

The Impact of Artificial Intelligence on Digital Privacy: The Mediating Role of Trust in Social Media

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Abstract— Artificial Intelligence (AI), a groundbreaking field of computer science, has surged in prominence, revolutionizing the way machines process information and make decisions. In the rapidly evolving landscape of digital communication, the intersection of AI and privacy has become a focal point of discussion. As the online activities generate an ever-increasing amount of data, concerns about the protection of digital privacy have intensified. This research aims to fill a knowledge gap for AI acts as a crucial guardian of digital privacy on social media, considering the impact of Technological, Regulatory, Cultural, and Educational factors. Trust becomes a critical mediator in social media of this relationship. As social media continues to shape the interconnected world, the responsible use of AI emerges as a key determinant in safeguarding digital privacy. By addressing the challenges posed by technological, regulatory, cultural, and educational factors, AI can contribute to a privacy-respecting social media landscape. Establishing and maintaining user trust through transparent practices and ethical considerations are essential for AI to fulfill its role as a guardian of digital privacy on social media platforms. The findings aim to inform strategic decision-making, enhance user trust, and contribute to the development of ethical guidelines, fostering a balance between innovation and robust privacy measures in the business-oriented realm of AI-driven social media.

Keywords— Artificial Intelligence, Privacy, Regulatory, Social media, Technological

I. INTRODUCTION

Developing computers that can carry out activities that normally require human intellect is the goal of the quickly developing discipline of computer science known as Artificial Intelligence (AI). These activities involve language understanding, perception, reasoning, problem-solving, and even decision-making (Shah & Shay, 2019). AI's ability to process vast amounts of data, learn from patterns, and make autonomous decisions has enabled it to play a critical role in enhancing user experience on social media platforms (Shah & Shay, 2019). However, this same capability raises significant concerns regarding digital privacy particularly regarding the extent of data collection and usage, the potential for pervasive surveillance, and the increased risk of data breaches and unauthorized access associated with AI systems (Ahmad et al., 2023). Considering the impact of technological, regulatory,

cultural, and educational factors, trust becomes a critical mediator in social media adds another subtle of layer to this relationship. This enhanced trust leads to a greater willingness among users to share personal data, a stronger perception that their privacy is being protected, and increased loyalty to the platform. For example, users might be more willing to provide location data to a platform they trust to use this information responsibly and transparently, enhancing their experience with location-based services or recommendations (Ahmad et al., 2023).

1.1 Background of Research

AI algorithms on social media continuously collect and process enormous volumes of user data, including preferences, behaviours, and personal information. Platforms are able to generate comprehensive user profiles according to this data collecting, which may be used for

targeted advertising, content recommendation, and other personalized services (Wang, 2023).

AI in Social Media Size

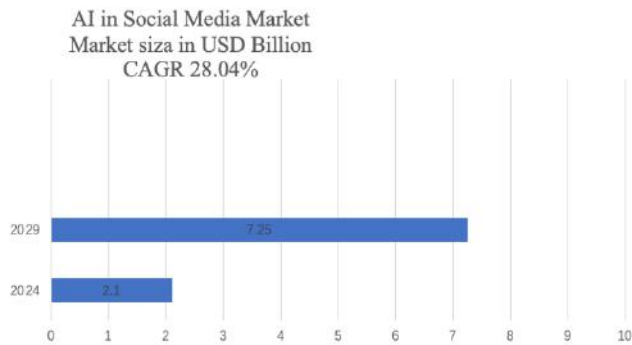


Fig. 1.1: AI in Social Media Size

Source: Mordor Intelligence (2024)

The Figure 1.1 shows AI in Social Media Market size is estimated at USD 2.10 billion in 2024 and is expected to grow at a compound annual growth rate (CAGR) of 28.04% to reach USD 7.25 billion by 2029 (AI In Social Media Market Size | Mordor Intelligence, 2024). As the number of social media users rises, there will likely be a greater need for AI solutions to understand consumer preferences. Social media has emerged as one of the main sources of customer intelligence data.

