

Engineering approach of Indian Knowledge Systems with AI: A Cultured Innovation

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ABSTRACT

The human tendency to innovate Science and Technology has constantly geared towards global properly-being. The duty of advancing a kingdom lies in huge element on the shoulders of its kids, who're informed in contemporary technological knowledge and rising technologies to fulfill future disturbing situations. However, on the equal time as progressing toward technological development, it's miles in addition critical to preserve India's wealthy information, know-how, and philosophical foundations. The imaginative and prescient of a "New Bharat" shows this harmonious integration. The Indian Knowledge System (IKS) has been integrated into better training curricula to foster cultural pride and promote sustainable, ethical, and scientific perception rooted in Indian traditions. Simultaneously, Artificial Intelligence (AI) has emerged as a transformative era influencing nearly every sphere of lifestyles. Integrating contemporary AI algorithms with ancient requirements of holistic wondering and consciousness-based totally completely philosophies can result in the development of possible, moral, and human-centric technology. This synergy can assist address AI-associated issues which includes bias, loss of obligation, and environmental impact, while utilizing IKS to regions like herbal language processing, understanding maintenance, and sustainable innovation. The gift art work explores how IKS thoughts can guide AI programs in green sustainability, training, healthcare, agriculture, economic protection, and governance to construct moral, socially responsible, and clever structures. Collaboration among IKS students and STEM researchers is critical to growth innovative programs that keep national roots at the equal time as embracing technological development.

Keywords: *Indian Knowledge Systems, Artificial Intelligence, STEM, ancient requirements, better education curriculum*

Among the historical civilizations of the arena, the Indian subcontinent has extended been identified as a center of knowledge, philosophy, and engineering excellence. Indian civilization suggests a Dharmik manner of life that emphasizes the harmonious improvement of all dimensions of human lifestyles-synchronizing the character with society, nature, and the universe. Recent global developments endorse that winning technological and economic models are often unsustainable and in war with nature. Rising inequalities and ecological degradation recommend the urgent need for alternative paradigms of improvement. In this context, the Indian worldview-grounded in sustainability and traditional well-being-gives a valuable framework.

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Recognizing this, the Ministry of Education installation the IKS Division with the vision of revitalizing and mainstreaming Indian Knowledge Systems. The intention is to cultivate students who can display the “Indian way” of information and exercise to the location. Aspiring to turn out to be a international information chief (“Viśvaguru”), India need to reclaim and validate its entire historical beyond within the direction of disciplines.

The IKS Division promotes interdisciplinary and transdisciplinary studies, curriculum integration in schools and better education establishments, and college development. IKS encompasses facts transmission (gyan), knowledge traditions (gyan parampara), and realistic applications rooted in experience, assertion, experimentation, and systematic evaluation. These traditions span schooling, arts, governance, law, healthcare, production, and trade, preserved thru textual, oral, and creative traditions.

On the alternative hand, Artificial Intelligence (AI) represents a transformative technological improvement able to acting complex responsibilities that normally require human intelligence together with gaining knowledge of reasoning, trouble-fixing, and sample popularity. AI enhances universal performance at some point of sectors which encompass healthcare, education, and transportation by way of way of automating responsibilities, assisting selection-making, and handing over custom designed reviews.

The National Education Policy (NEP 2020) promotes the mixture of AI with IKS to construct a technologically advanced but culturally rooted education device. This strategic approach goals to digitize, analyse, and disseminate traditional understanding using current-day generation. It moreover seeks to move beyond merely technical AI fashions toward structures that consist of context, interest, sustainability, and moral values.

This paper explores the demanding conditions and opportunities in integrating IKS with AI and proposes a framework for leveraging the strengths of every structures in education, healthcare, governance, and sustainable development.

