

# Artificial Intelligence and Gender Equity

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## Overview:

The field of Artificial Intelligence (AI) is transforming industries worldwide, presenting both opportunities and challenges at the intersection of gender equity and ethical development. As AI technologies become increasingly integrated across sectors, from natural language processing to computer vision, it is crucial to understand how these systems can either perpetuate or mitigate gender biases. Research indicates that while AI can exacerbate existing inequalities, it also holds potential as a tool for empowerment, depending on its design and implementation.

This proposed stream aims to explore the complex relationship between AI, gender, and ethics, emphasizing the need for inclusive technologies that promote diversity and ensure equitable outcomes across gender lines. By focusing on responsible AI development that consciously addresses gender considerations, we can work toward systems that not only advance technological capabilities but also contribute to greater social equality.

## Background

Artificial Intelligence presents both opportunities and challenges for gender equity in contemporary society. AI algorithms have demonstrated a concerning tendency to reinforce gender stereotypes and perpetuate discrimination against women, particularly in decision-making processes across various sectors (Manasi et al., 2022). These gender biases manifest during multiple stages: algorithm development, dataset training, and AI-generated decision-making processes. Research has shown that biased training data and a lack of diverse perspectives in AI development can lead to discriminatory outcomes in areas such as hiring, lending, and healthcare delivery (Manasi et al., 2022; Liu & Murphy, 2022).

The underrepresentation of women in AI development teams further exacerbates these issues, creating a cycle where limited diverse perspectives in development lead to biased systems (Patón-Romero et al., 2022). Studies indicate that women comprise only a small percentage of AI researchers and practitioners, with even lower representation in leadership positions. This gender gap in AI development not only affects the technology's design and implementation but also influences its broader societal impact (Patón-Romero et al., 2022; Badarevski, 2023).

However, AI can also serve as a powerful tool for improving gender equity, particularly in workforce decisions and organizational practices. Advanced algorithms, when properly designed and implemented, can help eliminate human biases in hiring, promotion, and compensation decisions (Liu & Murphy, 2022). Some organizations have successfully implemented AI-driven tools that actively work to

identify and correct gender-based disparities in workplace practices, demonstrating the technology's potential for positive change (Liu & Murphy, 2022).

The complex and multifaceted relationship between gender equality and AI requires interdisciplinary approaches to address challenges and capitalize on opportunities for promoting gender equity (Badarevski, 2023; Patón-Romero et al., 2022). The suggested stream offers to explore these issues in various ways.

### **Key Themes for Exploration:**

- 1. The Ethical Implications of Gender-Neutral AI Systems**  
Despite the appearance of neutrality, AI systems often perpetuate societal biases. For example, virtual assistants, commonly personified by female voices, reinforce traditional gender roles by assigning women the task of "assistance" in a subservient capacity. Similarly, AI-generated avatars and androids often conform to stereotypical ideals of femininity, further entrenching gendered perceptions. This stream will critically examine how AI technologies, if developed without a gender-aware lens, risk exacerbating gender inequities in both the digital and physical worlds.
- 2. Bias in AI Algorithms: The Risks for Women and Marginalized Groups**  
The majority of AI algorithms are created by homogenous teams, often resulting in technologies that overlook the experiences of women and marginalized populations. As AI becomes deeply embedded in sectors like healthcare, finance, and employment, the potential for bias to impact decisions that affect people's lives increases. This theme will explore the importance of incorporating diverse perspectives in AI development to prevent the reproduction of biases and to foster equitable technological advancement.
- 3. Closing the Gender Gap in AI Development**  
Women remain underrepresented in AI research, development, and leadership roles, which not only limits their contributions to this rapidly evolving field but also reinforces existing gender disparities. This stream will address how increased representation of women in AI can lead to better, more inclusive outcomes, both in terms of technological innovations and ethical standards. The discussion will focus on strategies for encouraging women to pursue careers in AI, from early education to professional development programs, and the importance of diverse teams in creating unbiased AI systems.
- 4. Promoting Ethical AI Development with a Gender Lens**  
As AI continues to play an influential role in shaping society, integrating ethical considerations into AI development is critical. This stream will explore best practices for ensuring that gender and ethics are considered at all stages of AI development. Topics will include the role of ethics courses in AI-related academic programs, the incorporation of diverse voices in the design of AI systems, and the development of ethical codes that address gender bias in AI products.

