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# Role of Digital Transformation and Artificial Intelligence in Promoting Gender Equality in Public Administration

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## ABSTRACT

Over the years, there appear to be an observable level of bias in the practice of Public Administration. This anomaly can largely be traced to the traditionally accepted gender-based roles with obvious consequences in the present dispensation. However, the emergence of Artificial Intelligence has the potential to significantly enhance the empowerment of women and advance gender equality across the globe. Nevertheless, to efficiently harness AI for the advancement of women empowerment, it is essential to possess a thorough understanding of its impact, potential, and challenges which include. The objectives of this study, therefore, include: (i) To examine the level of women engagement in the development of unbiased AI Tools to promote gender equality, (ii) To assess the impact of AI Tools on gender participation in public administration, (iii) evaluate the challenges and benefits faced by women in accessing and leveraging on AI-related opportunities and resources, and (iv) To identify and analyze biases in AI Systems used in public administration. Data for this study were obtained from both primary and secondary sources. Findings show that despite the potential benefits associated with the emergence of Artificial Intelligence, instances of bias in AI systems persist. It concludes that Digital transformation and Artificial Intelligence are powerful enablers of gender equality, providing women with the tools and opportunities necessary to overcome barriers to leadership. Hence, leveraging on digital tools for collaboration, communication, and skills development, women can navigate the complexities of remote work while maintaining a healthy work-life balance. It recommends that there is need on the part of policy makers to mainstream gender considerations throughout the GDC framework, building on the 2030 Agenda's commitment to gender equality.

**Keywords:** Artificial Intelligence, Women Empowerment, Gender Equality, Access to Opportunities, Leadership Positions, Digital Transformation.

## INTRODUCTION

The convergence of Artificial Intelligence (AI) and Women Empowerment has gained significant attention in recent years as a crucial field of study and intervention. The rapid advancement of AI

technology highlights their potential to accelerate good transformations in 278 different aspects of society, such as promoting gender equality and empowering women. The application of AI technologies in efforts to advance women's empowerment has been a topic of attention in recent academic discussions. Abdeldayem and Aldulaimi (2020) emphasized the current patterns and potential advantages of artificial intelligence (AI) in the management of human resources, specifically in the public sector in Bahrain. Aksar et al. (2024) examine the effects of social media on the mental health of women in patriarchal societies, providing insights on the convergence of artificial intelligence and social interactions. In addition, Al Shehab and Hamdan (2021) analyse the particular circumstances in Bahrain, investigating the impact of artificial intelligence on efforts aimed at empowering women. In their study, Al-Ammal and Aljawder (2021) offer a strategic viewpoint on the difficulties and possibilities of implementing AI in Bahrain. They also discuss how AI might be utilized to empower women, providing insights into viable approaches.

To optimize the beneficial influence of AI on women's empowerment, implementing appropriate strategies and policies is essential. Recent research highlights several key areas where AI can significantly impact women's empowerment, focusing on education, ethical considerations, and safety.

**Education and Training:** Chaurasia et al. (2024) emphasized the importance of education and training in AI technology development. By up-skilling women and increasing their representation in AI leadership roles, the industry can foster a more inclusive and innovative environment. This is crucial as women currently represent only a small percentage of the AI workforce, which limits diverse perspectives in AI research and development.

**Ethical Considerations:** Kodyan (2019) discusses the ethical implications of AI systems, particularly in recruitment processes. The ethical deployment of AI is vital to prevent biases that can disadvantage women. For instance, AI-driven recruitment tools have been shown to discriminate against women, reinforcing existing inequalities in the job market. Addressing these ethical concerns is essential for ensuring that AI contributes positively to women's empowerment.

**Safety and Security:** The exploration of AI solutions for women's safety by Pattnaik et al. (2024) and Pimpalkar et al. (2024) provides insights into how AI technologies can enhance women's security. AI applications can predict potential dangers and monitor digital platforms for harassment, thereby offering protective measures for women. This aspect of AI not only enhances safety but also empowers women by providing them with tools to navigate public and digital spaces more securely.

