12-2023

Ethical Implications of AI-Based Algorithms in Recruiting Processes: A Study of Civil Rights Violations Under Title VII and the Americans with Disabilities Act

Vanessa Rodriguez
Boise State University

ETHICAL IMPLICATIONS OF AI-BASED ALGORITHMS IN RECRUITING PROCESSES: A STUDY OF CIVIL RIGHTS VIOLATIONS UNDER TITLE VII AND THE AMERICANS WITH DISABILITIES ACT

by

Vanessa Rodriguez

A project completed in fulfillment

of the CORe 591 requirements for the degree of

Master of Science in Cyber Operations and Resilience

Boise State University

December 2023

Abstract

This research paper analyzes the ethical implications of utilizing artificial intelligence, specifically AI-based algorithms in business selection and recruiting processes, with a focus on potential violations under Title VII of the Civil Rights Act of 1964 and Title 1 of the Americans with Disabilities Act (ADA). Amazon's attempt at launching AI recruiting tools is examined. This paper will assess the fairness of AI recruiting practices, considering data collection, potential biases, and accuracy concerns in its implementation process. Additionally, the paper will provide an overview of federal civil rights statutes enforced by the U.S. Equal Employment Opportunity Commission (EEOC) and recent guidance for recruiters, along with recent legal challenges and global AI legislation and case laws, to offer suggestions and provide strategies for the enhancement in the use of AI in the business selection and recruiting process, to promote fairness.

Introduction

With the increasing implementation of AI-based algorithms and machine learning (ML) applications in hiring processes for companies, it raises concerns about their impact on civil rights. This paper reviews Amazon's use of AI hiring practices, specifically in screening applicants. The focus will then move on to further ethical considerations and accuracy concerns with regard to AI-based algorithms and the data collection techniques. Federal civil rights statutes, EEOC guidance, recent legal challenges, and AI case laws in the U.S. and other countries, if any, will also be examined to explore and propose enhancements to ensure fair and equitable AI business selection and recruiting practices, which has become common practice in the business world [1].

Background

As has been observed recently, AI-based algorithms being implemented in recruitment processes have been under scrutiny for having flaws that are making errors and creating unfair or biased outcomes, also referred to as algorithmic bias [2]. “Digital technologies can be a force for good, but too often they emerge from sources reflecting inequality and may amplify existing racial bias and discrimination [3].” AI-based algorithms are based on data that is used to train the algorithm and unfortunately as humans have biases embedded in them, it is not surprising that the algorithms used by data scientists to train the algorithm also reveal these biases [4]. For instance, if a data scientist was searching online for a fireman, police officer, or a Chief Executive Officer (CEO), it would most likely compile a collection of middle-aged, white men, without any disabilities. By feeding this data into the algorithm, the outcome would be biased by excluding women, minorities, and most likely disabled people.

With rapid innovation comes the challenge of legal requirements and regulations to keep up with the pace [5]. AI tools are becoming more of a common practice for large employers trying to be efficient in managing large data and hiring for employees. However, as seen with Amazon, employers need to implement the AI tools by being proactive and aware of employment laws, especially when it relates to potential discrimination.

Amazon's AI Recruitment – Trial and Error

With technical advances and rapid continuous developments of innovative technology, it is no surprise that companies like Amazon have chosen to work smarter, not harder by automating recruitment, or so it hoped. The goal for Amazon, like several large