Market Trends

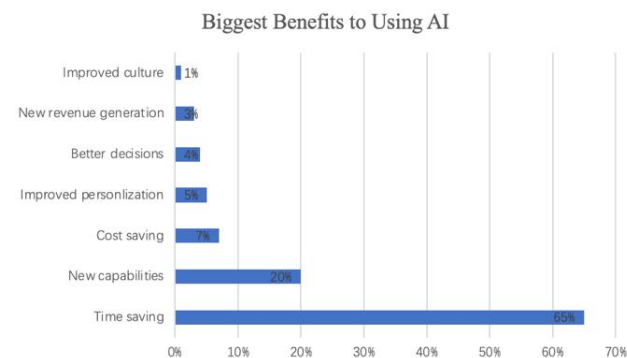


Fig. 1.2: Biggest Benefits to Using AI

Source: Foundation AI Survey (2024)

Time savings is the main advantage when using AI in the workplace, and the advantages of employing AI to produce anything from emails have been experienced by nearly 64% of respondents (Crump, 2024). This resounding majority shows that people firmly believe AI is effective and can simplify procedures. The time that AI saves, which can be used for more difficult, strategic, or creative tasks that call for human participation, is clearly valued by marketers (Crump, 2024).

AI-driven personalization features enhance user experiences on social media by tailoring content and recommendations to individual preferences. However, concerns arise regarding the scope of data collection, transparency about how data is used, and the potential for misuse or unauthorized access to sensitive information (Wang, 2023). Also, AI algorithms play a significant role in making decisions about what content users see on social media platforms but opacity in algorithms can lead to bias and manipulation.

1.2 Research Problem

The tension between personalization and privacy represents a significant challenge in the digital age, particularly with the proliferation of AI technologies (Jiang, 2023). Personalization involves using AI to tailor content, recommendations, and services to individual user preferences, thereby enhancing user experience and engagement. This process, however requires the collection and analysis of vast amounts of personal data, raising serious privacy concerns, and the use of AI in cybersecurity can both enhance and undermine digital privacy, but raise surveillance and misuse worries (Jiang, 2023). Trust is indeed a cornerstone in the relationship between users and social media platforms, particularly concerning data handing (Pan & Mishra, 2023). Transparency, clear privacy settings, and robust user controls are vital for fostering and maintaining trust, when users feel confident about how their data is managed and have the means to control it, they're more likely to engage with the platform positively (Pan & Mishra, 2023).

Besides, government regulations, like the General Data Protection Regulation (GDPR) in Europe (De Lucca et al., 2023) and the California Consumer Privacy Act (CCPA) in the United States (Blanke, 2020), are significant in shaping the use of AI and safeguarding digital privacy. Users have the right to access their personal data, request its deletion, and exercise control over how their information is used on social media platforms (Blanke, 2020). These regulatory frameworks reinforce user trust and confidence in social media platforms by holding them accountable for their data practices. By imposing restrictions and requirements on data handling practices, these regulations promote transparency, accountability, and user empowerment, thereby safeguarding privacy rights in an AI-driven digital landscape.

Next, cultural attitudes toward privacy vary, influencing how individuals perceive and prioritize privacy concerns related to AI on social media (Dong, 2020). Factors such as generational differences, attitudes toward technology, and trust in social media platforms can impact individuals' willingness to share personal information and engage with

AI-driven features. Then, societal norms also shape expectations regarding data privacy and user consent, which can differ significantly across regions and demographic groups (Dong, 2020). Also, improving media literacy and educating users about privacy risks associated with AI is essential for empowering individuals to make informed decisions online. Educating users about recognizing signs of data misuse, understanding privacy policies, and exercising their privacy rights can help mitigate risks and promote responsible use of social media platforms (Lee, 2020).