Artificial intelligence (AI) is increasingly being integrated into the processes for filling public positions, offering the potential to enhance efficiency and objectivity. However, the implementation of AI in recruitment for public roles raises concerns about the perpetuation of gender biases. The convergence of artificial intelligence (AI) and women's empowerment has gained significant attention in recent years as a crucial field of study and intervention. The rapid advancement of AI technology highlights their potential to accelerate good transformations in different aspects of society, such as promoting gender equality and empowering women. This article explores how AI tools can be leveraged to identify and mitigate these biases, ultimately fostering a more equitable environment in public administration.

Digital transformation is a pivotal aspect of contemporary society, serving as a catalyst for sustainable development and social progress. The integration of digital technologies into various sectors not only enhances operational efficiency but also reshapes social interactions and governance structures. As highlighted by Achim Steiner (2023), the future is inherently digital, shaping how individuals engage with each other and their environments. However, this transformation also reveals significant disparities, particularly concerning gender equality. Despite ongoing efforts to promote gender parity, women continue to face systemic barriers that limit their participation in public administration and leadership roles. Research indicates that the underrepresentation of women in decision-making positions not only undermines fairness and equality but also adversely affects the quality of governance and policy outcomes (UNDP, 2023).

The digital divide remains a pressing issue, with approximately 234 million fewer women than men having access to mobile internet in low- and middle-income countries (UN Women, 2024). This disparity

restricts women's economic opportunities and their ability to engage meaningfully in the labour market. Bridging this gap is essential for empowering women and ensuring their active participation in political and social spheres. The advent of tele-health services exemplifies how digital technologies can enhance access to essential services, thereby improving healthcare coverage and outcomes for women (Shivam, 2019). Furthermore, e-governance initiatives facilitate the delivery of public services, fostering deeper user engagement and participation in governance processes.

### **Objectives of the Study**

The study aims to achieve the following research objectives:

- ii. Examine Women Engagement in the Development of Unbiased AI Tools to Promote Gender Equality.
- iii. Assess the Impact of AI Tools on Gender Participation in Public Administration.
- iv. Evaluate the challenges and benefits faced by women in accessing and leveraging on AI-related opportunities and resources.
- v. Identify and Analyze Biases in AI Systems Used in Public Administration

### **Identifying Gender Biases**

Gender-biased technology poses significant challenges to achieving gender equality and empowering women. A study analyzing 133 AI systems across various industries found that approximately 44% exhibited gender bias, while 25% displayed both gender and racial bias. Once deployed, these AI systems are difficult to rectify, highlighting the urgent need for governance discussions. Currently, there are no safeguards to prevent developers from launching AI systems prematurely without ensuring their safety and effectiveness. This situation calls for a global, multi-stakeholder governance framework aimed at preventing and addressing gender and racial biases in AI, as well as countering harmful stereotypes. Moreover, governance dialogues must adopt a broader perspective that considers industry disruptions, labor market shifts, the potential misuse of technology as an oppressive tool, the sustainability of the AI supply chain, and the long-term impacts of AI on future generations. By addressing these issues, we can work towards creating more equitable and inclusive technological systems that reflect the diversity of the global population.

Beyza Doğuç, an artist from Ankara, Turkey, encountered gender bias in Generative AI when she was researching for a novel and prompted it to write a story about a doctor and a nurse. Generative AI creates new content (text, images, video, etc.) inspired by similar content and data that it was trained on, often in response to questions or prompts by a user. The AI made the doctor male and the nurse female. Doğuç continued to give it more prompts, and the AI always chose gender stereotypical roles for the characters and associated certain qualities and skills with male or female characters. When she asked the AI about the gender bias it exhibited, the AI explained it was because of the data it had been trained on and specifically, “word embedding” – which means the way certain words are encoded in machine learning to reflect their meaning and association with other words – it’s how machines learn and work with human language. If the AI is trained on data that associates women and men with different and specific skills or interests, it will generate content reflecting that bias.

Doğuç, in a recent interview with UN Women maintained that “Artificial intelligence mirrors the biases that are present in our society and that manifest in AI training data”. Who develops AI, and what kind of data it is trained on, has gender implications for AI-powered solutions. Sola Mahfouz, a quantum computing researcher at Tufts University, is excited about AI, but also concerned. “Is it equitable? How much does it mirror our society’s patriarchal structures and inherent biases from its predominantly male creators,” she reflected. Mahfouz was born in Afghanistan, where she was forced to leave school when the Taliban came to her home and threatened her family. She eventually escaped Afghanistan and immigrated to the U.S. in 2016 to attend college. As companies are scrambling for more data to feed AI systems, researchers from Epoch claim that tech companies could run out of high-quality data used by AI by 2026.