Ethical Challenges in AI

In contemporary years, several ethical issues associated with AI have emerged:

- **Algorithmic Bias:** AI systems also can furthermore replicate and enlarge present day social prejudices determined in training facts.
- **Lack of Accountability:** When AI systems make incorrect or risky alternatives, obligation is frequently doubtful.
- **Privacy Violations:** AI-driven surveillance technologies can also threaten individual freedom and confidentiality.
- **Autonomous Weapons:** The development of AI-powered weapon structures increases intense ethical issues.

These traumatic conditions call for moral frameworks grounded in fairness, compassion, and justice-values deeply embedded in Indian philosophical traditions.

INTENTIONS OF GRINDING IKS WITH AI

Integrating IKS with AI reason to research the virtuous necessities interior IKS which is probably suitable for the improvement of AI. It allows to find out legitimate growth of AI. Another reason is to discover how the Indian thoughts which consist of Dharma, Ahinsa, and Seva make sure to manual AI improvement in a accountable and human-centric approach.

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Expecting that with the beneficial resource of making use of these perceptions a pioneering and societal properly being will begin paintings on earth. Moreover, to indicate an schedule for integrating Indian traditional recognition into AI design and execution, make certain that AI technology serves civilization's wider ethical dreams.

Ways of Integrating IKS with AI (As Envisioned in NEP 2020)

- **Digitization of Ancient Knowledge:** AI equipment can hold, translate, and examine historic manuscripts and texts.
- **Immersive Learning (AR/VR):** AI combined with Augmented and Virtual Reality can construct interactive memories for studying Vastu Shastra, Ayurveda, and Vedic Mathematics.
- **AI-Powered Research on Traditional Practices:** AI can validate and observe traditional statistics in Ayurveda, Yoga, and sustainable agricultural practices.
- **Interdisciplinary Curriculum:** Integration of IKS with STEM and arts fosters crucial questioning and holistic schooling.
- **Personalized Educational Tools:** AI-based totally absolutely structures can tailor getting to know evaluations while maintaining cultural context and human values.

REAL-WORLD APPLICATIONS OF AI GUIDED WITH THE AID OF IKS

Healthcare: AI systems selling equitable and holistic patient care aligned with nicely-being.

Governance: Policy-making tool stimulated with the useful resource of Dharma and Seva to ensure justice and traditional universal overall performance.

Education Technology: AI-pushed custom designed education structures that uphold human dignity and inclusivity.

Algorithmic Policy Design: Embedding Ahimsa and Seva as guiding thoughts in choice-making frameworks.

Evaluation Models: Applying the concept of Karma—assessing no longer simplest outcomes however furthermore broader societal results.

Social Uplift: Deploying AI to empower marginalized groups and sell inclusive growth.

BOUNDARIES AND CHALLENGES

However IKS integration with AI ensuing a significance stage despite the fact that there are few obstacles and annoying situations live unsolved. Concepts like Dharma and Karma can be hard to encode into tool language without simplification says that it's miles tough to rent AI for cultural translation. Another constraint is information meaning IKS-primarily based completely without a doubt ethical techniques entail curated records, replicating for Indian philosophical values. Also, Standardization Issues are critical notes as worldwide noted AI fashions frequently disregard cultural ethics and posing integration barriers. Despite those problems, the capability benefits of merging IKS with AI ethics are massive and transformative.

We recommend to encourage interdisciplinary research combining AI, ethics, and Indian philosophy. Another point to note is to develop AI curriculum in India that integrate IKS standards. We can include philosophers and religious students in AI coverage and can promote international recognition of IKS as a contributor to AI ethics.

CONCLUSION

India has an exclusive opportunity for culturally aligned technological innovation by the integration of Indian Knowledge Systems with Artificial Intelligence. India can play a vital role in the development of ethical, sustainable, and human-centric using AI systems by merging historical information with modern computational system. Deliberate studies, curriculum development and coverage resource can characterise India as a topmost worldwide master of AI innovation on the same time as preserving its civilizational origins.

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Conflict of Interest

The author declared no conflict of interest.

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