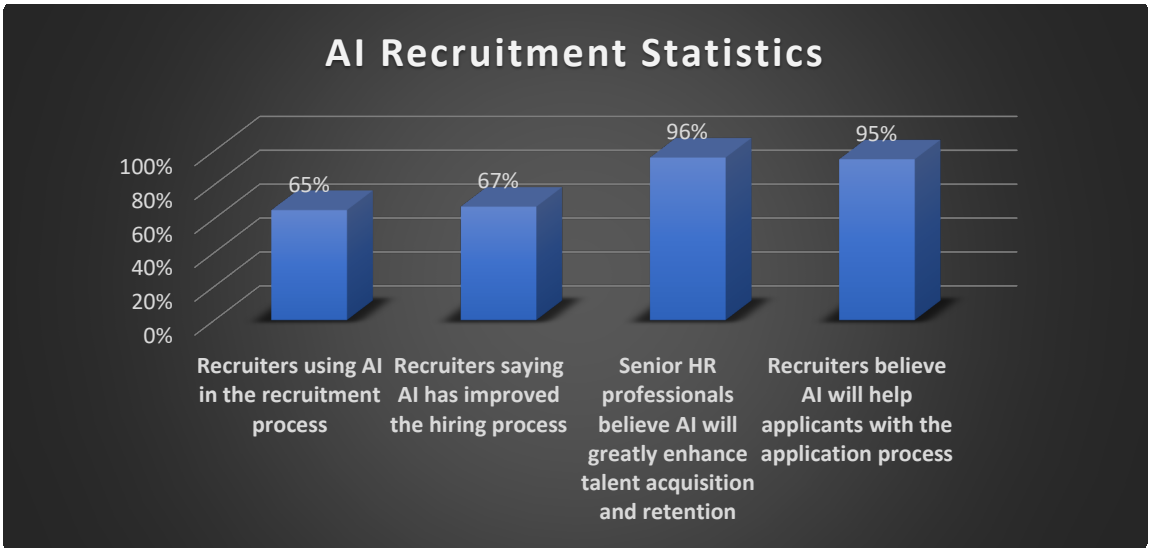
employers, was to be efficient in its screening process of its large pool of applicants for a single position [1]. In 2014, Amazon was the world's largest retailer, and it was gearing up for a massive hiring spree [6]. In its efforts to review applicants' resumes with the goal of finding the best talent out of a huge pool of applicants, Amazon used an AI-based approach to find the best candidates, but it backfired instead. Amazon created 500 computer models to recognize 50,000 key terms.

In 2015, Amazon was forced to shut down its hiring experiment [7]. Amazon discovered that it was discriminating against women applying for engineer jobs. The AI-based "algorithms learned to assign little significance to skills that were common across IT applicants, such as the ability to write various computer codes [6]." The technology also picked up verbs found in male engineer positions, like "executed" and "captured [6]." Thus, it favored male candidates and eliminated female candidates. Gender bias was just one issue among several other inaccuracies. With the outcome showing that it clearly preferred males, it also excluded resumes that included the word "women's," as in "women's chess club captain [6]." Further, it relegated graduates of all-women's colleges [6]. Amazon tried tweaking the programs to be neutral and non-discriminatory, but despite their best efforts to resolve the issue, the problem did not go away [7].

In 2017, the AI tool was no longer being used by Amazon. It was not surprising that the tool developed such a bias because most of the software engineers were males. The algorithm was fed data regarding their resumes to search for resumes that looked similar, so of course it reproduced the same demographics of the existing workforce [7]. Amazon claims that the recruiting tool "was never used by Amazon recruiters to evaluate

candidates." However, it did not dispute that recruiters considered recommendations generated by the recruiting tool [6].

Amazon's use of AI recruiting tools in its hiring processes is a clear example of how AI technology can analytically discriminate against a protected class. In the case of Amazon, it systematically excluded women [1]. Nonetheless, Amazon has learned from its failed AI recruiting tool debacle. Now, efforts are being made to include diversity in its employment screening approach [6]. Several other large companies have been utilizing AI tools in their hiring processes. "55 percent of U.S. human resources managers said artificial intelligence, or AI, would be a regular part of their work within the next five years, according to a 2017 survey by talent software firm CareerBuilder [6]. In a study, it was determined that "99% of Fortune 500 companies" use "talent-sifting software" and "55% of human resource leaders in the U.S." use AI-based algorithms to support their hiring processes. According to Zippia – The Career Expert, in its research study it revealed the following statistics (See graph below) regarding AI recruitment [16]. Notably, 67% of recruiters are saying AI has improved the hiring process.