According to Natacha Sangwa, “When women use some AI-powered systems to diagnose illnesses, they often receive inaccurate answers, because the AI is not aware of symptoms that may present differently in

women.” If current trends continue, AI-powered technology and services will continue lacking diverse gender and racial perspectives, and that gap will result in lower quality of services, biased decisions about jobs, credit, health care and more.

### **How to avoid Gender Bias in AI**

Removing gender bias in AI starts with prioritizing gender equality as a goal, as AI systems are conceptualized and built. This includes assessing data for misrepresentation, providing data that is representative of diverse gender and racial experiences, and reshaping the teams developing AI to make them more diverse and inclusive. According to the Global Gender Gap Report of 2023, there are only 30 per cent women currently working in AI. “When technology is developed with just one perspective, it’s like looking at the world half-blind,” concurred Mahfouz. She is currently working on a project to create an AI-powered platform that would connect Afghan women with each other. She added that “more women researchers are needed in the field. The unique lived experiences of women can profoundly shape the theoretical foundations of technology. It can also open new applications of the technology,”

There is a critical need for drawing upon diverse fields of expertise when developing AI, including gender expertise, so that machine learning systems can serve us better and support the drive for a more equal and sustainable world. In a rapidly advancing AI industry, the lack of gender perspectives, data, and decision-making can perpetuate profound inequality for years to come. The AI field needs more women, and that requires enabling and increasing girls’ and women’s access to and leadership in STEM and ICT education and careers.

The World Economic Forum reported in 2023 that women accounted for just 29 per cent of all science, technology, engineering and math (STEM) workers. Although more women are graduating and entering STEM jobs today than ever before, they are concentrated in entry level jobs and less likely to hold leadership positions. AI tools can play a crucial role in identifying existing gender biases within the processes for filling public positions. By analyzing historical data on appointments and promotions, AI can uncover patterns that indicate bias against specific genders. For instance, AI algorithms can evaluate the success rates of male versus female candidates in various public roles, highlighting discrepancies that may suggest biased decision-making.

- **Data Analysis:** AI can process large datasets to identify trends in the selection of candidates for public positions, such as the frequency of male versus female candidates being shortlisted or appointed. This analysis can reveal underlying biases that may not be immediately apparent to human decision-makers.
- **Language Analysis:** AI tools can analyze job descriptions and public position announcements for biased language that may deter female applicants. For example, certain phrases may be perceived as more appealing to male candidates, which AI can flag for revision to promote inclusivity.

There is need for a more multidisciplinary approach in the AI field, emphasizing the necessity of involving individuals with social science expertise alongside engineers and IT specialists in the development of technology. Given the profound effects of AI, it is crucial to ensure diverse perspectives are included in the decision-making process.

### **Current State of Gender Representation**

Numerous countries have made significant progress in gender representation at entry-level positions in public administration. Despite advancements in the lower situations, a substantial gender imbalance remains in elderly leadership situations. This difference is more pronounced in sectors traditionally dominated by men, such as finance, defense, and technology.

Gender-based stereotypes, and limited access to resources continue to hinder women's political participation. As noted by the UNDP and McKinsey, increasing female representation in public administration correlates positively with economic development and societal gender equality (UNDP, 2023). Furthermore, research from the Wilson Center suggests that greater female representation in leadership roles leads to improved governance outcomes, creating a virtuous cycle that benefits society as a whole.

### **Role of Artificial Intelligence in Promoting Gender Participation**

Artificial intelligence (AI) has the potential to play a transformative role in addressing gender disparities in public administration. By focusing on an individual's capacity, ability, and intelligence rather than their gender, AI can help create a more equitable environment. Some key aspects of AI that can support this goal include:

**Bias Mitigation:** AI tools can be designed to minimize biases in recruitment and promotion processes. By analyzing data objectively and focusing on qualifications and performance metrics, AI can help ensure that decisions are made based on merit rather than gender stereotypes.

**Data-Driven Insights:** AI can analyze large datasets to identify trends and barriers that women face in public administration. This information can inform policies and initiatives aimed at promoting gender equality, ensuring that interventions are tailored to address specific challenges.

