

Technology with a Human Face: Reimagining Progress through Universal Ethical Principles

Tarakanta Sahoo¹, Priyanka Priyadarshini²

Abstract

Technological progression is mostly considered as a tool of human evolution. In this digital era, however, quick novelty has revealed complex ethical gaps in the modelling and implement of technology. Technologies namely artificial intelligence, algorithmic systems, and digital surveillance progressively effect social life, economic activity, and political decision-making. While these technologies provide proficiency and progress, they also advance moral concerns connected to discretion, disparity, liability, and human dignity. The technique seriously observes the leading technology-run knowledge of development and queries its moral suitability. The work propounds a logical and normative method to reveal the impression of expertise with a human face. This perception underscores the requirement to normalise scientific advancement in global moral values. Combining human rights dissertation along with universal moral outlines, this very work claims that knowledge itself is not worthy, but is guided by communal conventions, power constructions, and human selections. The moment moral reflection is unnoticed, technology can strengthen inequality and fade distinct independence. In order to converge on ethics namely human pride, righteousness, transparency, independence, and sustainability, the work re-considered advancement as a morally directed course. It settles that decent values should be united with technological novelty. This combination is needed to certify that technology assists civilisation and cares comprehensive and justifiable growth.

Keywords: Ethics; Technology; Progress; Humanity; Justice; Sustainability

INTRODUCTION

Down the time line, technological advancement has been linked with human growth along with communal advancement. Commencing from past tool-making and the agricultural revolution to the Industrial Revolution, technology has altered financial decorum and communal relations[1-10]. The Revolution pointed a pivotal shift via automating manufacturing and hurrying financial progress, but it also produced ethical difficulties like labour mistreatment, urban poverty, and ambient deprivation (Hobsbawm, 1962[11]). These past practices highlight that technological advancement has constantly supported moral values together with material advantages.[12-13] The twentieth century further extended technological power via electrification, mass production, and technical novelty. While these growths enhanced existing values, they also familiarised unique ethical ventures. The development of nuclear weapons at the instant of World War II exposed the damaging capability of scientific strength and encouraged universal reflection on human sustainable approach in the face of novelty (Jonas, 1984[14]). This time span emphasised the requirement for ethical constraint and liability in the pursuit of growth.

*Author for Correspondence

Tarakanta Sahoo
E-mail: tarakant.sahoo@gmail.com

¹Professor and Head, Gandhi Institute of Excellent Technocrats, Ghangapatna, Bhubaneswar, Odisha, India
²Assistant Professor, Gandhi Institute of Excellent Technocrats, Ghangapatna, Bhubaneswar, Odisha, India

Received Date: January 25, 2026
Accepted Date: January 29, 2026
Published Date: February 05, 2026

Citation: Tarakanta Sahoo, Priyanka Priyadarshini. Technology with a Human Face: Reimagining Progress

In this current advanced time, expertise namely AI (artificial intelligence), algorithmic schemes, and data-driven work domain exert profound

impact over communal, financial, and dogmatic life. [15-25] Unlike previous knowledges, these arrangements progressively facilitate human experience and decision-making. Researchers argue that knowledge is not value-neutral but attached with dogmatic and moral conventions that guide communal results (Winner, 1980[26]; Floridi, 2013[9]). Algorithmic arrangements implemented in job given work, controlling, and economic concern services often repeat communal differences because of unfair data and impervious methods (O’Neil, 2016[18]). This archaic path exhibits a determined break amid scientific fitness as well as decent replication. The idea arises as a reply to this disparity. The work observes how global ethical rules namely human pride, fairness, transparency, and accountability can channel technological advancements. It claims that re-imagining growth via moral contexts is needed towards confirming that technological novelty pays to comprehensive, kind, and maintainable communal progress (UNESCO, 2021[22]).

THEORETICAL FRAMEWORK

The idea of “technology with a human face” arises from serious grant that requests knowledge-driven systems for growth. Leading novelty arrangements repeatedly highlight competence, scalability, and financial progress, while demoting moral likeness and communal results. These methods venture giving human beings as inactive operators rather than dynamic ethical mediators. A human-centred outline encounters this inequality via stating that scientific arrangements, which must serve human standards rather than redefine them. Core to this arrangement is the knowledge which is socially optimistic. Science and technology lessons concerned learners opine that technological advancement is guided via academic involvements, cultural guidelines, as well as dogmatic enable arrangements (Feenberg, 2017[8]). Model selections are never unbiased; they encrypt conventions around users, primacies, and tolerable risks. When ethical contemplations are omitted from these initial phases, injurious results mostly become attached and hard to exact.