Nevertheless, the issue that arises is that most companies do not have the resources to verify and test for consistency, accuracy, and errors in the AI hiring tools they are using [5]. The more that these AI tools are used, the more potential and growing concern for unchecked algorithmic bias. Several researchers have cautioned of the significant risks of algorithmic bias and "several philosophers have condemned the use of AI in recruitment, denying that AI could possess the social and empathetic skills needed in the selection process," which can become more prevalent and problematic with regard to illegal discrimination [1].

More Potential Biases and Accuracy Considerations

As was apparent in the Amazon case, in evaluating the data collection of AI recruiting tools that was used, it introduced potential biases, consciously or unconsciously, and accuracy issues into the recruitment process. Since then, several other similar instances have been reported regarding various companies and the continuous use of AI recruiting tools in which applicants may be erroneously excluded or discriminated against due to inaccuracies in the AI-based algorithms used for recruitment. This has led to concerns about diversity and inclusion. "Algorithms that disproportionately weed out job candidates of a particular gender, race, or religion are illegal under Title VII, the federal law prohibiting discrimination in employment. And that's true regardless of whether employers or toolmakers *intended* to discriminate — "disparate impact discrimination" is enough to make such practices illegal [7]." However, it is a challenge "to sue over disparate impact, particularly in 'failure-to-hire' cases because it's so difficult for someone who never got an interview to identify what policy or practice led to the rejection [7].

LinkedIn has taken a step further by providing employers with algorithmic rankings for potential employees based on their fit for jobs posted on the website [6]. However, John Jersin, vice president of LinkedIn Talent Solutions said the service is not meant to eliminate the conventional recruiting. Jersin said, "I certainly would not trust any AI system today to make a hiring decision on its own. The technology is just not ready yet [7]."

Several activists are worried about the lack of transparency in AI. They are focused on the fairness of algorithms because of the data sets being susceptible to several biases. The American Civil Liberties Union (ACLU) is currently challenging a law that will allow researchers and writers, who are investigating and testing AI-based algorithms on websites for potential discrimination, to be criminally prosecuted [7]. Nonetheless, Rachel Goodman, a staff attorney with the Racial Justice Program at the ACLU, acknowledges that it will be difficult to legally challenge an employer based on algorithmic bias in hiring because job applicants may not know whether the recruiting tool was being used [6].

AI-based screening facial recognition software is a popular tool used by recruiters for analyzing video interviews and evaluating applicant responses to provide information on certain personality characteristics and skills [1]. Unfortunately, AI lacks any capacity for empathy and the ability to discern emotional intelligence, which diminishes the overall reliability. Although sophisticated technology can recognize and replicate emotions using sensors, which is characterized as affective computing, it is limited in comprehension of emotional states. Complex emotions such as self-pity, regret, and loneliness, as well as nuanced expressions of joy such as pride and confidence, remain indecipherable to AI

[1]. Moreover, AI struggles to recognize and understand values and charisma, which results in the loss of subtleties. “Over the last decade, this technology has experienced a booming growth based on advances in deep learning,” while also being controversial, especially with its use in policing [8]. In 2020, facial technology made headlines when the European Commission proposed to ban facial recognition technology in the public space and big tech companies announced to stop selling the technology to the police [8].

In a report by Brookings Institution on auditing employment algorithms for discrimination, stated that “models used to analyze natural language” in resumes or interviews have shown biases against women and people with disabilities [10]. “Speech recognition models have demonstrated clear biases against African Americans and potential problems across dialectical and regional variations of speech. Commercial AI facial analysis, aside from being largely pseudoscientific, has shown clear disparities across skin color and is highly concerning for people with disabilities [10].”

In a 2021 economic study, evidence revealed racial discrimination in present-day hiring processes when researchers submitted about 84,000 fake applications to entry-level positions at companies across the U.S. Employment applications “with distinctively Black names, like Antwan, Darnell, Kenya, and Tamika, were less likely on average to receive a response compared to applications with distinctively white names like Brad, Joshua, Erin, and Rebecca [12].”