**Enhanced Decision-Making:** AI can assist in decision-making processes by providing unbiased recommendations based on data analysis. This can lead to more informed and equitable outcomes in public governance, as decisions are grounded in objective assessments rather than subjective biases.

**Capacity Building:** AI-driven platforms can provide personalized training and development resources for women, helping them to enhance their skills and competencies. By focusing on individual abilities and potential, these tools can empower women to take on leadership roles and contribute effectively to public administration.

**Skills-Based Selection:** AI can facilitate a shift towards skills-based selection practices, which focus on candidates' abilities rather than demographic characteristics. Platforms that utilize algorithms to highlight candidates' skills and experiences ensure that decisions are made based on merit. This approach helps to level the playing field by minimizing the influence of gender on appointment outcomes.

**Access to a Global Community:** Digital communication tools and online platforms provide women in technology with the opportunity to connect, collaborate, and network with peers around the world. This global access can lead to mentorship opportunities, community support, and exposure to diverse ideas and practices that can boost their careers.

**Increased Flexibility in Work Hours:** Digital tools allow for greater flexibility in scheduling, enabling women in technology to balance their professional obligations with personal responsibilities more effectively. Tools like calendar apps and project management software facilitate asynchronous work, allowing them to complete tasks at times that suit them best, including outside of traditional work hours.

### **Enhanced Learning and Skill Development**

A plethora of online courses, webinars, and digital resources are available at the fingertips of women in technology, making it easier than ever to acquire new skills or deepen existing ones. Learning management systems and online certification programs allow for continuous professional development without the need to physically attend classes.

### **Improved Work-Life Balance**

The use of digital tools in remote work can significantly improve work-life balance for women in technology by reducing the time and stress associated with commuting. This extra time can be redirected towards personal growth, family, or leisure activities, contributing to better mental health and job satisfaction.

### **Access to Remote Work Opportunities**

Digital platforms and job boards dedicated to remote work have made it easier for women in technology to find positions that offer the flexibility of working from anywhere. This can be particularly beneficial for those who live in areas with fewer local job opportunities in their field or have constraints that make commuting challenging.

### **Enhanced Communication and Collaboration**

With digital tools such as video conferencing software, instant messaging apps, and collaborative project management platforms, remote teams can communicate and collaborate efficiently. These tools help in

maintaining the visibility and active participation of women in technology teams, ensuring their voices are heard and valued.

### **Empowerment through Anonymity**

In online environments, where the focus is often more on the quality of work and ideas rather than personal traits, women in technology can sometimes find a level playing field. Digital tools that make anonymous contributions can help reduce biases, allowing for fairer treatment and recognition based on merit.

### **Customizable Work Environment**

Digital tools and apps allow for the creation of personalized workspaces, whether through customized software settings, the use of productivity-enhancing applications, or even the adjustment of work communications. This customization can lead to more comfortable and efficient work environments that cater to individual preferences and needs.

### **Data-Driven Performance Metrics**

Many digital tools used in remote work come with built-in analytics that provide insights into work habits and productivity. Women in technology can leverage this data to showcase their achievements, negotiate promotions or raises, and identify areas for improvement in a quantifiable manner.

### **Encouraging Entrepreneurship**

Digital tools level the playing field for women in technology looking to venture into entrepreneurship. Easy access to online marketplaces, social media for marketing, and management tools for running a business allow for the pursuit of entrepreneurial endeavors with lower overhead costs and the flexibility to work from any location.

**Skiing:** AI systems can implement profile masking, allowing decision-makers to view candidate profiles without identifying information such as name, gender, or ethnicity. This method encourages decision-makers to focus solely on relevant qualifications and skills, reducing the likelihood of biased judgments.

**Continuous Monitoring and Auditing:** Regular audits of AI algorithms can help organizations identify and rectify any biases that may emerge over time. By ensuring that AI systems are trained on diverse datasets and are regularly evaluated for fairness, public administration entities can maintain a commitment to equitable practices.

## **The Role of Digital Transformation in Women's Empowerment**

### **Enhancing Work Flexibility**

The rise of remote work, accelerated by the COVID-19 pandemic, has highlighted the importance of digital platforms in facilitating women's participation in the workforce. Tools such as Zoom and Google Meet enable women to engage in virtual meetings and discussions, removing geographical barriers and allowing them to contribute meaningfully to their organizations. This flexibility is particularly beneficial for women with care-giving responsibilities, as they can attend meetings and collaborate with colleagues from the comfort of their homes.