Starting from an ethical point of concern, a human-faced knowledge orders human pride along with moral intervention. Kantian ethical standpoints underscore that humans must never be dealt only as means to a stop, a rule progressively defied by data-driven arrangements that make trade off private information (Bostrom & Yudkowsky, 2014[3]). In algorithmic situations, results influencing individuals are often computerised, diminishing chances against description, contestation, and permission. This weakens belief and liability in technological control. The arrangement also pulled on the skills method, which assesses growth depending on persons’ actual liberties to live a worthy life rather than on scientific result alone (Sen, 1999[21]). Knowledges associated with this method enlarge human abilities, eliminate disparity, and advance communal contribution. On the other hand, knowledges that limit access, strengthen unfairness, or focus control oppose the exact concept of ethical growth. International plan dissertation further resolves this perception. The European Commission’s ethics rules underscore human error, impartiality, and liability as vital workings of reliable knowledge (European Commission, 2019[7]). These ideologies strengthen the dispute that ethical reflections must be attached all over the technological lifespan. Thus, technology include a human face expresses a normative alteration. It re-arranges growth as an honestly directed course which combines ethical intellectual into creation, control, and communal influence.

UNIVERSAL ETHICAL PRINCIPLES GUIDING TECHNOLOGICAL PROGRESS

Global ethical rules exert a pivotal part in controlling technological novelty in a universal and linked world. As technologies progressively exceed nation-wide margins and artistic settings, ethical assessment cannot trust exclusively on restricted models or market-driven measures. Worldwide values offer a common moral terminology which allows civilisations to evaluate whether technological growth sincerely tributes to human prosperous or only progress technical competence. Human pride considers as the initial ethical rule in this setting. Based on international human rights address, self-respect upholds the inherent value of each individuals regardless of communal, financial, or technological class (United Nations, 1948[23]). In the recent digital situation, this rule is regularly dared by technologies that shape, forecast, and classify people short of their expertise or agreement. Computerised decision-making units in regions like welfare distribution, project monitoring, along

with credit counting eliminate persons to intellectual data illustrations, thereby decline personal control and moral unit (Eubanks, 2018[6]). Ethical scientific growth needs protection self-respect via safeguarding significant human participation, well-versed permission, and the true to challenge automated choices.

The idea of justice further develops the ethical assessment of knowledge via resolving matters of equality. Rawls' [20](1971) concept of justice underscores that communal establishments must be settled to assist the minimum privileged individuals of community. Practical with skill, this viewpoint seeks study of how aids and loads are dispersed. Digital knowledges mostly worsen operational disparities via benefitting those to align with data, skills, and set-up while demoting rests. Algorithmic bias, digital gaps, and incapable admission to scientific possessions expose that novelty can extend unfairness if ethical reflections are overlooked (Noble, 2018[17]). Clarity and answerability are required ethical demands in composite technological set-ups. As algorithms and AI systems move progressively impervious, pretentious persons mostly deprive of knowledge of the way choices are taken.

Opacity does not arise solely from technical complexity; it is also shaped by institutional secrecy and proprietary interests. Therefore, ethical supremacy requires clearly defined responsibilities, transparent accountability mechanisms, and effective frameworks for dispute resolution. Deprived of clarity, believe in technological organisations wear down, and autonomous mistake becomes unproductive. Accountability and sustainability spread ethical apprehension past instant results to long-term communal values. The concept of a risk-oriented society emphasizes that contemporary technologies generate organized forms of risk that are not always immediately visible or perceptible. Ethical obligation includes antedating probable difficulties, accepting protective methods, and upholding influences on forthcoming groups. This is mainly appropriate in the growth of AI, ambient technologies, and large-scale digital set-ups. Jointly, these global ethical conventions redefine technological advancement as a normative course. Development is not assessed exclusively through novelty or proficiency but by the degree to which knowledge progress pride, law, liability, and elongated human well-being.

CASE STUDIES: ETHICAL CHALLENGES IN CONTEMPORARY TECHNOLOGICAL PRACTICES

Real time examples support solid understandings into how ethical rules are either defended or sullied in practical technological submissions. The underneath two cases—algorithmic signing kinds and large-scale digital monitoring—validate how technological innovation, when guided primarily by efficiency and control, can undermine universal ethical standards. These executes express the imperative requirement to combine ethical likeness into technological model, positioning, and governance. Collectively, these case lessons validate that scientific advance cannot be measured exclusively via novelty or execution standards. The issue together exhibits the way knowledges, the moment separated from ethical values, can institutionalise judgment and wear away human supremacy. They emphasise the need of implanting worldwide ethical ideologies into scientific arrangements from strategy to disposition. Ethical growth, therefore, needs unceasing reflection, comprising supremacy, and a promise to defend human principles in a progressively computerised environment.

