

ITU

The International Telecommunication Union Facial Recognition and AI Technologies

Overview

In tandem with the evolution of technology, the field of artificial intelligence (AI) has attained unprecedented prominence. This can be seen particularly in one facet of the technology: facial recognition. This AI application, characterized by its adept analysis and interpretation of facial features, has become widely utilized in many fields, from security to commerce and many more. However, the rising popularity of facial recognition technology has elicited a multitude of ethical quandaries and privacy concerns such as privacy rights, warranting meticulous academic scrutiny for nations across the globe.

The International Telecommunication Union

The International Telecommunication Union (ITU) is a specialized United Nations agency responsible for issues related to information and communication technologies (ICTs). Established in 1865, the ITU plays a crucial role in the development and coordination of global telecommunications networks and services, with over 190 member states.¹ The goal of this committee is to address the challenges and ethical implications of facial recognition technology; these extend beyond individual privacy concerns to encompass broader issues of consent, bias, and societal impact. Delegates should research multifaceted approaches that are conscious of their countries' views on transparency, accountability, and the protection of fundamental human rights in the development and deployment of AI technologies.

How AI and Facial Algorithms Work

Artificial intelligence (AI) algorithms are intricate systems designed to sift through extensive datasets, discern patterns and generate informed recommendations. As the informational bedrock for these algorithms, data assumes paramount significance. The efficacy of AI, particularly in applications such as facial recognition, hinges upon the quality and

¹ Britannica, The Editors of Encyclopaedia. "International Telecommunication Union". Encyclopedia Britannica, 29 Oct. 2023, <https://www.britannica.com/topic/International-Telecommunication-Union>. Accessed 24 December 2023.

representativeness of the data used in training. Simply put, algorithms within artificial intelligence operate by processing vast amounts of information to identify patterns and make recommendations. When feeding data into AI systems, it is crucial to understand that the patterns discerned by algorithms are only as unbiased as the data on which they are trained.²

Facial recognition technology, a notable subset of AI, operates through a multi-step process. Initially, the system acquires an image containing facial features. This image is then subjected to preprocessing, involving tasks like normalization and alignment to enhance the algorithm's ability to extract key facial attributes. Following this, the algorithm engages in feature extraction, isolating distinctive elements like the contour of the eyes, nose, and mouth. The crux of facial recognition lies in the subsequent phase—pattern matching. During this step, the algorithm compares the extracted facial features against a database, seeking a match.³

Biases in AI systems

Cultural studies scholar Safiya Noble delves into the issue of racism and bias in artificial intelligence, particularly emphasizing the concept of technological redlining. She identifies two key forms of encoded bias contributing to this phenomenon: ideological and technical biases. Ideological bias arises from human encoders, introducing inherent biases that can lead to skewed machine-generated results. Technical bias highlights unintended discriminatory outcomes stemming from the mechanics and algorithms of technological systems, including cases where technical aspects perpetuate discrimination, such as inadequate data representation for minority groups. Notably, the efficacy of processes like facial recognition relies on the diversity of the training dataset, revealing the broader challenge of mitigating biases ingrained in AI technologies.⁴

Uses for AI

Artificial intelligence has become instrumental in enhancing security measures across various sectors. In security applications, AI is employed for facial recognition, behaviour analysis, and anomaly detection, bolstering surveillance systems and safeguarding public spaces.

² Singh, Shilpi, and S.V.A.V. Prasad. "Techniques and Challenges of Face Recognition: A Critical Review." *Procedia Computer Science*, vol. 143, 2018, pp. 536-543, ISSN 1877-0509, <https://doi.org/10.1016/j.procs.2018.10.427>.

³ Ibid.

⁴ Noble, S. U. (2018). *Algorithms of oppression: How search engines reinforce racism*. New York University Press.

For instance, AI-powered facial recognition technologies are utilized in airports and high-security areas to identify individuals and enhance overall safety.⁵

Beyond security, AI facial recognition also plays a pivotal role in commerce and consumer applications. The integration of facial recognition technology extends beyond physical storefronts to the digital realm. Amazon, for instance, employs facial recognition to gauge customer reactions to specific displays, providing valuable data on attentiveness and interest. In this context, consumers, while aware of the presence of security cameras, may be less cognizant of the extent to which these technologies compile detailed information, including names, addresses, visit frequencies, and overall satisfaction with the in-store experience. The application of facial recognition isn't confined to retail alone, however- it permeates other services such as ride-sharing. In bustling cities like Miami, thousands of Uber and Lyft drivers utilize digital tablets equipped with facial recognition technology in their backseats.⁶ This technology assesses riders' age, gender, and demographics, tailoring advertisements displayed in the vehicle to match perceived characteristics. Meanwhile, innovative approaches by makeup brands like Sephora enable consumers to virtually try on sunglasses or makeup using facial recognition technology directly on their mobile devices, revolutionizing the online shopping experience.⁷

Ethical Issues: Right to Privacy

Delegates should conscientiously evaluate their countries' stances on facial recognition technology, especially concerning citizens' rights to privacy. It is imperative for nations to critically assess the ethical implications and potential infringements on civil liberties associated with the widespread adoption of facial recognition systems.

