



Letter to Editor

The importance of cultural diversity in Artificial Intelligence systems

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Abstract

With the AI revolution today, alongside the developments we see in many fields, it is also observed that the number of journals in the academic field has begun to increase. The success and expansion of this newly established journal, as it moves forward with a different perspective, are very important in terms of both its success and the broadening of its scope. This letter to the editor has been written with this in mind, particularly considering the differences and manifestations of AI in fundamental areas such as social sciences and cultural communities, in terms of the formation of publication policies

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Dear Editor,

I have recently learned that the first issue of the Journal of AI, Humanities and New Ethics (JAIHNE) will be published soon. With the aim of contributing to the academic and scientific discussions in your journal, which aims to be one of the most comprehensive platforms for scientific discussions in the field of artificial intelligence, humanity, and new ethical approaches, I would like to share my views on the importance of cultural diversity in artificial intelligence systems.

The Relationship Between Artificial Intelligence and Cultural Diversity

Today, artificial intelligence systems are rapidly globalizing and being used in different cultural contexts. However, most of these systems are built on certain cultural assumptions and are claimed to be based on universally accepted ethical principles. This approach carries the risk of ignoring the role of cultural diversity in ethical evaluations.

Ethical concepts and values can show significant differences from culture to culture. For example, while the principle of "autonomy" expresses the freedom of individual decision-making in Western societies, it can carry a meaning that prioritizes group harmony and community interests in collectivist societies. Similarly, the concept of "justice" can be interpreted differently in different cultures in terms of the importance given to equality versus fairness. This situation makes questionable the assumption that the ethical frameworks of artificial intelligence systems can be culture-independent and universal.

The evaluation of artificial intelligence systems in terms of cultural diversity can be addressed in two fundamental dimensions: First, examining the cultural values and assumptions that dominate the design and development of systems; second, analyzing the interactions and results that emerge when these systems are used in different cultural contexts.

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These two dimensions are critical in determining whether artificial intelligence systems are truly culturally sensitive and inclusive.

The Impact of Culture on Ethical Evaluations

Culture deeply affects how people perceive, evaluate, and interact with the world. Anthropological and cross-cultural psychology studies reveal that moral and ethical judgments can vary significantly according to cultural context. For example, cultural dimensions such as individualism-collectivism, power distance, uncertainty avoidance, and long-term orientation can lead to significant differences in ethical evaluations.

These cultural differences also become apparent in the ethical dilemmas faced by artificial intelligence systems. For example, in "trolley problem" scenarios faced by autonomous vehicles, it has been observed that the preferences of people with different cultural backgrounds systematically differ. In some cultures, the tendency to protect the elderly is stronger, while in others, priority is given to children. Such cultural differences raise the question of how to address them in the ethical decision-making processes of artificial intelligence systems.

The Necessity of Cultural Awareness in AI Development

Adopting an inclusive approach that considers cultural context when developing ethical standards for artificial intelligence is vitally important. This approach demands balancing universally-accepted principles with sensitivity to local values and hearing diverse cultural viewpoints in decision-making. Without cultural awareness, AI risks inadequately embodying societies' moral systems, possibly enabling technological imperialism. This danger intensifies as AI originates largely from Western perspectives.

Technological imperialism exports not just technologies but accompanying worldviews and social norms, potentially weakening locales' original ethics while homogenizing globally. Building AI attentive to cultural diversity can mitigate this by respecting differences yet learning from each culture's wisdom. Ubuntu's "I am because we are" perspective, for instance, inspires when assessing AI's societal consequences. Confucianism's focus on social cohesion and mutual duty also offers insightful consideration. Varied strategies can foster AI's cultural sensitivity. Including multicultural specialists ensures considering diverse viewpoints. Consulting local communities on their values aids incorporating cultural context appropriately.

Cross-cultural Ethical Frameworks

Frameworks that bring together ethical principles from different cultural traditions and establish a meaningful dialogue between them can surely be developed, though creating such frameworks presents many challenges. These frameworks aim to enable people to meet on common ground while preventing any single cultural tradition from dominating the others. Western ethics' focus on autonomy, non-maleficence, beneficence, and justice, for instance, could be thoughtfully integrated with Eastern traditions' emphasis on social harmony, interconnectivity, and accountability.