Trust serves as a bridge between users and AI-driven systems when users trust that their data is handled responsibly, and that AI recommendations are aligned with their preferences, a symbiotic relationship emerges (Singh et al., 2022). This trust becomes a crucial buffer, potentially preserving digital privacy by fostering confidence in users regarding the ethical use of their data. However, trust can be compromised if users perceive AI as invasive or if there are concerns about data misuse (Singh et al., 2022). Instances of data breaches, algorithmic biases, or unclear data handling practices can erode user trust, leading to a breakdown in the delicate balance between personalization and privacy. In such scenarios, AI's role shifts from a privacy-preserving tool to a potential threat (Almada, 2021), to investigate this intricate interplay, researchers delve into the mediating role of trust in the AI-social commerce-digital privacy nexus. Studies scrutinize user perceptions, attitudes, and behaviors within social commerce platforms, aiming to discern how trust mediates the impact of AI on digital privacy. Insights derived from these investigations can inform the development of ethical AI practices, privacy-centric design, and communication strategies that enhance user trust.

1.3 Research Gap

Policymakers may lack a comprehensive understanding of how AI can effectively safeguard digital privacy on social media platforms (Almada, 2021). This gap may result in regulatory frameworks that are not sufficiently or adaptable to address the complexities of digital privacy in different contexts (Zhang et al., 2020). While there is a growing body of research on AI and privacy, gaps may still exist in understanding how various factors interact to influence the effectiveness and user acceptance of AI-driven privacy measures. Social media companies and tech firms have varying levels of understanding of the factors affecting digital privacy, some prioritize technological solutions, while others focus more on compliance with regulations, leading to discrepancies in approaches (Zhang et al., 2020).

AI acts as a crucial guardian of digital privacy on social media, considering the impact of technological, regulatory, cultural, and educational factors. However, despite AI's potential to enhance digital privacy, there is a lack of comprehensive understanding of how these various factors influence its effectiveness and user acceptance, specifically the balance between AI's data processing capabilities and the safeguarding of user data remains unclear (Guo et al., 2022). Compliance with data protection laws is crucial, yet the adaptability of AI to various regulatory environments needs further exploration, And cultural differences significantly impact privacy expectations and behaviors, requiring tailored AI systems that respect diverse norms and privacy expectations (Guo et al., 2022).

1.4 Research Questions

1. How do technological factors influence digital privacy in the context of Artificial Intelligence?
2. What is the impact of regulations on digital privacy in the era of Artificial Intelligence?
3. How do cultural and educational factors affect digital privacy in relation to Artificial Intelligence?
4. What role does trust in social media play in mediating the relationship between technological factors and digital privacy?
5. How does trust in social media mediate the relationship between regulations and digital privacy?
6. Does trust in social media mediate the relationship between cultural and educational factors and digital privacy?

1.5 Research Objectives

1. To examine the influence of technological factors on digital privacy in the context of Artificial Intelligence.
2. To analyze the impact of regulations on digital privacy in the era of Artificial Intelligence.
3. To investigate how cultural and educational factors affect digital privacy in relation to Artificial Intelligence.
4. To assess the mediating role of trust in social media between technological factors and digital privacy.
5. To evaluate the mediating role of trust in social media between regulations and digital privacy.
6. To determine the mediating role of trust in social media between cultural and educational factors and digital privacy.

II. LITERATURE REVIEW

2.1 Artificial Intelligence

The ability of a digital machine, computer, or computer-controlled robot to do activities that are normally performed by intelligent individuals is referred to as

Artificial Intelligence (AI) (Wang, 2023). The phrase is most frequently used when creating systems that are meant to replicate human cognition and intelligence, including reasoning, the capacity to delve deeper, the ability to make inferences and generalisations, and even experience learning (Wang, 2023).

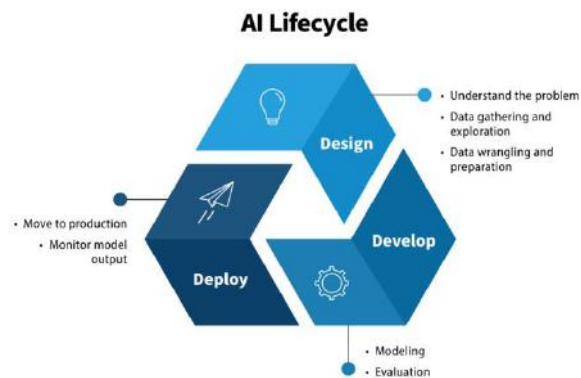


Fig. 2.1: AI lifecycle, 2024

Source: *Understanding and managing the AI lifecycle* (2024)

The cyclical process of going from a business challenge to an AI solution that resolves that problem is known as the AI lifecycle. During the phases of design, development, and deployment, every step in the life cycle is reviewed several times (Understanding and managing the AI lifecycle, 2024).