On June 20, 2023, during a webinar EEOC Legal Update with legal counsel Carol Miaskoff, she discussed the ethical implications of AI facial recognition tools. When looking at facial recognition technology, one ethical consideration, for instance, can be

when screening applicants and the interview is focusing on making eye contact, looking at the camera directly, voice tone, volume, and other requirements that a person with a particular disability may not be able to demonstrate. How does the technology decipher that the applicant may be someone who has disabilities such as facial paralysis or autism, which is a similar type of disability? Furthermore, does making that interpretation then mean that the employer is acknowledging that the applicant has a disability, prior to making its hiring decision, which means that the employer is then illegally discriminating against someone with disabilities in its hiring processes?

During an AI and Employment Decisions EEOC FEPA Conference via Zoom on June 20, 2022, ReNika Moore, the director of the Racial Justice Program, discussed the major equity concerns in employment AI such as lack of transparency, notice or informed consent, and many proxies for protected categories. Moore also stated that AI can weed people out with physical disabilities. There may be lack of notice and meaningful access to accommodations, which can lead to applicants having to reveal their disability, and then to more intentional discrimination. Another concern could be natural language processing issues. Moore stressed the potential violations of Title VII, the ADA, the Age Discrimination in Employment Act (ADEA), and the Equal Pay Act (EPA).

Legal Framework

Almost six decades ago, Title VII of the Civil Rights Act of 1964, made it illegal for employers to discriminate based on race, color, religion, sex, and national origin [11, 12]. Unfortunately, as has been discussed and discovered throughout this research, AI-based algorithmic recruiting tools don’t always comply with Title VII requirements. However, not only is there proof of AI racial and gender discrimination, but just as previously

discussed when using facial recognition tools or when people with disabilities require accommodations, it is also perpetuating biases against people with disabilities, Title I of the Americans with Disabilities Act (ADA) of 1990 prohibits private employers, state and local governments, employment agencies and labor unions from discriminating against qualified individuals with disabilities in job application procedures, hiring, firing, advancement, compensation, job training, and other terms, conditions, and privileges of employment [13]. Under the ADA, people have the right to request accommodations during the recruiting process under jurisdiction covered by the EEOC. As Moore stated, applicants in those circumstances who require accommodations for their disabilities could lead to the applicants having to divulge information regarding their disability in the hiring process. AI algorithms can unintentionally disadvantage candidates with disabilities.

Recent Guidance

In December 2020, ten U.S. Senators requested information regarding the design, use, and effects of AI-based recruiting technology from the EEOC [5]. They also wanted information regarding their authority and capability to oversee and investigate this topic of new cutting-edge technology used for recruitment by employers. In January 2021, President Biden appointed Commissioner Charlotte Burrows to EEOC Chair. The EEOC has been working on updating their guidance so that "AI helps eliminate rather than exacerbate discrimination in the workplace [5]." On October 28, 2021, the EEOC launched the initiative on AI and algorithmic fairness, which includes guidance and research as the AI tools continue to evolve. The focus is to ensure that AI recruitment technology is used in a way that complies with federal anti-discrimination laws [14]. The guidance will inform not only employers, but applicants, employees, and technology

vendors, as well [14]. Burrows stated that the EEOC is aware that the AI "tools have great potential to improve our lives, including in the area of employment [14]." However, she is also aware that they could "perpetuate bias or create new discriminatory barriers to jobs [14]." The EEOC is committed to prioritizing this initiative. As part of the new initiative, the EEOC plans to:

- Establish an internal working group to coordinate the agency's work on the initiative.
- Launch a series of listening sessions with key stakeholders about algorithmic tools and their employment ramifications.
- Gather information about the adoption, design, and impact of hiring and other employment-related technologies.
- Identify promising practices.
- Issue technical assistance to provide guidance on algorithmic fairness and the use of AI in employment decisions [14].

On May 12, 2022, the EEOC and the Department of Justice (DOJ) Civil Rights Division released guidance warning employers, including state and local government employers, that the use of algorithmic screening tools to assist them in "hiring workers, monitoring worker performance, determining pay or promotions, and establishing the terms and conditions of employment could be a violation of the ADA [15]." Certain hiring practices, like "personality tests, AI-scored video interviews, and gamified assessments," fail to consider individuals who may need accommodations [12]. What if an individual

who suffers from anxiety speaks rapidly during a video interview? An AI algorithm that ties a comfortable speaking pace with successful career outcomes would more than likely give that candidate a low score for the interview and probably not consider them for the position [12]. Thus, leading to a potential violation of the ADA.