Inclusive Design and Development

Stakeholders from diverse cultural backgrounds ought to have meaningful input in designing and building AI systems from the very start. Only by including diverse voices can systems be shaped to respectfully fit specific community contexts and avoid potential harms.

Cultural Impact Assessments

Rigorous methodologies for evaluating how AI may impact various cultures could be established. Assessing how systems might adapt to differing values and norms, along with any unintended consequences, would help ensure cultural sensitivity.

Adaptive Cultural Mechanisms

If designed well, AI could self-modify depending on users' cultural perspectives and priorities. Dynamic adaptation shows respect for humanity's rich diversity and helps systems serve people more usefully worldwide.

Recommendations and Research Directions

The importance of respecting cultural diversity in AI merits deep discussion in academic journals. I suggest exploring: how to design AI reflecting varied ethical viewpoints; strategies for inclusive, community-driven development; and methods for ongoing impact assessment and adaptation.

Comparative Cultural AI Ethics

Comparative examinations exploring how ethical standards are understood cross-culturally are importantly significant. These studies may methodically inspect how selected ethical notions and principles are perceived and employed across cultures. For example, how ideas regularly prioritized in machine learning ethics like privacy, equity, autonomy, and transparency correlate across diverse cultural traditions can be investigated.

For such comparative studies, both qualitative (profound interviews, focus groups) and quantitative (surveys, experiments) research techniques may be utilized. Additionally, cross-cultural studies inspecting attitudes and expectations towards artificial intelligence systems in varying cultural settings can furnish valuable insights.

Culturally Considerate AI Design Methodologies

The progression of practical methodologies to incorporate different cultural values and viewpoints in the architecture of AI systems is critically essential. These methodologies can address how cultural values can be integrated into system architecture, how cultural biases can be detected and minimized, and how cultural diversity can be assessed as a source of richness in the design process.

Culturally considerate design methodologies can be nourished from diverse disciplines (anthropology, sociology, psychology, computer sciences) and can be incorporated with approaches such as participatory design, user-centered design, and inclusive design. The progression and testing of these methodologies will be an important step in boosting the cultural sensitivity of artificial intelligence systems.

Local Ethical Traditions and AI

Research on how varying philosophical and religious traditions such as Confucianism, Buddhism, Islam, Christianity, and local belief systems can contribute to AI ethics is of great value. These traditions can offer singular viewpoints, concepts, and values that can enrich the ethical frameworks of artificial intelligence systems.

The concepts of connectedness and interdependence espoused by Buddhist philosophy offer insightful perspective when assessing artificial intelligence systems' social and environmental consequences. Similarly, Islam's principle of *maslaha* - prioritizing public welfare - merits reflection when evaluating AI systems' societal utility. Cross-cultural analyses could broaden AI ethics' cultural underpinnings while facilitating inclusive framework development. For instance, considering diverse traditions' emphases on compassion and common good may prompt evaluating models' impacts on vulnerable populations earlier. Conversely, examining how certain applications could empower marginalized communities may stimulate new, positive applications. Overall, culturally informed and interdisciplinary investigations may nurture more equitable and thoughtful progress.

Cross-cultural Case Studies

Comparative analyses of AI systems applied in dissimilar cultural backdrops and case reports investigating the relationship between their efficacy and acceptance can furnish precious insights in understanding the practical impacts of cultural factors. These case reports can record what sort of difficulties artificial intelligence systems face in different cultural contexts, how they are adapted, and what kind of unexpected consequences they produce.

For example, case reports examining the performance and approval of artificial intelligence systems used in areas such as health, education, finance, and law in diverse cultural backdrops can reveal the practical importance of cultural factors. These studies can help extract valuable lessons for the design and execution of future systems by documenting both successful applications and challenges encountered. Meanwhile, investigations analyzing how cultural diversity can be taken into account when formulating artificial intelligence policies and regulations are also of great significance. This research can address how national and international artificial intelligence policies can be designed in a manner that is

sensitive to cultural diversity, how the values and top priorities of different cultures can be incorporated into these policies, and what kind of consequences policy executions can produce in different cultural contexts.

Such research can contribute to rendering artificial intelligence policies and regulations more culturally sensitive and inclusive, and thereby support the development and use of artificial intelligence systems in a more equitable and fair way on a global scale.