Algorithmic Bias in Automated Hiring Systems

The execution of AI in employment courses has been broadly acceptable on the basis of competence, cost discount, and objectivity. Automatic acquisition measures are modelled to estimate recommences, investigate video conferences, and forecast job routine considering machine learning models. Regardless of these privileges, experimental study expresses that these arrangements often repeat operational disparities attached with ancient data. An extensively referred concern is Amazon's AI-based employment arrangement, which was qualified on previous signing accounts from a male-conquered expertise labour force. The arrangement methodically disciplined reviews holding pointers linked with women, comprising academic institutes and qualified associations (Dastin, 2018[5]). This matter points a disaster to defend the ethical conventions of righteousness. Instead of encouraging like

chance, the arrangement strengthened present gender discrepancies in engagement. Algorithmic judgments can sometimes emerge indirectly through seemingly neutral variables that function as proxies for protected or sensitive attributes.

Lacking clear ethical defences, automatic arrangements can regularise unfair performs while confusing liability. Clarity and liability are further negotiated in algorithmic acquisition. Applicants characteristically obtain no clarification against refusal, nor do they have admission to mechanisms towards demand. Pasquale [15](2015) defines these arrangements as black boxes which collect control while restraining enquiry. The absence of clarity weakens routine justice as well as wear down belief in formal decision-making. Ethical signing performs, hence, need reasonable algorithms, consistent bias reviews, and expressive human mistake all over the employment course.

Digital Surveillance and the Erosion of Human Autonomy

Digital surveillance represents another critical ethical challenge in contemporary technological landscapes. Advances in data analytics, facial recognition, and networked sensors have enabled governments and corporations to monitor behaviour on an unprecedented scale. China's Social Credit System exemplifies this trend by aggregating data from financial transactions, online activities, and social interactions to evaluate citizens' trustworthiness. These scores influence access to transportation, employment, and public services (Creemers, [4]2018). From an ethical perspective, this system raises serious concerns regarding human dignity and autonomy. Continuous monitoring transforms individuals into objects of behavioural prediction and control. Zuboff (2023[27]) argues that such practices exemplify a new form of power that seeks to shape behaviour rather than merely observe it. When surveillance becomes normalised, individuals may alter their behaviour out of fear of punishment, undermining freedom of expression and moral agency. The ethical risks are compounded by the lack of transparency and consent. Citizens have limited knowledge of how data is collected, interpreted, or used, and few avenues for contestation. Ethical governance frameworks emphasise that technologies affecting fundamental rights must be subject to proportionality, accountability, and legal oversight (European Data Protection Board, 2020[6]). Without these safeguards, surveillance technologies risk legitimising coercion under the rhetoric of security and efficiency.

REIMAGINING PROGRESS THROUGH ETHICAL GOVERNANCE FRAMEWORKS

The ethical difficulties emphasised through algorithmic partiality and digital monitoring validate that technological growth alone does not promise communal well-being. Reimagining growth needs the combination of ethical supremacy contexts that upsurge novelty while protecting human standards. These bases go past sensitive directive and pursue to attach moral cognition, clarity, and responsibility all over the technological life span. An essential element of ethical supremacy is ethics by proposal. This plan underscores that ethical contemplations should be combined all through the model and fabrication phases, instead of being preserved as a postscript (Floridi et al., 2018[10]). For instance, machine learning organizations can be reviewed against bias, and decision-making courses can be finished understandable to impacted peoples. Conscience through strategy confirms that technologies encourage equality, non-insight, and communal enclosure from beginning.

Formal error and controlling tactics are also serious. Administrations and global figures exert a vital part in founding strategies, values, and compliance units against ethical expertise. The European Commission's "Ethics Guidelines for Trustworthy AI"[7] (2019) offers a basis underscoring human mistake, strength, liability, and secrecy. Likewise, UNESCO's Approval upon the Beliefs of Artificial Intelligence [12](2021) proposes supervision towards lining up scientific growth with human privileges, fairness, and bearable progress. These contexts demonstrate the way strategy interferences can operationalise global ethical rules in training. Business obligation and executive ethics counterpart controlling dealings. Technology firms must poise novelty with communal obligation, approving does namely comprehensive enterprise, non-stop inspecting, and clear reportage. Interdisciplinary

partnership between experts, ethicists, and officials reinforces ethical mindfulness and nurtures units that exhibit general standards (Mittelstadt, 2019[15]).