⁵ Rainie, L., Funk, C., Anderson, M., & Tyson, A. (2022, March 17). Public more likely to see facial recognition use by police as good rather than bad for society. Pew Research Center.

<https://www.pewresearch.org/internet/2022/03/17/public-more-likely-to-see-facial-recognition-use-by-police-as-good-rather-than-bad-for-society/>

⁶ Willian, M. (2022, September 9). Facial recognition technology in the commercial sector. Journal of Technology and Intellectual Property.

<https://jtjp.law.northwestern.edu/2022/09/09/facial-recognition-technology-in-the-commercial-sector/>

⁷ Balcazar, C. (2020, November 28). How Augmented Reality Lets Sephora Try On Something Different. Marketing in the Age of Digital.

<https://medium.com/marketing-in-the-age-of-digital/how-augmented-reality-lets-sephora-try-on-something-different-23b4446fd5c>

Case Study: China

The use of intrusive surveillance measures in China is a well-established practice, reflecting the government's firm grip on public discourse and its efforts to prevent any opposition. Through an extensive network of surveillance cameras equipped with advanced facial recognition technology, the government closely monitors public spaces, identifying individuals and tracking their activities in real time.⁸ This all-seeing surveillance apparatus not only infringes upon the privacy rights of citizens but also raises significant concerns about the erosion of civil liberties. By utilizing such sophisticated technologies, the authorities aim to maintain political stability by surveilling and controlling the movements and actions of citizens, particularly those who challenge the government's authority.

Moreover, the Chinese government's relentless pursuit of surveillance extends beyond public spaces. Facial recognition technologies intrude into everyday transactions, compelling individuals to use facial recognition technology for purchases without offering a choice in the matter.⁹ This coercive imposition effectively strips individuals of their autonomy, as their facial data becomes yet another commodity controlled by the government. Citizens are left with little agency over their personal information, as their faces effectively belong to the government, subject to constant monitoring and potential misuse.

The expansion of surveillance capabilities in China raises significant ethical concerns, particularly regarding citizens' right to privacy. The government's authoritarian control over public discourse, coupled with the widespread deployment of facial recognition technology, furthers the urgent need to address these issues in the ITU and safeguard individual freedoms in the face of advancing surveillance technologies.

Conclusion

Delegates must recognize the inherent biases in artificial intelligence, particularly in the realm of facial recognition. Countries exhibit diverse perspectives on the deployment of this technology, whether for surveillance or commercial purposes and as representatives of their respective nations, it is crucial for delegates to thoroughly research and understand their

⁸ Mozur, Paul, Claire Fu, and Amy Chang Chien. "How China's Police Used Phones and Faces to Track Protesters." *The New York Times*, 2 December 2022, <https://www.nytimes.com/2022/12/02/business/china-protests-surveillance.html>. Updated 4 December 2022.

⁹ Liu, Feifei. "Case Study of Facial-Recognition Payment in China." Nielsen Norman Group, May 10, 2020. <https://www.nngroup.com/articles/face-recognition-pay/>.

countries' positions on facial recognition technology. The debate extends beyond individual biases and raises questions about the necessity for policies that guide the developers of AI to mitigate biases, or whether limitations should be imposed on the technology itself. Striking a balance between technological advancement and ethical considerations is essential in ensuring that facial recognition technology aligns with principles of fairness, transparency, and respect for individual rights.

Questions to Consider

1. What is your country's stance on technological surveillance, particularly in the context of facial recognition in AI?
2. Are there any policies in place in your country where citizens' privacy is explicitly compromised or protected, specifically in relation to facial recognition technology?
3. How does your country address concerns related to bias and accuracy in facial recognition algorithms?
4. What measures has your country taken to balance the benefits of facial recognition technology with potential ethical and privacy considerations?
5. Has your country collaborated with international organizations or neighboring countries on standardizing regulations or guidelines for facial recognition technology in AI?

Useful Delegate Resources

[How biased are our algorithms? | Safiya Umoja Noble | TEDxUIUC](#)

[Approaches to Regulating Government Use of Facial Recognition Technology](#)

[How to make computers less biased](#)

[Algorithmic Bias and Fairness: Crash Course AI #18](#)

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