Example Research Approach

In this investigation, I plan to assess artificial intelligence platforms regarding cultural sensitivity in Turkey and diverse cultural settings. Through interviews with artificial intelligence principles specialists from five distinct cultural regions (East Asia, South Asia, Western Europe, North America, and the Middle East), I will carefully analyze how equivalent ethical standards can be interpreted differently relating to cultural context.

This evaluation will follow a three-stage methodology:

Cross-Cultural Ethical Perception Research

In the initial stage, I will lead semi-structured interviews with artificial intelligence ethics authorities from varying cultural regions to inspect how fundamental artificial intelligence ethical principles (autonomy, justice, transparency, privacy, non-maleficence, etc.) are comprehended and construed. These meetings aim to expose the impact of sociocultural factors on ethical viewpoints. Additionally, I will assess published policy documents, manuals, and academic studies on artificial intelligence ethics in diverse cultural contexts to inspect how cultural divergences are mirrored in written sources. This examination will help bring to light systematic contrasts and similarities in the methodologies of differing cultural traditions to artificial intelligence ethics.

Cultural Sensitivity Case Study in the Health Field

I want to assess the effects of neglecting cultural elements on system effectiveness by analyzing artificial intelligence platforms employed particularly in the health field. Since the health field is an area where cultural values and standards are particularly significant, this case study offers an ideal context to illustrate the practical importance of cultural sensitivity. In this case study, I will examine health recommendation systems used in different cultural contexts to investigate how the cultural dimensions of the patient-physician relationship, the importance of family participation, and differences in understanding of privacy affect the design and effectiveness of AI recommendation systems. I aim to analyze how the cultural norms surrounding illness, treatment decisions and consent in Turkey, Japan, and Brazil respectively shape these systems. A deeper exploration into the specific cultural factors at play could illuminate avenues for more inclusive and impactful design. Developing guidelines attentive to diversity will be key. By synthesizing perspectives from each location, I intend to craft a set of principles for crafting artificial intelligence with cultural sensitivity in mind. These tenets will offer tangible suggestions on localizing systems to suit varied contexts. They will address detecting and offsetting implicit biases as well as integrating community values into evaluations and product iterations. With care and consideration, such a framework could help developers and leaders foster trust and buy-in across borders.

The importance of cultural competence extends beyond academia. Artificial intelligence that respects difference has practical potential to better serve users on their own terms. Systems engineered with an awareness of societal nuances may prove more effective, equitable and welcome globally. With diligence to diverse viewpoints, unintended outcomes could also be reduced. In short, sensitivity strengthens applicability and impact in a multicultural world.

Cultural mindfulness proves beneficial for healthcare advising artificial intelligence. By studying how cultures understand health, patient-doctor bonds and healings, recommendations adapt to each group. Differing perspectives get respected. Learning too is improved by sensitive machines. They see how motivations and studying methods change between ethnicities. Valuable information comes from acknowledging diversities. If ignored, culture can lead to mistakes. Results miss the mark or cause confusion for some. But awareness fosters fairness. Anticipating issues means reducing unacceptable outcomes. Together societies better share advances as technologies gain intercultural acumen.

Conclusion

Cultural diversity plays a key role in shaping ethical AI and making technology more inclusive for all. Considering different perspectives ensures artificial intelligence respects local values and customs. This helps technology serve diverse groups while avoiding cultural imperialism. Diversity offers unique insights that can deepen ethical frameworks. Local traditions provide novel concepts and viewpoints that enrich design. Incorporating varied lenses leads to systems respecting humanity in all its richness.

The journal aims to explore diversity's role through research and discussion. Advancing understanding here critically develops the field. Contributing academically to work increasing awareness of issues seems a worthy goal. Dedicated coverage could spotlight crucial questions and spur deeper inquiry. As a forum bringing together global thinkers, the publication is well-placed to evaluate diversity's impact. Supporting investigation here allows assessing its importance for ethics. The journal can significantly advance comprehension through hosted debate.

I hope future issues will prioritize this vital topic. Please contact me regarding providing information to assist coverage of cultural diversity in AI ethics.

Sincerely,

Specialist Erdem Özkan

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