

“From Algorithms to Ethics: Assessing the Moral Impact of AI and Automation in Society”

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Abstract

In today’s world ethics is an important criterion to be considered to become successful. Corporate social responsibility is also a part of ethics which should be strictly followed in ever organization. AI ethics is a system of moral principles and techniques intended to inform the development and responsible use of artificial intelligence technology. As AI has become integral part to products and services, organizations are also starting to develop AI codes of ethics. Examples of AI ethics issues include data responsibility and privacy, fairness, explainability, robustness, transparency, environmental sustainability, inclusion, moral agency, value alignment, accountability, trust, and technology misuse. This paper aims to provide a comprehensive market view of AI ethics in the industry today. Should we trust automation? Can automation cause harm to individuals and to society? Can individuals apply automation to harm other individuals? The answers are yes; hence, ethical issues are deeply associated with automation. The purpose of this chapter is to provide some ethical background and guidance to automation professionals and students. Governmental action and economic factors are increasingly resulting in more global interactions and competition for jobs requiring lower-end skills as well as those that are higher-end endeavors such as research. Moreover, as the Internet continually eliminates geographic boundaries, the concept of doing business within a single country is giving way to companies and organizations focusing on serving and competing in international frameworks and a global marketplace. Coupled with the superfluous nature of an Internet-driven social culture, the globally-distributed digitalization of work, services and products, and the reorganization of work processes across many organizations have resulted in ethically challenging questions that are not just economically, or socially sensitive, but also highly culturally sensitive. Like the shifting of commodity manufacturing jobs in the late 1900s, standardization of information technology and engineering jobs have also accelerated the prospect of services and jobs more easily moved across the globe, thereby driving a need for innovation in design, and in the creation of higher-skill jobs. In this chapter, we review the fundamental concepts of ethics as it relates to automation, and then focus on the impacts of automation and their significance in both education and research.

Keywords; Artificial intelligence, Automation, Digitalization, Innovation, Standardization.

Definition

What is Ethics?

Ethics, or moral philosophy, is the study of what is morally right and wrong, and how to behave in a way that is good and fair. Ethics can also refer to a system of moral principles that guide a person's behavior and decision-making. Ethics can help people determine how to treat others with respect and fairness, and how to make choices that contribute to the common good. For example, ethics can guide people to tell the truth, keep their promises, and help those in needs.

What is Artificial Intelligence?

Artificial Intelligence (AI) refers to the development of computer systems of performing tasks that require human intelligence. AI aids in processing amounts of data identifying patterns and making decisions based on the collected information. This can be achieved through techniques like Machine Learning, Natural Language Processing, Computer Vision and Robotics. AI encompasses a range of abilities including learning, reasoning, perception, problem solving, and data analysis and language comprehension. The ultimate goal of AI is to create machines that can emulate capabilities and carry out diverse tasks, with enhanced efficiency and precision. The field of AI holds potential to revolutionize aspects of our daily lives.

What is AI ethics?

AI ethics is a system of moral principles and techniques intended to inform the development and responsible use of artificial intelligence technology. As AI has become integral to products and services, organizations are also starting to develop AI codes of ethics. An AI code of ethics is also called an AI value platform, is a policy statement that formally defines the role of artificial intelligence as it applies to the development and well-being of humans. The purpose of an AI code of ethics is to provide stakeholders with guidance when faced with an ethical decision regarding the use of artificial intelligence.

Isaac Asimov, a science fiction writer, foresaw the potential dangers of autonomous AI agents in 1942, long before the development of AI systems. He created the Three Laws of Robotics as a means of limiting those risks. In Asimov's code of ethics, the first law forbids robots from actively harming humans or allowing harm to come to humans by refusing to act. The second law orders robots to obey humans unless the orders aren't in accordance with the first law. The third law orders robots to protect themselves insofar as doing so is in accordance with the first two laws.

Today, the potential dangers of AI systems include AI replacing human jobs, AI hallucinations, deepfakes and AI bias. These issues could be responsible for human layoffs, misleading information, falsely mimicking others' images or voices, or prejudiced decisions that could negatively affect human lives. The rapid advancement of AI in the past 10 years has spurred groups of experts to develop safeguards for protecting against the risk of AI to humans. One such group is the nonprofit Future of Life Institute founded by Massachusetts Institute of Technology cosmologist Max Tegmark, Skype co-founder Jaan Tallinn and Google DeepMind research scientist Victoria Krakovna. The institute worked with AI researchers and developers, as well as scholars from many disciplines, to create the 23 guidelines now referred to as the Asilomar AI Principles.