### **Collaboration and Project Management**

Digital collaboration tools like Trello, Asana, and Slack are essential for organizing tasks and enhancing communication among remote teams. These platforms allow women to manage multiple projects efficiently, prioritize their workload, and collaborate seamlessly with colleagues. By providing a structured approach to project management, these tools enable women to showcase their leadership skills and ensure their contributions are recognized.

### **Document Management and Storage**

Cloud storage solutions such as Google Drive and Dropbox facilitate easy access to documents and files from any location. This capability allows women to work on important projects at their convenience, accommodating their personal responsibilities. The ability to share files and collaborate in real-time enhances teamwork and ensures that women can actively participate in discussions and decision-making processes.

### **Addressing Systemic Barriers through Digital Tools**

Overcoming Gender Norms digital tools have the potential to challenge traditional gender norms that often limit women's employment opportunities. The flexibility provided by remote work allows women to balance family obligations while pursuing their careers. Research indicates that work-from-home (WfH) opportunities can significantly increase female labor force participation, empowering women to take on leadership roles without the constraints of traditional office settings.

### **Skills Development and Continuous Learning**

As women engage with digital tools, it is essential to enhance their digital literacy through targeted educational programs. Platforms like Coursera and UdeMy offer a wide range of online courses that help women develop new skills relevant to their careers. By investing in continuous learning, women can position themselves as strong candidates for leadership roles, ensuring they remain competitive in a rapidly evolving job market.

### **Challenges and Opportunities**

First, it's important not just to see women as users of technology. Women are rarely viewed and empowered as creators of technology, promoters, and decision-makers in that field, which limits their ability to create technology that responds to the needs and priorities of women and girls. That's how we ended up with technology that is less used by women - it's not relevant to their needs. One assumption is that the use of digital tools will increase for everyone with universal internet access. But what we see is that 76% of the population living in least developed countries is covered by mobile broadband signal, but only 25% are online. And out of those 25%, men are 52% more likely to be online than women. So, infrastructure alone is not sufficient to reach meaningful access for women. Other critical factors are affordability, digital literacy, privacy, safety, content, relevance, ownership, awareness about tools, agency, or even access to electricity

Gender social norms also influence whether and how women and girls can use digital tools and services, for reasons such as obstacles limiting girls' education. There is not a singular, universal type of gender digital divide but a confluence of context-dependent factors. This needs to be taken into account when trying to remove barriers. While digital transformation and AI offer new opportunities for women's empowerment, they also present challenges that must be addressed. The current gender digital divide exacerbates existing inequalities, limiting women's access to digital resources and opportunities. Addressing these disparities requires a multifaceted approach that includes:

4. **Enhancing Digital Access:** Ensuring that women have equal access to digital technologies is crucial for expanding their economic opportunities. This involves improving infrastructure and affordability of internet services, particularly in underserved areas.
5. **Promoting Digital Literacy:** Providing training and resources to enhance digital skills among women can empower them to leverage technology for personal and professional growth. Initiatives that focus on up-skilling women in digital competencies are essential for fostering their participation in the digital economy.
6. **Encouraging Inclusive Policies:** Policymakers must prioritize gender-responsive strategies in digital governance. This includes integrating gender perspectives into national digital policies and ensuring that women's voices are represented in decision-making processes related to technology and governance.

### **Empowering Women through Digital Transformation and Artificial Intelligence in Leadership Roles**

Digital literacy is not a fixed skill set but rather a spectrum of abilities that develop and evolve, as technology advances, digital literacy evolves, requiring ongoing learning and adaptation. Essentially, it is about recognizing that digital skills are dynamic and should be continually updated and expanded (Umetiti, Nwafor, Arachie & Ifeme 2025). Digital transformation and Artificial Intelligence (AI) are reshaping the landscape of work, providing unprecedented opportunities for women to overcome gender-

related barriers in leadership positions, particularly within public offices. By leveraging digital tools and technologies, women can navigate the complexities of balancing professional responsibilities with personal commitments, ultimately fostering greater gender equality in leadership.

