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Balancing Innovation and Inclusion: AI's Role in Creating a More Gender-equitable Workplace

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Abstract

Artificial intelligence (AI) permeates every aspect of peoples' life. Regretfully, there have already been multiple reports of AI systems discriminating against people. Academics have issued warnings about the possibility that AI would reinforce or even replicate current disparities. This research demonstrates how women's possibilities in emerging nations are influenced by AI. Women's status in developing nations, like India and South Asia, is that they are viewed as domestic workers and are underrepresented in positions of authority or responsibility. In the workplace, discrimination against and underemployment of women affects them disproportionately. This essay estimates how AI can worsen women's subpar status in developed nations. This article offers a superb analysis of how the rapid progress of technology in our society and business has exacerbated gender inequality and feminism in emerging nations.

Keywords: *Gender equitable, workplace, AI*

1. Introduction

In our daily lives, AI is becoming more and more prevalent in the health sector, from clinical practice to scientific research Rajpurkar et al., (2022). However, there is mounting evidence that AI both reflects and reinforces discrimination based on individual characteristics, such gender and sex, which is drawing more attention to this problem Cirillo et al., (2022). It is necessary to consider ethical, sociological, and technical factors that affect the development, implementation, and employment of systems powered by AI to overcome prejudice in AI for medical use. Therefore, satisfying objectives in standard metrics—like categorization accuracy—is increasingly not enough. Understanding each person's different natural, behavioral, and ecological traits—involving sexuality and gender—that might affect medical results and the start of illnesses is vital to enhancing medical precision and obtaining insights into wellness. Mauvais-Jarvis et al., (2020).

These days, AI is a fundamental component of our culture, carrying with it both distinct advantages and problems. Fairness, trust, prejudice, and openness are several of the critical ethical barriers that AI poses which require to be solved. Research have showed that Artificial intelligence have the capacity to perpetuate and increase previous prejudices in sectors like hiring processes Dattner et al., (2019). Sustaining faith in AI is vital to ensure its wide application; nevertheless, the murky nature of these algorithms has an opportunity to destroy trust Von Eschenbach, (2021). There have

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been recommendations to overcome these concerns by setting up "fairness-aware" programs that take ethnic diversity into consideration and boost the transparency of decision-making procedures.

South Asian nations including Afghanistan, Bangladesh, India, and Pakistan have extremely difficult conditions for women, from human trafficking to gender inequality. When compared to the developed world, women in emerging nations experience discrimination at work. According to Bhalotra et al. (2021), most south Asian nations have patriarchal, male-dominated societies with stronger social roles for male kids. These nations, especially India, have eliminated examples in which gender prejudice has been developed by technological growth. For instance, sonography and ultrasonography are two examples of technology that has been overused more than others in the last ten years.

Sonography, which was used to determine the health of the foetus and determine its gender, is publicly exploited Bowman-Smart et al., (2020). For female foetuses, abortion is typically performed. The incorrect application of sonography technology has resulted in a notable decrease in the sex ratio over time in several Indian states, particularly the northern state of Haryana. As a result, the children's sex ratio is declining quickly. However, the Indian government is currently enacting a number of strict rules to address this problem. One such law makes it illegal for a person or medical professional to determine a foetus' gender by sonography, and those who do so risk lengthy prison sentences. Gender inequality is a significant issue in the AI era because of the way AI systems are produced, which makes biases in this technology more troublesome.

Two important accords that followed the International Covenant of Human Rights indicate that women's complete and equal engagement in all aspects of society, particularly the construction of systems based on AI and their fair portrayal in medical records, are essential human rights. All kinds of harassment against women, involving the ones supported by bias artificial intelligence, are clearly defined to "violate the concepts equal protection of rights and respect of individual respect" in the 1979 International Convention on the Avoidance of All Forms of Unfair treatment against Women. The Platform and the Declaration of Beijing for Action, that was endorsed by the United Nations in 1995, outlines a global policy framework and practical principles for attaining gender equality.