AI enhances personalization by tailoring content and services to individual preferences, creating a more satisfying user experience. It boosts efficiency by automating repetitive tasks and supporting decision-making (Pan & Mishra, 2023). The AI-driven chatbots improve customer engagement by offering instant, round-the-clock responses, and predictive analytics enable better planning by forecasting trends and demands. Additionally, AI strengthens security by detecting potential cyber threats, providing organizations with an extra layer of protection against fraud. Also, AI fosters accessibility and inclusivity, making digital content more usable for people with disabilities or language barriers, and driving innovation by uncovering new insights and opportunities (Pan & Mishra, 2023).

The use of AI has given rise to a number of ethical and legal concerns, including those related to civil and criminal liability, insurance, data protection and privacy, user safety and information, and contracts (Reis et al., 2020). Given the vast amount of data that AI systems process, privacy and data protection are among the most important concerns (Reis et al., 2020). At the same time, there are viable mitigation techniques that make use of AI as well as the

changing legal environment to support ethical AI deployment and responsible development that respects individual rights, including the fundamental right to privacy.

2.2 Social Media

Social media engagement has become an essential component of any marketing plan as social media platforms develop to reward authentic social connections (Mano, 2021). The phrase social media engagement refers to a wide range of activities on all social media platforms and is a measure of how users interact with their accounts and content. For example likes, favorites, comments, and shares, with billions of users sharing vast amounts of data on sites like Facebook, Instagram, and Twitter every day, social media has become an essential aspect of everyday life (Mano, 2021). In order to provide users with personalised content, AI algorithms examine this data and behaviour, by examining posts, pages, and profiles that users interact with, AI may see trends and suggest new material that users might find interesting. This procedure, known as content curating, is essential for maintaining user engagement and increasing platform usage (Paluch & Wirtz, 2020). Additionally, AI is used to identify and remove harmful or dangerous information, which has grown to be a major problem for social media companies. Social media companies have been under attack recently for their failure to control material, which has allowed hate speech, disinformation, and other dangerous material to spread. The companies can quickly and efficiently detect and remove such information using AI algorithms, minimising the harm it can do (Paluch & Wirtz, 2020), all things considered, AI significantly affects social media by assisting in the personalisation of content and ensuring a safer and more satisfying online experience for users.

2.3 Digital Privacy

Online privacy, or internet privacy, is another name for digital privacy, it refers to protecting private persons' internet data. However, privacy could appear more like an ideal than a reality in the virtual world where everything we do can be recorded (Wu et al., 2020). Social media postings, employment histories, shopping and entertainment choices, geolocation data, and financial and healthcare information are just a few examples of the digital "footprint" that comes with online activities and may be used to identify it. Additionally, a typical digital footprint is massive, for example The average person has 90 online identities, while in the United States, there are on average 130 accounts connected to a single email address, according to an analysis of data from over 20,000 users

(Wu et al., 2020). The importance of data privacy in an era where personal and professional digital boundaries are increasingly blurred, especially with remote work and personal devices being used for work purposes, that protecting customer and employee privacy is essential for organizational security and integrity.

2.3.1 Personalization

Personalisation is the process of tailoring outputs to a specific user and scenario, the user's location, educational and professional history, connection with groups, hobbies, preferences, opinions, and other characteristics may be taken into consideration (O'Hara, 2020). Numerous web-based services employ personalisation for various reasons, recommending products, components, or general information that a user has not yet thought of but would find helpful is a popular type of personalisation. Personalisation strategies are used by general-purpose social networks like Facebook.com to find potential friends based on the user's current connections and group membership. Professional social networks like LinkedIn.com exploit user profiles' talents and professional background information to suggest possible hires, and search engines like Google.com utilise user search history to tailor the user's current queries (O'Hara, 2020). AI-powered personalization features on social media platforms are designed to enhance user experience by tailoring content to individual preferences. These features analyze user behavior and preferences to deliver more relevant content, advertisements, and recommendations, while personalization will significantly improve user satisfaction and engagement, it raises important concerns about privacy.