### **Artificial Intelligence Governance and the Prospect of enhancing Gender Equality**

International cooperation on digital technology has largely focused on technical and infrastructural issues, often overlooking the societal impacts on vulnerable and historically marginalized groups. This has created a global governance deficit in addressing the risks and challenges associated with Artificial Intelligence (AI) and ensuring inclusivity. Helene Molinier, UN Women's Advisor on Digital Gender Equality Cooperation, pointed out the lack of mechanisms to prevent the premature release of unsafe AI systems. She called for a global multi-stakeholder governance model to tackle issues like gender and racial bias, harmful stereotypes, and privacy violations. Currently, the benefits and risks of digital technologies are unevenly distributed, with power concentrated among a few corporations, states, and individuals. This exacerbates social vulnerabilities and overlooks broader implications, such as industry disruption and the potential for technology to be used oppressively. The upcoming negotiation of the Global Digital Compact (GDC) in 2024 offers a vital opportunity to embed gender perspectives into a new digital governance framework. Without this focus, existing gender disparities may be amplified by AI systems. UN Women's position paper on the GDC provides recommendations to leverage digital transformation for the empowerment of women and girls, advocating for an equitable digital future for all.

### **METHODOLOGY**

A multi-stakeholder approach is essential for examining the role of artificial intelligence (AI) in enhancing gender equality in public administration. This methodology involves the participation of various stakeholders, including government officials, public administration experts, AI developers, and gender equality advocates. The study begins with a comprehensive literature review of existing research on AI, gender equality, and public administration to identify current trends, best practices, and challenges. In-depth interviews with key informants from these stakeholder groups explore their perspectives on AI's potential to promote gender equality, the associated risks, and strategies for effective implementation. Additionally, several case studies are analyzed to illustrate the application of AI in enhancing gender equality in public administration, showcasing diverse approaches and outcomes from different contexts. Focus group discussions with women in public administration are conducted to gather their experiences and perceptions regarding the use of AI in their workplaces, capturing the voices of those directly impacted. The methodology also includes an analysis of existing policies and regulations related to AI and gender equality, identifying gaps and areas for improvement. This comprehensive approach ensures that the research is inclusive and grounded in the realities of various contexts, providing a holistic understanding of the opportunities and challenges associated with using AI to enhance gender equality in public administration.

### **SUMMARY OF FINDINGS AND DISCUSSIONS**

Despite the potential benefits of Artificial Intelligence (AI), instances of bias in AI systems persist. For example, women constitute only 27 percent of all CEOs in the United States, and in 2015, images associated with the term "CEO" featured women in just 11 percent of Google search results (Dutta, 2023). A study by Anupam Dutta at Carnegie Mellon University revealed that Google's online advertising system was more likely to display high-paying job positions to men than to women. Google acknowledged that advertisers can target specific demographics, including gender, which raises concerns that the algorithm may have concluded that men are more suited for certain roles based on user behavior. This suggests that if predominantly male users respond to high-paying job listings, the algorithm may increasingly direct such vacancies only to men (Larkin, 2023).

Analysis conducted by Zoe Larkin emphasizes the critical issue of bias in AI-based recruitment systems and the urgent need for modifications to ensure fairness in candidate assessments. Amazon's computer models, after analyzing resumes over a decade, recognized that the majority of applications came from



men, reflecting the male dominance in the tech industry. Consequently, the algorithm learned to favor male candidates, resulting in discrimination against applications indicating a female gender (Buolamwini et al., 2018). This scenario highlights the problem of selection bias in AI systems, which arises when training data lacks diversity or is not appropriately randomized.

Furthermore, a study by Joy Buolamwini, Timnit Gebru, and Deborah Raja found that three commercial image recognition products demonstrated superior performance on images of men compared to women, with a pronounced bias against dark-skinned women. This finding underscores a significant issue stemming from the lack of diversity in training data, which can perpetuate existing societal biases and discrimination (Nature, 2023). The evidence indicates that while AI has the potential to improve recruitment processes, it also risks reinforcing historical biases if not carefully managed and audited.

The integration of AI technology in hiring processes raises significant ethical concerns that must be addressed to ensure fairness and accountability. Research highlights the potential for biases and discrimination embedded within AI algorithms, which can adversely affect candidates, particularly women and historically marginalized groups. As noted by Kodiyan (2019) and Fazil et al. (2024), the presence of such biases necessitates the establishment of ethical guidelines and regulations to promote equal opportunities for all applicants.