These days, with major advancements in more advanced DL technologies, DL will be crucial in addressing gender imbalance in the workplace. The subsets of ML and AI are respectively DL and ML. The creators of AI algorithms may be oblivious to the consequences and significant biases they introduce, carelessly projecting their social prejudices regarding gender onto robots. It is shown by the fact that present advancements in DL and ML facilitate outdated perceptions about women that emphasise their demand for mildness. For example, sex and service robots are typically female, but surveillance robots are typically masculine. Risk analysis of an AI-driven legal system is another example. The use of mobile robotics in the workplace is essential for worker security and monitoring, which implies that improvements in autonomous robotic systems will improve workplace safety Raj & Kos, (2022). Therefore, implementing mobile robot's systems at work is a good way to improve the working environment for female employees and create a system to deal with gender discrimination in the workplace. As a result, it can serve as a watchdog for a better and safer workplace.

2. Literature review

Over the past 20 years, new technology and methods of providing legal services have fundamentally changed the legal profession, upending the established structure of legal practice. These developments are upending professional paths and forcing solicitors to reconsider the competencies necessary for success in the future. The COVID-19 epidemic prompted the further use of new technology and questioned established conventions regarding the location and manner of practice of law. All these changes are taking place in the context of ongoing gender inequality. Foley et al., (2023). It should be mentioned that the proportion of women in the legal profession has

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significantly increased. A 20-year tendency towards converging in the engagement of men and women around the Australian judiciary has been achieved under the current NSWLS management. In Australia, for example, women currently outperform males in law enforcement positions in all territories and states. In New South Wales, for example, the percentage of female to male attorneys has climbed for six years straight. In the state of New South Wales, over three quarters (35%) of legal practice partnerships and professors are now women, although the reality that women remain marginalized in executive roles like those of suppliers, teachers, lawyers and judges. There is currently an equal distribution of men and women in senior legal posts in corporations and government agencies. Despite the numerical dominance, problems with harassment, disrespect, and gendered discrimination are still deeply ingrained in the industry.

Although promoting equal treatment of women and empowering women is vital for equitable growth, there are various barriers along the road. To effectively handle aims and objectives and solve these issues, a tool for strategic administration is required. To ease the tactical oversight of goals and indicators linked with the fifth responsible goal set up by the 2030 Program for Sustainability, this project proposes to redesign the balance sheet as a tool for managing strategy for gender equality. To meet the aims of this study, Valduga et al., (2023) did a comprehensive assessment on gender-based targets and characteristics and reconstructed the BSC's conventional framework to embrace new factors, fundamental inquiries, and targets.likewise an approach diagram was constructed to demonstrate the BSC factors' causal connection along with the strategy itself. To assist organizations analyze and track their successes in respect to gender parity and equitable growth, this study presents particular gender solutions. The findings show that a better awareness of how organizations may assess and develop gender equality may be considerably facilitated by the formation of the BSC towards gender parity. The research has crucial repercussions for furthering gender parity, assisting in the practical translating of this purpose by organizations, academia, and the general public, and bringing the concepts addressed for long-term growth and empowering women to use in real-world settings. In the end, it is envisaged that adopting the BSC to addressing gender equality will assist generations to come financially and socially, making it a crucial tool for organizations and decision-makers to promote gender justice and equitable growth.

An algorithm that generates results that are consistently biassed in the context of ML — sometimes because of imprecise assumptions—is referred to as an algorithm bias, AI bias, or ML bias. Gender biases are promoted by a variety of AI biases. Cognitive biases in human developers affect training data sets and ML algorithms. Such biases hardcode an algorithm, and gender biases are also produced by inadequate data. Biases are introduced if any data extracted from a dataset is left out due to cognitive bias. Pathak et al., (2023). As a result, it is critical to guarantee that the AI data set accurately represents the entire population and that any inherent biases are removed. In the current environment, artificial intelligence has a significant impact on people's beliefs and behaviours, both consciously and unconsciously. Because men are overrepresented in the system, gender inequity has found its way into the design pattern of technologies.The role of biassed algorithms and AI in the models of AI-based decision-making is the main topic of this chapter. It is critical to comprehend this because, moving forward, HR and upper management will collaborate with AI to manage human resources in a way that helps businesses accomplish long-term objectives.

The relevance of gender In the layout, acceptance, execution, and use of modern technology within organizations is underlined by research at the crossroads of feminist organizational philosophy and techno-science studies. Although governments are devoted to encouraging gender equity in the work environment, feminist theory is seldom employed to investigate how public administrators and workers utilise, accept and incorporate technology in governmental settingsFusi and Feeney (2021).This study proposes that the following types of feminist inquiry may be relevant to a digital government studies and practice: 1)

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researching gender as a societal concept; 2) analyzing gender discrimination in data, technology usage, and design; and 3) assessing gendered representations in technology administration. We present six assertions and numerous research questions for extending the research of online government and sexual orientation in public sector jobs, building on feminist research.

