights into the role of AI tools in shaping credible content-sharing behavior on XiaoHongShu, with implications for platform developers, policymakers, and researchers interested in the intersection of AI and social media.

8 CONCLUSION

In this chapter, the foundation for exploring the impact of AI tools on XiaoHongShu in developing credible content-sharing behavior among the Chinese population has been established. The chapter highlights the growing challenges of misinformation, sponsored bias, and algorithmic manipulation within digital platforms, particularly in the context of social media and e-commerce. By introducing advanced AI tools as solutions to the opacity of traditional AI models, the study positions these technologies as crucial enablers of user trust, media efficacy, and informed decision-making. The research problem is identified as the lack of empirical understanding regarding how AI tools can influence content-sharing behaviors, especially within the unique socio-cultural and regulatory landscape of China. The chapter outlines the research questions and objectives, emphasizing the need to examine the interplay between AI technologies, user behavior, and cultural factors. The significance of the study is discussed both theoretically and practically, underscoring its potential to contribute to academic discourse on digital trust and authenticity while offering actionable insights for platforms like XiaoHongShu. Through this framework, the study seeks to provide a nuanced understanding of how transparent and explainable AI systems can foster credible content-sharing behavior. It also addresses the complex dynamics of social conformity, media literacy, and government regulation in China, offering a comprehensive perspective on the challenges and opportunities associated with AI-driven content ecosystems. By focusing on XiaoHongShu as a case study, this research aims to bridge the gap between technological innovation and user-centric design, ultimately contributing to a more trustworthy and inclusive digital environment.

COMPETING INTERESTS

The authors have no relevant financial or non-financial interests to disclose.

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