Ultimately, public meeting and teaching are vital towards setting ethical flexibility. Citizens, users, and investors must be well-versed and authorised to partake in scientific supremacy. Digital learning packages, ethical drill against engineers, and share design courses confirm that human viewpoints guide technological directions. Ethical domination contexts do not obstruct novelty. Instead, they reorient scientific growth against results that promote people self-respect, justice, and sustainability. Attaching ethics at all phases from modelling to disposition confirms that knowledge assists humanity instead of decline it.

ROLE OF EDUCATION, POLICY, AND GLOBAL COOPERATION

Confirming that skills assists people seeks more than ethical model and power contexts; it requires a general style relating teaching, strategy, and global teamwork. Deprived of these introductory components, ethical values may continue aspiring rather than unlawful. Edification nurtures an ethically mindful labour force and learnt citizenry; policy interprets ethical values into enforceable values; and global partnership confirms that ethical performs are clear across limits. Together, they generate a complete environment in which knowledge can grow sensibly, with regard to human pride, fairness, and sustainability.

Education for Ethical Technology

Ethical instruction exerts a key part in guiding accountable expertise and learnt citizens. Combining ethics into engineering, computer science, and data science programs prepares forthcoming innovators with the services to antedate communal results, recognise biases, and attach human standards into technological arrangements (Moor, 2005[16]). Exercise in extents namely algorithmic equality, secrecy, and human-centred model inspires ethical likeness together with technical expertise. Additionally, public digital learning packages authorise operators to comprehend how skills effect their lives, promote well-versed decision-making and civic involvement (van Wynsberghe & Robbins, 2019[24]). Edification, so, reinforces both upstream novelty ethics and downstream communal consciousness.

Policy and Regulatory Interventions

Policy interpositions confirm that ethical levels are steadily engaged and officially workable. Administrations can enforce controlling contexts which seek clarity, responsibility, and influence valuation in scientific growth. For example, data safety rules, namely the European Union's General Data Protection Regulation (GDPR), hold lawful responsibilities towards confidentiality, consensus, and answerable data management (Voigt & Von dem Bussche, 2017[25]). Likewise, strategies against ethical AI can order reviewing of algorithmic arrangements to avert unfairness and judgement. Rule assesses thus alter ethical values into illegal necessities, dropping the venture of impairment and nurturing community belief.

Global Cooperation

Scientific units progressively work across boundaries, forming trials that not a single country can resolve autonomously. Ethical hazards, comprising algorithmic unfairness, monitoring, and ecological influences, are sometimes intercontinental by attribute. Universal teamwork is required towards consistent ethical values, distributing finest performs, as well as stopping governing arbitrage (Jobin, Ienca, & Vayena, 2019[13]). International organisations, namely UNESCO and the OECD, offer stages against collective expansion of ethical procedures, confirming that knowledge line up with global human privileges and encourages communal well-being on a universal standard.

CONCLUSION

Technological advancement has the capacity to greatly improve human existence, yet olden times and current preparation express that modernisation itself does not promise communal well-being. Commencing from the Industrial Revolution to the proliferation of artificial intelligence and digital

monitoring, have altered the communal life style, sometimes refining standards of life but also creating moral hurdles namely inequality, discrimination, and damage of autonomy. These difficulties exhibit that technological advancement must be collaborated through moral replication and power. This work has claimed that the idea of “technology with a human face” suggests a worthy context towards convergence of novelty with human values. On combining global moral values namely human self-esteem, righteousness, clarity, liability, and obligation towards modelling, fabrication, and engagement, knowledge can be recognised as a pivot against comprehensive, reasonable, and workable growth. The real-world examples of algorithmic hiring systems along with large-scale monitoring demonstrate the practical results of moral negligence, expressing the way proficiency-propelled novelty can imitate bias and wear away power.

Decent ruling contexts, comprising morality-by-design, governing mistake, business accountability, and community assignation, support illegal means for attaching ethical contemplations into technological arrangements. Teaching guidelines, as well as universal collaboration further strengthen moral technological advancements via developing skilled, answerable innovators, executing enforceable levels, and synchronising with global ethical models. In a nutshell, expertise on its own cannot express growth. Exact growth is assessed not only through creation or proficiency but by the degree to which it promotes human self-respect, endorses law, and confirm power across communities. Attaching morality with each level of technological advancement is required to confirm that technological growth serves people rather than discouraging it. An upcoming in which knowledge actually has a human face is attainable only via reliable ethical likeness, strong governance, and shared accountability.