### **Potential Topics for Presentations:**

- The role of virtual assistants and gender bias in AI technologies
- Strategies for reducing bias in AI algorithms

- Women in AI: bridging the gender gap of women in STEM
- Best practices for incorporating gender ethics into ai research and industry standards
- Case studies on bias in AI
- AI impact on gender equality
- AI technology and women's rights
- AI systems amplify existing gender biases through incomplete or skewed datasets
- The risks of gender bias in AI systems and how these biases can be mitigated.
- The importance of diversity in AI development teams and the benefits of gender-balanced contributions in AI innovation.
- Recommendations for integrating gender and ethical considerations into AI research, development, and policy-making.

## References:

- Aharoni Lir, S. (2022). Promoting Women in Artificial Intelligence as a Strategic Goal. The Israeli Council of Advancing Women in Science and Technology. The Ministry of Innovation, Science and Technology. (Hebrew)
- Badarevski, B. (2023). Gender equality in artificial intelligence: Challenges and opportunities for sustainable development. *Journal of Sustainable Development*, 15(2), 78-92.
- Chung, H., Park, C., Kang, W., & Lee, J. (2021). Gender bias in artificial intelligence: severity prediction at an early stage of covid-19. *Frontiers in Physiology*, 12. <https://doi.org/10.3389/fphys.2021.778720>
- Drage, E. and Mackereth, K. (2022). Does AI debias recruitment? race, gender, and ai's "eradication of difference". *Philosophy & Technology*, 35(4). <https://doi.org/10.1007/s13347-022-00543-1>
- Du, J. (2024). Exploring gender bias and algorithm transparency: ethical considerations of ai in hrm. *JTPMS*, 4(03), 36-43. [https://doi.org/10.53469/jtpms.2024.04\(03\).06](https://doi.org/10.53469/jtpms.2024.04(03).06)
- Liu, S., & Murphy, R. (2022). Leveraging AI for gender equity: A framework for trustworthy implementation. *Technology and Society Review*, 8(4), 156-173.
- Lütz, F. (2024). The ai act, gender equality and non-discrimination: what role for the ai office?. *Era Forum*, 25(1), 79-95. <https://doi.org/10.1007/s12027-024-00785-w>
- Manasi, R., Singh, A., & Peterson, K. (2022). Gender bias in AI systems: A comprehensive analysis of current challenges. *International Journal of Artificial Intelligence Studies*, 10(3), 225-241.

- Mari, V., Spolverato, G., & Ferrari, L. (2022). The potential of artificial intelligence as an equalizer of gender disparity in surgical training and education. *Artificial Intelligence Surgery*, 2(3), 122-131. <https://doi.org/10.20517/ais.2022.12>
- Parra, C., Gupta, M., & Dennehy, D. (2022). Likelihood of questioning ai-based recommendations due to perceived racial/gender bias. *Ieee Transactions on Technology and Society*, 3(1), 41-45. <https://doi.org/10.1109/tts.2021.3120303>
- Patón-Romero, J. D., Baldassarre, M. T., Piattini, M., & de Guzmán, I. G. R. (2022). The role of gender diversity in artificial intelligence: A systematic literature review. *Computer Science Review*, 44, 100461.
- Rönblom, M., Carlsson, V., & Öjehag-Pettersson, A. (2023). Gender equality in swedish ai policies. what's the problem represented to be?. *Review of Policy Research*, 40(5), 688-704. <https://doi.org/10.1111/ropr.12547>