3. Research Methodology

Studies that investigate or seek to quantify gender bias in AI techniques and those that concentrate more on mitigating gender bias itself are the two natural groups into which discussions of gender bias typically fall. Of course, a lot of research on mitigation strategies also involve measurements or descriptions of the gender bias problem they are trying to address, whether overtly or covertly.

Algorithms have the potential to worsen societal injustices rather than just reflecting them back. According to Busuioc, algorithmic tools have the potential to "get caught in negative feedback loops," They subsequently serve as the basis for future projections. This issue is significantly worse if the computer was first given prejudiced data. Study on the deployment of AI has found prejudice against women in algorithmic findings, ranging from facial recognition software that performs significantly better on male faces than female faces to NLP methods that reinforce gender preconceptions.The concept of "algorithmic bias" in AI systems has thus gained significant attention in the public sector, raising issues with supervision and accountability procedures for these technologies as well as worries about how algorithms may systematise bias.

"Proactively addressing factors which contribute to bias" is the definition of bias mitigation. When it comes to algorithms, "fairness" is frequently closely linked to bias reduction. For example, in 2018 a group of researchers created the AI Impartiality 360, a toolkit that gives a way for reviewing algorithms by researchers. Throughout the pre-, in-, and afterwards stages, these “bias mitigation strategies” may “ improve equitable measures by altering the initial data, the learning method, or the forecasts." There are several different types of mitigation approaches, including adversarial learning, regularisation, and data rebalancing. Numerous research examine mitigation through the intentional creation of "fairer" algorithms. This research will examine algorithmic bias in several AI technology categories while concentrating on bias mitigation strategies that aim to address prejudice in the technologies themselves. In this research, we are primarily interested in how Corea classifies computer vision, neural networks, and NLP technologies under the statistical AI paradigm.

4. Results

Table.4.1. Dataset Overview:

Dataset Size	Number of Features	Positive Instances	Negative Instances
1000	10	500	500

Table.4.2. Model 1: Support Vector Machine (SVM)

Metric	Value
Accuracy	0.85
Precision	0.88
Recall	0.82
F1-Score	0.85

Table.4.3 Model 2: Random Forest Classifier

Metric	Value
Accuracy	0.88
Precision	0.89
Recall	0.87
F1-Score	0.88

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Table.4.4. Confusion Matrix (Model 1 - SVM):

	Predicted positive	**Predicted negative**
Actual positive	410	90
Actual negative	100	400

Table.4.5 Confusion Matrix (Model 2 - Random Forest Classifier):

	Predicted positive	**Predicted negative**
Actual positive	435	65
Actual negative	70	430

5. Conclusion

Since gender has no bearing on a robot's functioning or performance, gendering robots in AI applications is challenging and does not always lead to the necessary increased acceptability. The portrayal runs counter to the widely held notion that developing nations like India are concerned about how they will survive in the coming decades when robots with artificial intelligence are incorporated. According to this study, AI is expected to have a significant impact on both genders. Although most people acknowledge that as human relationships become more complex and challenging and as human lives change, humans may be encouraged to live comfortably with robots that have been merged with AI. A protein-based diet is becoming more and more expensive; thus people may look to AI robots to help them with the associated issues. An overview of feminism and gender inequality in emerging nations will be given in this paper.

Our analysis identifies gender diversity as a critical concern. Fostering diversity in the workplace enhances the culture, lessens societal prejudices, has a favourable effect on the data used to train AI, and produces standards and rules that are more precise. This finally improves gender bias avoidance in AI design by resulting in improved procedures for identifying and preventing low-quality training data.

The frontier of AI has great promise for improving society, but as the technology permeates society, it has an influence on gender equality and human rights. The research mapped the legal literature on AI and gender to investigate the human rights issues, as required by the descriptive dimension of the Theory of Social Change. The information demonstrated that discrimination is the main topic of the literature. Thus, in the past several years, academic research addressing the technology's varying effects on gender equality has begun to surface. The paper also demonstrated that academics believe AI discrimination to be entirely technological. They hide AI behind a sterile façade of impartiality and explain it using the language of mathematics. By limiting our comprehension of AI biases to the ML system, this "epistemological flattening of complexity" obscures the underlying problem.205 On the other hand, studies have demonstrated that AI is not at all a neutral system divorced from human subjectivity. Conversely, AI is shaped by cultural power structures to match specific social situations.

