

SIKHISM AND ARTIFICIAL INTELLIGENCE THE MUTUAL RELEVANCE

ARTICLE

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INTRODUCTION

Artificial Intelligence (AI) refers to developing computer systems and machines that can perform tasks that typically require human intelligence. It involves the creation of intelligent agents that can perceive their environment, reason for it, and take action to achieve specific goals (Dorobantu, 2019; Pinto, 2022). These systems are designed to analyze and interpret large amounts of data, learn from patterns and experiences, and make decisions or predictions based on that information. AI applications are wide-ranging, including virtual assistants, autonomous vehicles, recommendation systems, fraud detection, medical diagnostics, and many more. However, while AI systems can exhibit advanced capabilities, they still lack humans' general intelligence and common-sense reasoning. AI is an evolving field, and researchers and engineers continue to explore and develop new techniques and technologies to enhance its capabilities. Artificial intelligence is likely to affect religion in various ways, some of which are already becoming apparent (Rendsburg, 2019; Olaore et. al. 2014; Geraci, 2008; Upadhyay, 2023). In such a scenario, the teachings of Sikhism, as enshrined in Aad Guru Granth Sahib (AGGS, 1983), with appropriate usage of AI, can play a vital role in the development of a new social order that is more just, sustainable, and compassionate for all.

SIKHISM'S RELEVANCE TO AI

Guru Nanak founded the Sikh religion during the late 15th century in the Punjab district of British India. Sikhism is based on Guru Nanak's teaching and those of the nine Gurus who followed him. The Sikh scripture,

ABSTRACT

Artificial Intelligence refers to developing computer systems and machines that can perform tasks that usually require human intelligence. AI is an evolving field, and researchers and engineers continue to explore and develop new techniques and technologies to enhance its capabilities. The impact of AI on religions is not entirely predictable. AI is likely to affect religions or be affected by them in various ways, some of which are already becoming apparent. As with any new technology, it is up to individuals and religious communities to decide how to incorporate AI into their beliefs and practices. It is worth mentioning that the mutual relevance of Sikhism and AI is likely to be complex and multifaceted. It will depend on how AI is developed, implemented, and used and the attitudes and beliefs of individual Sikhs and the Sikh community.

Aad Guru Granth Sahib, contains a wealth of knowledge and instructions that can be applied to various aspects of modern life, including the era of artificial intelligence (Virk, 2023; Singh, 2021). Here are some possible ways in which the teachings of the Aad Guru Granth Sahib may be relevant to the scientific era of AI:

Oneness of creation: The Aad Guru Granth Sahib emphasizes the oneness of creation and the interconnectedness of all things (Singh, 2009). This perspective could help shape the development and use of AI to align more with the values of sustainability, compassion, and respect for all forms of life.

Knowledge and wisdom: The Aad Guru Granth Sahib highlights the importance of seeking knowledge and wisdom, and AI can be a powerful tool for acquiring knowledge and analyzing data. The Sikh teachings (Singh, 2021) can provide a framework for using AI in a

way that is mindful of the ethical implications and the potential impact on human well-being.

Service to others: The Sikh teachings proclaim the importance of serving others and working to ameliorate society (Singh, 2019). AI can be used to address critical societal issues such as poverty, hunger, and disease, and the Sikh teachings can provide a framework for using AI in service to others.

Truth and authenticity: The Aad Guru Granth Sahib declares the importance of truth and authenticity (Singh, 2023), and AI has the potential to be used in a way that is transparent and trustworthy. Therefore, the Sikh teachings can provide a framework for developing AI systems that are honest, accurate, and in line with ethical principles.

Equality and justice: The Sikh tradition strongly emphasizes social justice and equality for all (Singh, 2018). AI can be used to identify and address inequalities and biases in society, but it can also perpetuate and exacerbate these issues if not developed and used ethically. The Sikh teachings can provide a framework for developing and using AI to promote social justice and equality.

Humility and gratitude: The Sikh teachings emphasize the importance of humility and gratitude (Singh, 2019), which can help individuals approach AI use and development with a feeling of responsibility and respect for all forms of life. In addition, humility can help prevent individuals from becoming overly reliant on AI and viewing it as a substitute for human connection and compassion.

Non-attachment: The Sikh tradition encourages individuals to practice non-attachment, which can help cultivate a sense of detachment from AI development and use outcomes. In addition, it can help individuals approach AI more objectively and consciously and consider the potential ethical implications and impact on society and the environment.

Emphasis on action: Aad Guru Granth Sahib emphasizes the importance of action and service to others (Singh, 2021; Singh, 2019) rather than passive contemplation. This perspective can help individuals use AI in a way that is focused on creating positive change and addressing critical societal issues rather than simply analyzing data and information.