Ding et al. (2022) and Hasas et al. (2024) emphasize the importance of transparency and explainability in AI systems to mitigate these ethical challenges. By ensuring that AI decision-making processes are clear and understandable, organizations can build trust among users and stakeholders. This transparency is crucial not only for addressing biases but also for fostering an environment that supports women's empowerment in the workplace.

Abdeldayem and Aldulaimi's (2020) study on the use of artificial intelligence (AI) in human resource management (HRM) within Bahrain's public sector offers valuable insights into the current trends and potential benefits of this emerging technology. Their research suggests that AI has the capacity to optimize HR processes and enhance organizational productivity, ultimately contributing to the empowerment of the entire workforce.

Al Shehab and Hamdan (2021) further emphasize the strong correlation between AI and the empowerment of women in the workplace. Their work highlights Bahrain's proactive initiatives to leverage AI technology in order to advance gender equality and promote socio-economic inclusion. These studies underscore the transformative potential of AI in HRM, particularly in the areas of process optimization, productivity enhancement, and workforce empowerment. By harnessing the power of AI, organizations can streamline HR tasks, make data-driven decisions, and create a more equitable and inclusive work environment.

However, it is crucial to acknowledge the ethical considerations surrounding the use of AI in hiring and HR practices. Issues such as bias, privacy, and transparency must be carefully addressed to ensure that AI-powered systems do not perpetuate discrimination and respect the rights of employees.

AI technologies are emerging as innovative tools to enhance women's safety and well-being. Gandi et al. (2024) examine the application of wearable devices, surveillance systems, and AI applications designed to improve women's autonomy and security across various settings. Similarly, Jewani et al. (2024) explore the potential of AI-based tools and applications to address safety concerns and bolster women's independence. Together, these studies highlight the role of AI in creating safer environments for women and promoting their empowerment.

## CONCLUSION

Digital transformation and AI are powerful enablers of gender equality. The world is experiencing a global upsurge where the economies of numerous nations are seeking ways to advance through available technological skills (Nwafor, Umetiti&Ndu-Anunobi, 2024) and digital literacy is at the centre of all these. Providing women with the tools and opportunities necessary to overcome barriers to leadership. By leveraging digital tools for collaboration, communication, and skills development, women can navigate the complexities of remote work while maintaining a healthy work-life balance. As organizations

continue to embrace these technologies, it is essential to prioritize gender equality in the digital age, ensuring that the benefits of technological advancements are shared by all. By fostering inclusive environments and promoting women's participation in leadership roles, we can create a more equitable and innovative society. This comprehensive write-up highlights the multifaceted role of digital transformation and AI in empowering women and addressing gender issues in leadership positions.

## **RECOMMENDATIONS**

To effectively integrate gender equality into digital governance discussions, it is crucial to address the root causes of inequality rather than just the visible consequences of digital divides. This entails establishing a standalone goal on gender equality within the Global Digital Compact (GDC), which should focus on three key areas: ensuring freedom from technology-facilitated gender-based violence, promoting equitable educational and economic opportunities, and ensuring equal voice and participation in decision-making processes. The current concentration of power among a few corporations, states, and individuals leads to the development of discriminatory tools and systems that do not represent the majority of the world's population. Arising from discussions and conclusion, the study makes the following recommendations:

- There is need to prioritize a gender perspective in digital cooperation, which is essential not only for the benefit of women and girls, but also for fostering a more inclusive future for all.
- There is need on the part of policy makers to mainstream gender considerations throughout the GDC framework, building on the 2030 Agenda's commitment to gender equality. This approach should not only address access to digital tools but also transform gender relations in the digital age.
- Government should consciously encourage women participation and leadership in technology, particularly in administrative roles. Overcoming challenges related to accessing AI tools is also critical, as these technologies can significantly impact women's engagement in various sectors.
- There is also the need to foster collaboration among technology and gender experts, as well as developing technology within a regulatory framework that prioritizes and protects human rights. This comprehensive approach aims to ensure that the progress made in gender equality over the past decades is not undermined by biased technology or inaccessible digital tools, ultimately fulfilling the pledge to leave no one behind. Political engagement at the highest levels is necessary to ensure these recommendations are included in digital governance discussions and reflected in national policies.

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