Kelly Combs, director advisory of Emerging Technology Risk Services for KPMG US, said that, when developing an AI code of ethics, "it's imperative to include clear guidelines on how the technology will be deployed and continuously monitored." These policies should mandate measures that guard against unintended bias in machine learning (ML) algorithms, continuously detect drift in data and algorithms, and track both the provenance of data and the identity of those who train algorithms.

History of ethics

The history of ethics started in the ancient period with the development of ethical principles and theories in ancient Egypt, India, China, and Greece. This period saw the emergence of ethical teachings associated with Hinduism, Buddhism, Confucianism, Daoism, and contributions of philosophers like Socrates and Aristotle. During the medieval period, ethical thought was strongly influenced by religious teachings. In the modern period, this focus shifted to a more secular approach concerned with moral experience, reasons for acting, and the consequences of actions. An influential development in the 20th century was the emergence of metaethics.

A human rights approach to AI

These ten principles lay out a human-rights centered approach to the Ethics of AI.

1. Proportionality and Do No Harm

The use of AI systems must not go beyond what is necessary to achieve a legitimate aim. Risk assessment should be used to prevent harms which may result from such uses.

2. Safety and Security

Unwanted harms (safety risks) as well as vulnerabilities to attack (security risks) should be avoided and addressed by AI actors.

3. Right to Privacy and Data Protection

Privacy must be protected and promoted throughout the AI lifecycle. Adequate data protection frameworks should also be established.

4. Multi-stakeholder and Adaptive Governance & Collaboration

International law & national sovereignty must be respected in the use of data. Additionally, participation of diverse stakeholders is necessary for inclusive approaches to AI governance.

5. Responsibility and Accountability

AI systems should be auditable and traceable. There should be oversight, impact assessment, audit and due diligence mechanisms in place to avoid conflicts with human rights norms and threats to environmental wellbeing.

6. Transparency and Explainability

The ethical deployment of AI systems depends on their transparency & explainability (T&E). The level of T&E should be appropriate to the context, as there may be tensions between T&E and other principles such as privacy, safety and security.

7. Human Oversight and Determination

Member States should ensure that AI systems do not displace ultimate human responsibility and accountability.

8. Sustainability

AI technologies should be assessed against their impacts on 'sustainability', understood as a set of constantly evolving goals including those set out in the UN's Sustainable Development Goals.

9. Awareness & Literacy

Public understanding of AI and data should be promoted through open & accessible education, civic engagement, digital skills & AI ethics training, media & information literacy.

10. Fairness and Non-Discrimination

AI actors should promote social justice, fairness, and non-discrimination while taking an inclusive approach to ensure AI's benefits are accessible to all.

Why AI ethics are important?

These tools often rely on a lot of data of various types to create visualizations. Poorly designed procedures based on inaccurate, incomplete, or biased information can lead to unintended consequences. How conclusions are drawn, therefore, depends on the ability of humans to explain decisions that may affect humans. Guidelines for its use in the workplace have been developed. Advocating ethical and technological frameworks for the responsible use of AI requires industry and stakeholders to examine fundamental societal issues and, ultimately, the question of what makes us human.

What are the ethical challenges of AI?

Enterprises face the following ethical challenges in their use of AI technologies:

- **Explainability**-When AI systems go awry, teams must be able to trace through a complex chain of algorithmic systems and data processes to find out why. Organizations using AI should be able to explain the source data, resulting data, what their algorithms do and why they're doing that. "AI needs to have a strong degree of traceability to ensure that, if harms arise, they can be traced back to the cause," said Adam Wisniewski, CTO and co-founder of AI Clearing.
- **Responsibility**- Society is still sorting out responsibility when decisions made by AI systems have catastrophic consequences, including loss of capital, health or life. The process of addressing accountability for the consequences of AI-based decisions should involve a range of stakeholders, including lawyers, regulators, AI developers, ethics bodies and citizens. One challenge is finding the appropriate balance in cases where an AI system might be safer than the human activity it's duplicating but still causes problems, such as weighing the merits of autonomous driving systems that cause fatalities but far less than people do.
- **Fairness**-In data sets involving personally identifiable information, it's extremely important to ensure that there are no biases in terms of race, gender or ethnicity.
- **Algorithmic biases**-AI algorithms can be used for purposes other than those for which they were created. For example, Facial recognition algorithms developed by Microsoft, IBM, and Face++ have been shown to be biased