2.4 Technological

The integration of AI into social media platforms has significantly transformed the user experience, content delivery, and platform management. However, this technological advancement also poses various challenges and implications for digital privacy, key factors outlining the technological impact of AI on digital privacy in social media include, AI algorithms, AI-driven, and AI systems (Park et al., 2021). AI algorithms require vast amounts of data to function effectively, and also analyzes user behavior to create detailed profiles and predict future actions, enhancing user experience through personalized content and recommendations, but simultaneously giving social media platforms deep insights into users' private lives, which can be invasive (Park et al., 2021).

Besides, AI-driven content personalization and targeted advertising enhance engagement and user satisfaction by personalizing the content users see in their feeds and enabling highly targeted advertising based on user profiles

(Lang et al., 2021). However, this involves extensive tracking and data sharing with third-party advertisers, compromising user privacy, then, The systems frequently function as 'black boxes' using complex algorithms to make judgements that are opaque to users (Lang et al., 2021). Concerns over the decision-making process for user bans, content moderation, and other platform restrictions may arise from this lack of transparency, furthermore, biases in the training data may be inadvertently perpetuated by AI algorithms, leading to discriminatory behaviours that compromise users' privacy and social media experiences.

2.5 Regulatory

Important data protection regulations include the California Consumer Privacy Act (CCPA) and the General Data Protection Regulation (GDPR) (De Lucca et al., 2023) (Blanke, 2020). In order to ensure transparency and accountability in data handling, social media platforms that use artificial intelligence (AI) must get users' explicit consent before collecting and analysing their data. This is made possible by the General Data Protection Regulation (GDPR), a comprehensive data protection law in the European Union (De Lucca et al., 2023). Social media companies are required by law to get users' informed permission before collecting and using AI to process their data, this involves offering users with clear information about the types of data that will be gathered, how they will be used, and the consequences of processing data using AI. In order to give users simple access to details about how their data is being used and the decisions made by AI systems, platforms must also be transparent and forthright about their AI algorithms and data processing procedures, and laws such as the CCPA and GDPR guarantee that consumers may ask for and obtain a copy of their data in order to comprehend how AI systems are using it (Baik, 2020). Furthermore, individuals have the right to ask for their personal data to be erased, and social media companies are required to abide by these requests, making sure that AI systems no longer use the removed data for analysis or decision-making.

2.6 Cultural and Educational

Culturally, the widespread use of AI in social media has shifted societal perceptions of privacy (Baik, 2020), users are increasingly sharing personal information online, often without fully understanding the implications. This cultural shift impacts how privacy is valued and protected, leading to a more relaxed attitude toward personal data sharing. AI-driven surveillance practices, such as data collection and behavioral tracking, have become normalized (Baik, 2020), this normalization leads to a culture of acceptance where users are less likely to question or resist privacy

invasions, seeing them as a standard part of their online experience. AI algorithms can inadvertently perpetuate cultural biases present in their training data. This affects the representation of different cultures on social media platforms, potentially marginalizing minority groups and influencing cultural narratives based on biased data interpretations (Seo et al., 2021). On the positive side, AI can facilitate global cultural exchange by connecting users from different backgrounds and recommending culturally diverse content, however, this requires careful handling to ensure respectful and accurate representation of all cultures (Seo et al., 2021).

Besides, education serves as a key factor in understanding the impact of artificial intelligence on digital privacy because it shapes an individual's knowledge, awareness, and attitudes toward emerging technologies (Lee, 2020). People with higher levels of education are often more familiar with digital technology and the underlying mechanisms of AI, making them more likely to understand both the benefits and risks associated with data-driven algorithms used by social media platforms. This knowledge influences their digital literacy, which includes the ability to critically assess privacy policies, recognize data collection practices, and make informed decisions about data sharing (Lee, 2020). Additionally, education can impact trust in technology, individuals with a higher level of education may either be more cautious and skeptical about AI's role in data privacy or more trusting of technology due to familiarity with its development and applications (Dong, 2020). As a result, education can directly affect how comfortable or concerned users feel about privacy on social media platforms that leverage AI, ultimately shaping their behavior and level of trust in these platforms.