Interfaith dialogue: The Sikh tradition encourages interfaith dialogue and collaboration (Singh, 2020), which can be valuable in navigating AI's complex ethical and societal implications. Engaging in dialogue with individuals from different faith traditions and perspectives can help to identify shared values and concerns and to develop a more nuanced and holistic approach to AI development and use.

Importance of meditation: The Sikh tradition strongly emphasizes meditation and introspection (Singh, 2021), which can be beneficial in navigating the complex ethical and societal implications of AI. The practice of meditation can help individuals to develop a more mindful approach to using and developing AI and to consider the impact of AI on society and the environment.

Thus, the teachings of the Guru Granth Sahib provide a valuable framework for navigating the era of AI in a way that is ethical, compassionate, and mindful of the interconnectedness of all things. By incorporating these teachings into the development and use of AI, individuals and communities can work towards a more just, sustainable, and compassionate future for all.

AI'S RELEVANCE TO SIKHISM

AI can potentially support Sikhs in practicing their faith in various ways. Here are a few examples:

Access to Gurbani and Sikh resources: AI-powered platforms and applications can provide convenient access to Gurbani (Sikh scriptures), kirtan (devotional music), and other Sikh resources. Virtual assistants or chatbots can assist with answering questions about Sikh beliefs, rituals, or historical events. These technologies can enhance accessibility to Sikh teachings, particularly for those who may not have immediate access to physical Sikh institutions or resources.

Language translation and interpretation: AI-powered translation tools can help overcome language barriers for Sikhs who may not be fluent in Gurmukhi or Punjabi, the primary languages of Sikh scriptures. For example, AI algorithms can provide real-time translations of Gurbani or sermons, enabling a wider range of people to engage with Sikh teachings and participate in religious ceremonies.

Community networking and engagement: AI-powered platforms and social media communities can facilitate connections among Sikhs worldwide. These platforms can help organize Sikh events, share information, foster discussions on Sikh topics, and promote community engagement. In addition, AI algorithms can suggest relevant Sikh groups, events, or resources based on users' interests and preferences.

Personalized spiritual guidance: AI can assist individuals in their spiritual journeys by providing personalized guidance and recommendations. For example, AI-powered apps or platforms can suggest specific prayers, meditations, or readings based on an individual's preferences, spiritual goals, or current emotional state. This personalization can help Sikhs develop a more personalized and meaningful spiritual practice.

Historic and cultural preservation: AI technologies can aid in preserving and digitizing historical Sikh texts, manuscripts, and artifacts. AI algorithms can help analyze and categorize these resources, making them easily searchable and accessible for research, study, or cultural preservation efforts. It can contribute to the preservation and promotion of Sikh history and culture.

Virtual Sangat (spiritual community): AI-powered virtual environments, such as virtual reality (VR) or augmented reality (AR), can create immersive experiences that simulate the presence of a Sangat (spiritual community) or allow virtual participation in religious ceremonies and events. These virtual experiences can provide a sense of connection and involvement, especially for individuals who cannot attend in-person gatherings.

While AI can offer valuable support to Sikhs in their faith practices, it is essential to approach its implementation with discernment and ensure that it aligns with the core principles of Sikhism. Critical evaluation and ethical considerations should guide the use of AI to preserve the authenticity, inclusivity, and integrity of Sikh religious practices.

RISKS AND CHALLENGES

There are indeed risks and challenges associated with using AI for Sikh purposes. Here are some key considerations.

Accuracy and authenticity: AI systems heavily rely on data for training and decision-making. In the case of Sikhism, ensuring the accuracy and authenticity of the data used for AI applications is crucial. There is a risk of misinformation or misinterpretation of Sikh teachings if AI algorithms are not appropriately trained or if the data contains inaccuracies or biases.

Interpretation and contextual understanding: Sikhism is a rich and nuanced faith with a deep historical and cultural context. AI systems may struggle to comprehend and interpret the complexities of Sikh teachings, rituals, and cultural practices. As a result, misinterpretation or oversimplification of Sikh concepts may occur, leading to potential misunderstandings or misrepresentations.

Human connection and spirituality: Sikhism emphasizes the importance of human connection, community engagement, and individuals' spiritual experiences. AI, while offering convenience and accessibility, cannot fully replicate the depth of human interaction and the spiritual connection experienced within a physical Sangat (spiritual community). Therefore, more reliance on AI may unintentionally diminish the significance of personal interactions and the depth of spiritual experiences.