when detecting human gender; these AI systems are more accurate at detecting white women than darkskinned men. Additionally, a 2020 study examining speech recognition systems from Amazon, Apple, Google, IBM, and Microsoft found that these systems made more errors when transcribing black voices than white voices, which is white noise.people

- **Privacy** -Because AI takes massive amounts of data to train properly, some companies are using publicly facing data, such as data from web forums or social media posts, for training. Other companies like Facebook, Google and Adobe have also added into their policies that they can take user data to train their AI models, leading to controversies in protecting user data.
- **Job displacement**- Instead of using AI to help make human jobs easier, some organizations might choose to use AI tools to replace human jobs altogether. This practice has been met with controversy, as it directly affects those who it replaces, and AI systems are still prone to hallucinations and other imperfections.

- Environmental- AI models require a lot of energy to train and run, leaving behind a large carbon footprint. If the electricity it uses is generated primarily from coal or fossil fuels, it causes even more pollution.

The public release and rapid adoption of generative AI applications, such as ChatGPT and Dall-E, which are trained on existing data to generate new content, amplify the ethical issues related to AI, introducing risks related to misinformation, plagiarism, copyright infringement and harmful content.

Empirical Research

The evidence is mixed on whether people evaluate behavior as human. Some evidence suggests that people have negative attitudes toward negative behaviors and positive attitudes toward positive behaviors, regardless of whether the actor is human or robot. However, robots receive less praise for good behaviors and more criticism for bad behaviors. Other evidence suggests that bad behaviors by robots are evaluated more ethically than good behaviors. Robotic bad behavior is evaluated more intentionally than ordinary bad behaviors. In general, people's moral judgments about robots and humans are based on the same reasons and principles, but people have different moral judgments when making decisions between humans and robots. The study also found that when people try to explain and understand how a robot makes decisions, the robot uses rules of thumb (selfenhancement, doing the right thing), while others (doing the right thing) are consistent with ethical doctrines (egoism, moralism, altruism, utilitarianism, and normativity). In the March 2018 issue of the journal *Ethics and Information Technology*, computer scientist Virginia Dignum noted that modern people's attitudes towards Artificial intelligence (AI) is changing, moving from seeing it as a tool to seeing it as an intelligent "teammate." In the same article, she argues that moral thinkers have three goals for wisdom, all of which can be achieved in the modern age by doing the same thing:

What are the benefits of ethical AI?

The rapid adoption of AI by businesses coincides with two key trends that, in many cases, reinforce each other: the rise of customer centricity and the rise of social media. "It's not just about delivering personalized products and services, it's also about empowering customers and doing good in the communities where they live," said Sudhir Jha, Brighterion CEO and Mastercard Vice Chairman. AI plays a huge role in how consumers interact with and perceive a brand. Responsible use is necessary to ensure a positive impact. In addition to consumers, employees want to feel good about the businesses they work for.

What is an AI code of ethics?

Atym CEO Jason Shepherd believes that there are three key areas to focus on to ensure the integrity of AI:

Legal –

This involves creating the framework to govern the model and create rules. Documents like the Asilomar AI Principles can be useful to start a conversation. Government agencies in the US, Europe and other countries have begun working to ensure ethical behavior in AI, and research organizations, vendors and universities have provided models, tools and strategies to help organizations develop AI policies. What to do about the law when there is a problem? Companies should consider incorporating AI policies into their practices. However, performance depends on employees following the rules, which may not be the case when money or fame is at stake. Biased AI and fake data can have negative impacts on decision making processes. A big question is the balance between the ease of data sharing and AI automation and the negative consequences of data sharing or not wanting automation. "Ultimately, the desire of consumers to take control of their data and be mindful of the threats posed by AI is as important as the combination of interests," Sheppard said.