2.7 Trust

Trust is a fundamental component of user relationships with social media platforms, users have to trust that platforms will protect their privacy, safeguard their data, and deliver reliable and relevant content. Trust can be influenced by various factors, including transparency, accountability, security, reliability, and consistency in platform behavior (Mohamed et al., 2024). Users' trust in the platform influences how they perceive and interact with AI-driven features, for example when users trust that AI algorithms are reliable, transparent, and aligned with their interests and preferences, they are more likely to engage with the platform actively. However, if users lack trust in the platform's AI capabilities or are concerned about privacy and data misuse, they may be less inclined to engage with AI-driven features and may even disengage from the platform altogether (Mohamed et al., 2024).

Moreover, trust is essential in user-platform relationships, particularly concerning privacy, data protection, transparency, and ethical use of technology. Users need to trust that social media platforms will respect their rights, safeguard their data, and use AI responsibly to enhance their experience without compromising their privacy or security (Liu et al., 2021). The presence of regulations influences users' trust in social media platforms' AI practices, because when regulations are in place to ensure transparency, accountability, and ethical use of AI, users are more likely to trust that platforms will adhere to these standards (Liu et al., 2021), as a result, they may feel more comfortable engaging with AI-driven features on social media platforms. Otherwise, in the absence of regulations or when regulations are perceived as inadequate, users may lack trust in platforms' AI practices, leading to concerns about privacy violations, data misuse, algorithmic bias, and other ethical issues. This lack of trust can undermine user confidence in AI-driven features and diminish user engagement on social media platforms.

Last, cultural and educational factors shape individuals' perceptions, attitudes, and knowledge about AI technology and its implications, these factors, in turn, influence users' trust in social media platforms' AI practices (Ali et al., 2023). Such as when users trust that platforms respect their cultural values, prioritize their educational needs, and use AI in a responsible and transparent manner, they are more likely to engage positively with AI-driven features (Ali et al., 2023). But if users perceive cultural insensitivity, educational deficiencies, or ethical concerns regarding AI use, their trust in the platform may be undermined, leading to negative responses or disengagement.

III. HYPOTHESIS

H1: Technological factors positively influence digital privacy in the context of Artificial Intelligence.

H2: Regulations positively influence digital privacy in the context of Artificial Intelligence.

H3: Cultural and educational factors positively influence digital privacy in the context of Artificial Intelligence.

H4: Trust in social media mediates the relationship between technological factors and digital privacy.

H5: Trust in social media mediates the relationship between regulations and digital privacy.

H6: Trust in social media mediates the relationship between cultural and educational factors and digital privacy.

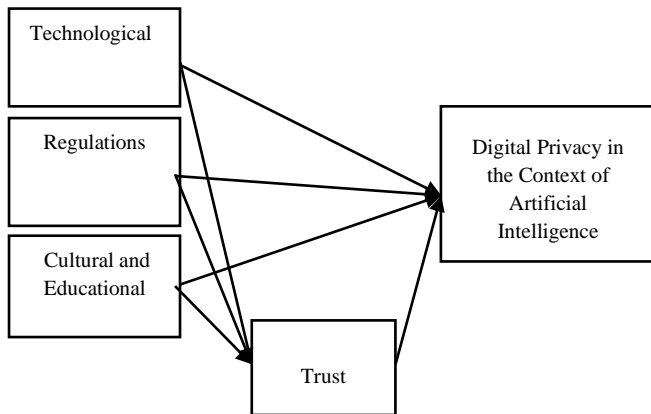


Fig 3.1: Conceptual Framework

IV. CONCLUSION

The impact of artificial intelligence on digital privacy is multifaceted, shaped by technological advancements, regulatory frameworks, cultural attitudes, and educational factors, all of which influence users' perceptions and behaviors on social media. Technological developments in AI have enabled unprecedented data collection and personalization, raising significant privacy concerns. Regulatory measures play a critical role in setting boundaries and protecting users, though they often struggle to keep pace with the rapid evolution of AI technologies. Culturally, varying societal norms and expectations around privacy affect how people approach and trust digital platforms. Education further shapes this landscape by influencing digital literacy and awareness, impacting how individuals understand and navigate privacy issues. Trust in social media acts as a mediating force, determining how users balance the convenience and engagement of AI-driven features with their privacy concerns. Altogether, these factors underscore the need for a balanced approach that fosters innovation in AI while safeguarding user privacy and building trust in digital environments.