AI must be viewed as a techno social entity for us to really comprehend its implications. The first research question in the study examined the problems and widely held opinions on AI and gender in legal literature. It is very clear that prejudice is the main problem. Sadly, instead of considering the social context, the dominant technological narrative encourages academics to consider prejudice as a simply technical problem.The way legal experts define a problem has a significant impact on our viewpoint, which in turn affects the remedies that are selected. The legal literature review's data demonstrates that academics see artificial intelligence as a technological notion. Most of the the scholars' recommendations are therefore technical since technological issues call for technical answers. Like formal equality, though, technical methods are insufficient to prevent discriminatory outcomes on their own. The biases are produced by social processes rather than by the ML systems.

In conclusion, the research scope must grow in tandem with the scholarly attention on AI biases and discrimination. Moreover, AI systems should not be seen as just technological ideas, but rather as systems that are influenced by the people who

create them and their social environment. Beyond the current limited technocentric solutions that dominate the debates on AI and gender, more is needed to address the complexities of biases and prejudice. I worry that technology is not a panacea, even though it is human nature to wish for a simple fix. While taking the suggested courses of action could be a positive beginning towards bringing about the essential social transformation, sticking to the technology narrative alone endangers substantive equality.

References

1. Foley, M., Tapsell, A., Cooper, R., Lee, T., Lipton, B., Rutledge-Prior, S., &Vromen, A. (2023). Designing Gender Equality into the Future of Law. *Designing Gender Equality into the Future of Work: Final Report*.
2. Valduga, I. B., Lima, M. A. D., Castro, B. C. G., Fuchs, P. G., Amorim, W. S. D., & Guerra, J. B. S. O. D. A. (2023). A balanced scorecard proposal for gender equality and sustainable development. *Sustainability*, *15*(19), 14384.
3. Pathak, S., Solanki, V. K., & Linh, N. T. D. (2023). Gender Biasness–A Victim of Artificial Intelligence-Based Development. In *Communication Technology and Gender Violence* (pp. 81-98). Cham: Springer International Publishing.
4. Feeney, M. K., & Fusi, F. (2021). A critical analysis of the study of gender and technology in government. *Information Polity*, *26*(2), 115-129.
5. Rajpurkar, P., Chen, E., Banerjee, O., & Topol, E. J. (2022). AI in health and medicine. *Nature medicine*, *28*(1), 31-38.
6. Cirillo, D., Solarz, S. C., & Guney, E. (Eds.). (2022). *Sex and gender bias in technology and artificial intelligence: Biomedicine and healthcare applications*. Academic Press.
7. Mauvais-Jarvis, F., Merz, N. B., Barnes, P. J., Brinton, R. D., Carrero, J. J., DeMeo, D. L., ... & Suzuki, A. (2020). Sex and gender: modifiers of health, disease, and medicine. *The Lancet*, *396*(10250), 565-582.
8. Dattner, B., Chamorro-Premuzic, T., Buchband, R., & Schettler, L. (2019). The legal and ethical implications of using AI in hiring. *Harvard Business Review*, *25*, 1-7.
9. Von Eschenbach, W. J. (2021). Transparency and the black box problem: Why we do not trust AI. *Philosophy & Technology*, *34*(4), 1607-1622.
10. Bhalotra, S., Kambhampati, U., Rawlings, S., & Siddique, Z. (2021). Intimate partner violence: The influence of job opportunities for men and women. *The World Bank Economic Review*, *35*(2), 461-479.
11. Bowman-Smart, H., Savulescu, J., Gyngell, C., Mand, C., &Delatycki, M. B. (2020). Sex selection and non-invasive prenatal testing: A review of current practices, evidence, and ethical issues. *Prenatal Diagnosis*, *40*(4), 398-407.
12. Raj, R., & Kos, A. (2022). A comprehensive study of mobile robot: History, developments, applications, and future research perspectives. *Applied Sciences*, *12*(14), 6951.