"Instantly, price, sentiment, and risk," he said. Hone your AI skills to spot misinformation and negative behavior. This

shouldn't just focus on the company's own AI, but also whether suppliers and partners are using AI for bad purposes. For example, using fake videos and deepfakes to discredit competitors or using intelligence to launch cyberattacks. This will become an even bigger problem as AI tools become more commercialized. To prevent this snowball effect, organizations need to invest in protections based on open, transparent, and trustworthy AI infrastructure. Shepard believes this will help increase reliability, ensure privacy, ensure data integrity, and provide a systems-level approach to investigating abuses.

Examples of AI codes of ethics

AI ethics can clarify concepts and provide incentives for appropriate behavior. For example, Mastercard's AI Code of Ethics states: Ethical AI systems should be inclusive, descriptive, and useful, and use data responsibly. Inclusive AI systems are not fair. AI models need to be trained using large and diverse datasets to reduce bias. They also need to be

continuously monitored and updated to address any issues learned during the course. The process should be transparent and explainable. For example, in many cases it can be used to help people at work. AI systems should be implemented in a way that they cannot be used for malicious purposes. Although the intelligence process often requires sharing a lot of information, companies should not sacrifice the personal information of users or other people. They take responsibility for developing and maintaining the intellectual production process. The law is based on the development of the Canadian Intellectual Property Integrity Act and contributions from various stakeholders. benefits, justice, privacy, security, relationships and other human values.

Government Regulations for ethics of AI

As of now, India does not have dedicated, explicit laws regulating AI ethics, but instead relies on a set of guidelines and initiatives aimed at promoting responsible development and deployment of AI technologies, including a focus on transparency, accountability, and fairness, with recent emphasis on data privacy through the Digital Personal Data Protection Act of 2023; essentially, the government is pushing for ethical AI practices through policy frameworks rather than strict legislation.

Key points about AI ethics regulation in India:

No specific AI law:

Currently, there is no single law specifically governing AI in India.

National AI Strategy:

India has a National Artificial Intelligence Strategy that emphasizes an inclusive approach to AI development and application across sectors like healthcare, education, and agriculture.

Focus on data privacy:

The recent Digital Personal Data Protection Act is considered a crucial tool to address privacy concerns related to AI usage.

Emphasis on ethical principles:

The government encourages adherence to ethical principles like transparency, fairness, accountability, and human oversight in AI development.

Guidelines and initiatives:

Various government bodies are promoting guidelines and best practices for responsible AI development.

Potential concerns regarding AI ethics in India:

Lack of enforcement mechanisms:

While guidelines exist, there might be a lack of robust enforcement mechanisms to address potential violations of AI ethics.

Bias in AI systems:

Concerns about AI algorithms perpetuating existing societal biases due to the data used to train them.

Need for further legislation:

Some experts argue that more specific legislation regarding AI ethics is necessary to effectively manage potential risks.

Conclusion

Some argue that AI ethics will soon become outdated, and a better way to adapt is needed. “We tend to try to define things like bias, then find the bias, and then try to eliminate it,” says Arijit Sengupta, founder and CEO of AI development platform Aible. “It’s easier and more effective to figure out what you should or shouldn’t do than to try to eliminate what needs to be done as if that’s possible.” “Instead of giving kids advice and letting them make their own decisions, we’re telling them all the things they can and can’t do.” Now Humans is developing policies and technologies to support the role of intelligence. This includes products and services that protect human rights and are unfair to certain groups, such as minorities, people with special needs, and the poor, Sheppard said. The latter is particularly dangerous because AI has the potential to start a major social and economic war, which could lead to a divide between those who can afford the technology and those who can’t. Urine (including human technology) and those who can’t.

The agency also needs plans to address the misuse of intelligence by some malicious actors. Today’s AI systems include rule-based engines, machine learning models that perform simple tasks, and AI based systems that mimic human intelligence. Elon Musk has also announced controversial AI models that can affect the environment and physical relationships it is in through images it creates. In the future of AI, AI companies are likely to continue to push ethical boundaries, push back on ethical, social, and economic issues, and demand more ethical behavior from government and citizens.

References

www.unesco.org

www.ibm.in

www.google.com

www.shodhganga.inflibnet.ac.in

www.geeksforgeeks.org

indiaai.gov.in

www.icmr.gov.in

www.coursera.org

www.wikipedia.org

<https://unesdoc.unesco.org>

<https://doi.org>