REFERENCES

1. Barocas S, Selbst AD. Big data's disparate impact. *Calif. L. Rev.*. 2016;104(3):671-732
2. Beck U. Risk society: Towards a new modernity. *sage*; 1992 Sep 3:pp 1-8
3. Bostrom N, Yudkowsky E. The ethics of artificial intelligence. In *Artificial intelligence safety and security* 2018 Jul 27 (pp. 57-69). Chapman and Hall/CRC. DOI:[10.1201/9781351251389-4](https://doi.org/10.1201/9781351251389-4)
4. Creemers R. China's Social Credit System: an evolving practice of control. Available at SSRN 3175792. 2018 May 9.
5. Dastin J. Amazon scraps secret AI recruiting tool that showed bias against women. In *Ethics of data and analytics* 2022 May 12 (pp. 296-299). Auerbach Publications.
6. Eubanks V. Automating Inequality: How High-Tech Tools Profile, Police, and Punish the Poor.
7. European Commission. Ethics guidelines for trustworthy AI. Brussels: European Commission; 2019.
8. Feenberg A. *Technosystem: The Social Life of Reason*. Harvard University Press; 2017.
9. Floridi L. *The ethics of information*. Oxford University Press (UK); 2013.
10. Floridi L, Cowls J, Beltrametti M, Chatila R, Chazerand P, Dignum V, Luetge C, Madelin R, Pagallo U, Rossi F, Schafer B. AI4People—An ethical framework for a good AI society: Opportunities, risks, principles, and recommendations. *Minds and machines*. 2018 Dec;28(4):689-707.
11. Hobsbawm EJ. *The age of revolution: 1789-1848*. Weidenfeld & Nicolson [Internet]. 1962
12. How JP. Ethically Aligned Design: A Vision for Prioritising Human Well-Being with Autonomous and Intelligent Systems—Version 2. *IEEE Control Systems Magazine*. 2017;38(3):1-292
13. Jobin A, Ienca M, Vayena E. The global landscape of AI ethics guidelines. *Nature machine intelligence*. 2019 Sep;1(9):389-99.
14. Jonas H. *The imperative of responsibility: In search of an ethics for the technological age*. University of Chicago press; 1984.
15. Mittelstadt B. Principles alone cannot guarantee ethical AI. *Nature machine intelligence*. 2019 Nov;1(11):501-507.
16. Moor JH. Why we need better ethics for emerging technologies. *Ethics and information technology*. 2005 Sep;7(3):111-119.
17. Noble SU. Algorithms of oppression: How search engines reinforce racism. In *Algorithms of oppression* 2018 Feb 20. New York university press.

18. O'neil C. Weapons of math destruction: How big data increases inequality and threatens democracy. *Crown*; 2017 Sep 5; 78(3):403 DOI:[10.5860/crl.78.3.403](https://doi.org/10.5860/crl.78.3.403)
19. Pasquale F. *The black box society: The secret algorithms that control money and information.* In *The black box society* 2015 Jan 5. Harvard University Press.
20. Rawls J. *A theory of justice.* Cambridge (MA): Harvard University Press; 1971.
21. Sen A. *Rationality and freedom.* Harvard University Press; 2002.
22. Ganbaatar U. Do Ethics in AI Still Matter? A Review of the 2021 UNESCO Recommendation on the Ethics of AI. *The Review of Faith & International Affairs.* 2025 Jul 3;23(3):26-33.
23. United Nations. *Universal Declaration of Human Rights.* Paris: United Nations; 1948.
24. Van Wynsberghe A, Robbins S. Ethicists in the loop: using ethics to guide autonomous systems design. *AI Soc.* 2019;34(1):1–14.
25. Voigt P, Von dem Bussche A. *The eu general data protection regulation (gdpr). A practical guide,* 1st ed., Cham: Springer International Publishing. 2017 Aug 10;10(3152676):10-5555.
26. Winner L. Do artefacts have politics? *Daedalus.* 1980;109(1):121–136.
27. Zuboff S. The age of surveillance capitalism: The fight for a human future at the new frontier of power. *Journal of Information Ethics.* 2024 Apr 1;33(1):84-5.