The expected outcomes of this research include practical recommendations for strengthening digital privacy practices on social media platforms through a deeper understanding of the technological, regulatory, cultural, and educational factors that impact users' trust in artificial intelligence. By identifying the role trust plays in users' willingness to engage with AI-driven features, this research aims to help organizations build safer and more trusted digital environments, ultimately leading to increased user satisfaction and responsible data practices. Additionally, this study will contribute to academic literature by offering insights into the complex interplay between AI, privacy, and trust within the context of social

media, especially as it applies to diverse regional and cultural settings.

REFERENCES

- [1] *AI in Social Media Market Size | Mordor Intelligence*. (2024). <https://www.mordorintelligence.com/industry-reports/ai-market-in-social-media>
- [2] Almada, M. (2021). Automated decision-making as a data protection issue. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3817472>
- [3] Ali, O., Murray, P. A., Momin, M., Dwivedi, Y. K., & Malik, T. (2023). The effects of artificial intelligence applications in educational settings: Challenges and strategies. *Technological Forecasting and Social Change*, 199, 123076. <https://doi.org/10.1016/j.techfore.2023.123076>
- [4] Ahmad, S. F., Han, H., Alam, M. M., Rehmat, Mohd. K., Irshad, M., Arraño-Muñoz, M., & Ariza-Montes, A. (2023a). Correction: Impact of artificial intelligence on human loss in decision making, Laziness and Safety in Education. *Humanities and Social Sciences Communications*, 10(1). <https://doi.org/10.1057/s41599-023-01842-4>
- [5] Blanke, J. M. (2020). Protection for 'inferences drawn': A comparison between the General Data Protection Regulation and the California Consumer Privacy Act. *Global Privacy Law Review*, 1(Issue 2), 81–92. <https://doi.org/10.54648/gplr2020080>
- [6] Baik, J. (Sophia). (2020). Data Privacy Against Innovation or against discrimination?: The case of the california consumer privacy act (CCPA). *Telematics and Informatics*, 52, 101431. <https://doi.org/10.1016/j.tele.2020.101431>
- [7] Collins, C., Dennehy, D., Conboy, K., & Mikalef, P. (2021). Artificial intelligence in information systems research: A systematic literature review and research agenda. *International Journal of Information Management*, 60, 102383. <https://doi.org/10.1016/j.ijinfomgt.2021.102383>
- [8] Crump, E. (2024, May 24). *AI in Marketing: Research Study, stats, Industry Trends & Data*. Foundation Marketing. <https://foundationinc.co/lab/ai-marketing-results/>
- [9] Dong, B. (2020). Privacy concerns. *Critical Storytelling in 2020: Issues, Elections and Beyond*, 110–119. https://doi.org/10.1163/9789004432758_013
- [10] De Lucca, N., Martins, G. M., & Queiroz, R. C. (2023). Brazilian General Data Protection Law (LGPD) and California Consumer Privacy Act (CCPA). *Brazilian Journal of Law, Technology and Innovation*, 1(1), 38–57. <https://doi.org/10.59224/bjlti.v1i1.38-57>
- [11] Guo, E., Li, P., Yu, S., & Wang, H. (2022). Efficient video privacy protection against malicious face recognition models. *IEEE Open Journal of the Computer Society*, 3, 271–280. <https://doi.org/10.1109/ojcs.2022.3218559>
- [12] Jiang, N. (2023). The analysis and application of Face Recognition Technology. *2023 International Conference on*