Bias and discrimination: AI systems can inherit biases in the data they are trained on. As a result, it can lead to biased or discriminatory outcomes, impacting the fair treatment and representation of individuals within the Sikh community. So, it is critical to ensure that AI systems used for Sikh purposes are designed and trained with a commitment to fairness, inclusivity, and equal representation.

Privacy and security: AI applications often involve collecting and analyzing personal data. Maintaining the confidentiality and security of an individual's personal information is essential, mainly when using AI platforms or apps for Sikh purposes. Care must be taken to protect sensitive data and ensure compliance with relevant privacy regulations.

Human dependency and loss of skills: The increasing reliance on AI systems may lead to a potential loss of specific skills or knowledge traditionally passed down through generations within the Sikh community. For example, reliance on AI for translation may reduce the motivation for individuals to learn and preserve the Gurmukhi script or Punjabi language. Therefore, balancing the leverage of AI's benefits and preserving traditional

knowledge and skills are vital.

OVERCOMING THE RISKS AND CHALLENGES

Addressing these risks and challenges associated with using AI for Sikh purposes requires a thoughtful and proactive approach on the part of Sikhs. They should actively engage in discussions, collaborate with AI ethics and technology experts, and contribute to developing responsible AI systems that align with Sikh principles and values. Additionally, continuous evaluation, transparency, and community input are vital to ensure that AI is used to uphold the integrity and authenticity of Sikh practices. Furthermore, they can take the following steps to prevent or overcome the risks and challenges associated with using AI for Sikh purposes:

Education and awareness: (i) Promote education and awareness within the Sikh community about AI technologies, their capabilities, and their limitations. (ii) Foster a deeper understanding of the potential risks and challenges of using AI for Sikh purposes. (iii) Encourage individuals to critically evaluate AI applications and their implications for Sikh teachings and practices.

Collaborate with AI experts: (i) Engage with AI ethics, technology, and data science experts to understand the ethical considerations and best practices in AI development and deployment. (ii) Collaborate with professionals who can guide ensuring fairness, transparency, and bias mitigation in AI systems used for Sikh purposes.

Quality control and data validation: (i) Implement quality control and data validation mechanisms in AI systems used for Sikh purposes. (ii) Regularly review and verify the accuracy, authenticity, and inclusivity of the data used in training AI algorithms. (iii) Ensure that diverse perspectives and inputs are considered to minimize biases and inaccuracies.

Ethical guidelines and standards: (i) Develop ethical guidelines and standards specific to using AI for Sikh purposes. These guidelines can address bias mitigation, privacy protection, transparency, and accountability. (ii) Engage with the Sikh community, religious leaders, and scholars to collaboratively establish these guidelines and ensure they align with Sikh values.

Active monitoring and evaluation: (i) Continuously monitor and evaluate the performance and impact of AI

systems used for Sikh purposes. (ii) Regularly assess their alignment with Sikh principles and values, addressing any issues or biases that may arise. (iii) Encourage feedback from the Sikh community to ensure ongoing improvement and refinement of AI applications.

Balancing AI with traditional practices: (i) Find a balance between leveraging the benefits of AI and preserving traditional Sikh practices, rituals, and skills. (ii) Encourage the learning of Gurmukhi script, Punjabi language, and other conventional practices alongside the use of AI tools and platforms. (iii) Emphasize the significance of human connection, personal experiences, and community engagement in Sikh religious practices.

Active community participation: (i) Foster active community participation and engagement in discussions surrounding AI and its impact on Sikhism. (ii) Involve Sikh scholars, religious leaders, and community members in shaping the development and deployment of AI systems for Sikh purposes. (iii) Encourage dialogue, feedback, and open communication to ensure the collective input of the Sikh community.

By taking these proactive measures, Sikhs can navigate the risks and challenges associated with AI while leveraging its potential benefits to enhance the practice of Sikhism in a manner that aligns with Sikh principles, ethics, and values. However, it requires a collaborative effort, ongoing evaluation, and a commitment to AI technology's responsible and ethical use.

CONCLUSIONS

The teachings of the Aad Guru Granth Sahib provide a valuable framework for navigating the era of artificial intelligence in a way that is ethical, compassionate, and mindful of the interconnectedness of all things. By incorporating these teachings into the development and use of AI, individuals and communities can work towards a more just, sustainable, and compassionate future for all. The mutual relevance of Sikhism and AI will likely be complex and multifaceted. It will depend on how AI is developed, implemented, and used and the attitudes and beliefs of individual Sikhs and the Sikh community. The advent of AI has the potential to impact Sikhism in various ways, both positively and negatively. Therefore, it is essential for the Sikh

community to engage in dialogue and reflection on these issues and to approach these technologies with caution and consideration for their potential impacts on the tradition and its followers.

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