

Ethical Innovation in the Coming Technological Revolution

Abstract

The four industrial revolutions have been marked by periods of growth and transformation, but not without their consequences. In an arguable fifth revolution marked by rapid development in artificial intelligence, surveillance, and military technology, we face significant challenges. We must draw lines and make rules in a world never experienced before, rather than picking up the pieces after the fact, or we will be left vulnerable to unimaginable consequences.

Objective

The result of this research will be a code of ethics intended to guide the responsible development of new technologies, minimizing the risk of misuse, and fostering accountability among those who develop them.

Sources

<https://www.chinalawtranslate.com/en/sc-punishment-list/>
<https://bipartisanpolicy.org/blog/cambridge-e-analytica-controversy/>
<https://www.forbes.com/sites/jessedamiani/2019/09/03/a-voice-deepfake-was-used-to-scram-a-ceo-out-of-243000/>
<https://www.acm.org/code-of-ethics>
http://zanthio.com/news_articles.htm
https://dpglaw.co.uk/wp-content/uploads/2021/05/11_FVuyYWOY3thsEIY2Sl8A.jpeg
https://media.licdn.com/dms/image/D5612AOEUq7uqz6_h9g/article-cover_image-shrink_720_1280/0/1680183156456?e=2147483647&v=beta&t=N6uZk-iUZ06ob_K5WfPEIRld2vZrufbIpNP17Qttwo8
https://www.economist.com/cdn-cgi/image/width=1424,quality=80,format=auto/content-assets/images/20240210_LDD001.jpg
https://cdn.prod.website-files.com/61dfc899a471632619dca9dd/62f2dd5573c01a4523b4ace6_Deepfake-Optional-Body-of-Article.jpeg

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LinkedIn

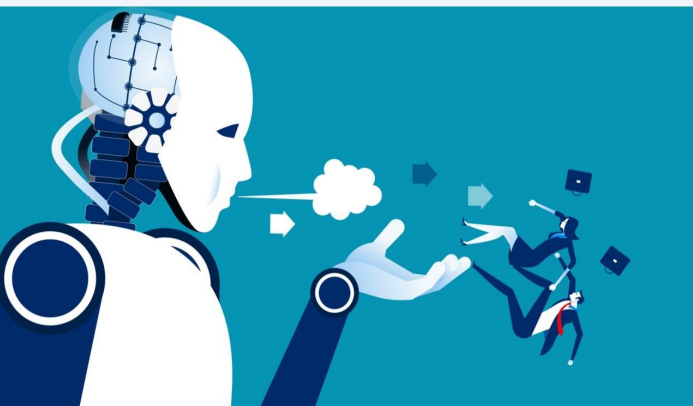


Key Challenges

Mass surveillance and loss of privacy: Advancements in AI and surveillance tech such as facial recognition and data tracking can lead to monitoring individuals without their consent



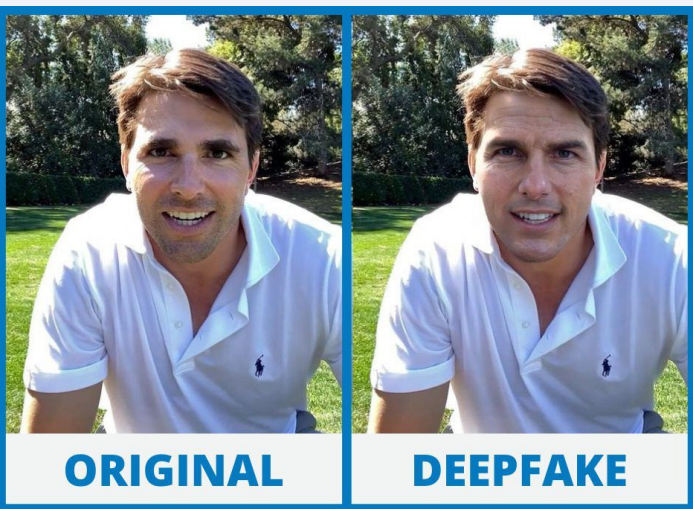
Job displacement due to automation: Automation is changing the employment landscape with many in fields like manufacturing, retail, and customer service seeing AI compete for their jobs



Unmanned military devices: A rise in autonomous and unmanned military devices such as drones bring about concerns of accountability, potential violations of international law, and moral implications of machines deciding matters of human life or death.



Misuse of generative AI: Generative AI can be and is regularly weaponized for misinformation, fraud, and the creation of “deepfakes”, which are computer generated media resembling real people.



Ethical Questions

What types of personal data, if any, should governments or corporations be allowed to collect and monitor? Under what conditions should such monitoring be permitted?
What moral obligations do companies have toward employees whose jobs are replaced by automation?
Who should be held accountable when an autonomous system makes a fatal error or is exploited for harmful purposes, such as acts of terrorism?
Can misuse of generative AI be prevented while still allowing creative freedom?
To what extent should developers be required to implement safeguards against misuse of their technology?

Examples

China’s Social Credit System (SCS): Citizens are monitored and punished for “untrustworthiness”, ranging from professional bans or practice restrictions to being restricted from traveling by plane

Cambridge Analytica Scandal: The company provided data-driven services to political campaigns, but in 2018, it was revealed that they had utilized 50 million Facebook profiles to do their modeling without users’ consent.

Autonomous Weapons System (AWS): These systems, also called killer robots, have significant autonomy in selecting and engaging targets, leading to ethical concerns about accountability, decision making, and potential for unintended harm leading to fatal errors of innocent people.

Voice Deepfake: In a reported case, a company executive believed he was speaking with his boss over the phone and followed orders to transfer approximately \$243,000 to an account. The voice had been cloned with AI, demonstrating potential deception and misuse.

The Code of Ethics

- Accountability:** Developers are responsible for the use and impact of the technologies they create
- Transparency:** Clear communications about what technologies can and cannot do is essential
- Privacy:** Users should clearly understand how their information is collected, stored, and used.
- Equity:** Technology should benefit all members of society, not just those wealthy enough to use it
- Security:** Technology must be secure to protect individuals from harm caused by attacks or misuse
- Sustainability:** The environmental impact of technology should be considered to minimize ecological harm
- Advancing:** Technology should be constantly improved to better align with this code