- Computers, Information Processing and Advanced Education (CIPAE). <https://doi.org/10.1109/cipae60493.2023.00069>
- [13] Lee, D. (2020). Artificial Intelligence. Birth of Intelligence, 48–69. <https://doi.org/10.1093/oso/9780190908324.003.0003>
- [14] Liu, T., Yang, B., Geng, Y., & Du, S. (2021). Research on Face Recognition and Privacy in China—Based on Social Cognition and Cultural Psychology. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.809736>
- [15] Lang, Q., Zhong, C., Liang, Z., Zhang, Y., Wu, B., Xu, F., Cong, L., Wu, S., & Tian, Y. (2021). Six application scenarios of artificial intelligence in the precise diagnosis and treatment of liver cancer. *Artificial Intelligence Review*, 54(7), 5307–5346. <https://doi.org/10.1007/s10462-021-10023-1>
- [16] Mohamed, E. a. S., Osman, M. E., & Mohamed, B. A. (2024). The Impact of Artificial Intelligence on Social Media Content. *Journal of Social Sciences*, 20(1), 12–16. <https://doi.org/10.3844/jssp.2024.12.16>
- [17] Mano, R. (2021). Social Media and social networks for health purposes. *Online Health Forums and Services: Benefits, Risks and Perspectives*, 20–27. <https://doi.org/10.2174/9789811499654121010004>
- [18] O'Hara, K. (2020). Big Data, consequentialism and privacy. *Big Data and Democracy*, 13–26. <https://doi.org/10.3366/edinburgh/9781474463522.003.0002>
- [19] Park, S. S., Tung, C. D., & Lee, H. (2021). The adoption of AI Service Robots: A comparison between credence and Experience Service Settings. *Psychology & Marketing*, 38(4), 691–703. <https://doi.org/10.1002/mar.21468>
- [20] Paluch, S., & Wirtz, J. (2020). Artificial Intelligence and robots in the service encounter. *Journal of Service Management Research*, 4(1), 3–8. <https://doi.org/10.15358/2511-8676-2020-1-3>
- [21] Pan, Z., & Mishra, P. (2023). The future of AI-enabled cybersecurity. *Explainable AI for Cybersecurity*, 235–240. https://doi.org/10.1007/978-3-031-46479-9_12
- [22] Reis, J., Santo, P., & Melão, N. (2020). Impact of Artificial Intelligence Research on Politics of the European Union Member States: The Case Study of Portugal. *Sustainability (Switzerland)*, 12(17), 1–27. <https://doi.org/10.3390/SU12176708>
- [23] Shah, D., & Shay, E. (2019). How and why artificial intelligence, mixed reality and blockchain technologies will change marketing we know today. *Handbook of Advances in Marketing in an Era of Disruptions: Essays in Honour of Jagdish N. Sheth*, 377–390. <https://doi.org/10.4135/9789353287733.n32>
- [24] Seo, K., Tang, J., Roll, I., Fels, S., & Yoon, D. (2021). The impact of artificial intelligence on learner–instructor interaction in online learning. *International Journal of Educational Technology in Higher Education*, 18(1). <https://doi.org/10.1186/s41239-021-00292-9>
- [25] Singh, S., Greaves, D. J., & Epiphaniou, G. (2022). A framework for integrating responsible AI into social media platforms. *Competitive Advantage in the Digital Economy (CADE 2022)*. <https://doi.org/10.1049/icp.2022.2051>
- [26] *Understanding and managing the AI lifecycle | GSA - IT Modernization Centers of Excellence*. (2024). <https://coe.gsa.gov/coe/ai-guide-for-government/understanding-managing-ai-lifecycle/>
- [27] Wang, S. (2023). Factors related to user perceptions of artificial intelligence (ai)-based content moderation on social media. *Computers in Human Behavior*, 149, 107971. <https://doi.org/10.1016/j.chb.2023.107971>
- [28] Wu, Z., Li, G., Shen, S., Lian, X., Chen, E., & Xu, G. (2020). Constructing dummy query sequences to protect location privacy and query privacy in location-based services. *World Wide Web*, 24(1), 25–49. <https://doi.org/10.1007/s11280-020-00830-x>
- [29] Zhang, Y., Gao, N., & Chen, J. (2020). A practical defense against attribute inference attacks in session-based recommendations. *2020 IEEE International Conference on Web Services (ICWS)*. <https://doi.org/10.1109/icws49710.2020.00053>