As AI continues to be utilized for hiring, some guidance employers is as follows:

- **Apply existing law to algorithmic tools**. Although AI-based algorithms do not perfectly fit within the current laws, "employers need to ensure that both the criteria for selection and the performance measures are both fair and job-related [5]."
- **Develop and adjust the data fed into the hiring programs and algorithms.** Ensure the data is job-related, it promotes diversity and inclusion, and neutrality. The data must also be protected, secured, and regulated for privacy concerns [5].
- **Look for ways to strengthen accountability.** There should be consistent auditing to monitor how the tools are being used in the processes [5].
- **Aim to be transparent and fair.** Consider what is told to candidates about the use of AI recruiting tools. If they are notified about how the tools are used for screening or evaluation, it can provide some insight on how decisions are made [5].

AI recruitment is a new and innovative way to go through the hiring process that has become more popular among recruiters, but it is still imperative to recognize the human element of the hiring process, which AI, at least for now, cannot identify or analyze [16].

Recent Legal Challenges

On August 24, 2023, the EEOC settled its first lawsuit regarding AI bias in hiring with iTutorGroup Inc. (now known as Fullmind), an organization that provides English-language tutoring services to students in China [17]. While iTutorGroup denied any wrongdoing, evidence supported that the company programmed its AI software to reject older applicants, which was in violation of the ADEA [17]. The AI software specifically rejected females over the age of 55 and males over the age of 60. It was determined that the company failed to hire over 200 qualified candidates in 2020. Typically, candidates do not know why they are not selected in the hiring process, but in this particular case one candidate resubmitted her application with a different birthdate and iTutorGroup offered the younger candidate, or so they thought, an interview. With this evidence against the company, it was ordered to implement anti-discrimination policies and conduct mandatory training. The company was also ordered to pay out $365,000.00 to all the job seekers who were denied using the AI tool. The applicants were also provided an opportunity to reapply.

As was apparent from this case, the use of AI recruiting tools can "result in intentional or unintentional discrimination if applicants are disproportionately rejected or otherwise disadvantaged based on a federally protected characteristic such as age, race, or sex without sufficient evidence of job-relatedness [17]."

There are more AI tools that involve a lot of machine learning. This particular "allegation falls under the disparate treatment theory of discrimination (i.e., intentional discrimination) as opposed to disparate impact theory (i.e., where a facially neutral tool results in discrimination) [17]." This settlement reveals that the EEOC is enforcing both

disparate treatment and disparate impact, and it is using a broad definition of what establishes AI [17]. With the evolving growth and utilization of AI recruiting tools, it should come as no surprise that there will likely be a rise in several more AI-based legal challenges similar to the one against iTutorGroup brought forth by the EEOC in the near future.

Other Challenges

In 2019, the Electronic Privacy Information Center (EPIC) filed a petition asking the Federal Trade Commission to investigate AI being used by a vendor, HireVue, a primary provider of video-interviewing technology [9]. EPIC alleged that HireVue was not following "international and national standards of fairness, transparency and accountability" in the use of its AI tools [9]. EPIC asserts that the "unregulated use of AI causes harm to job candidates, who are subject to opaque and unprovable decision-making in employment and other decisions [9]."

According to Matissa Hollister, an assistant professor of organizational behavior at McGill University in Montreal who studies the use of AI in the workplace, she states that companies have also used the unknown and the publicity of AI tools in a way to get consumers to buy their products. However, now she believes there is increased pressure for the companies to be more transparent in what they do [9].

U.S. Legislation

With the expansion of AI utilization, it has garnered increased scrutiny from regulators and lawmakers who are particularly focused on issues of fairness and ethics associated with the technology. Key concerns include the lack of transparency in the operations of

many AI vendors' tools, often functioning as "black boxes" without easily comprehensible explanations of their inner workings [9]. Additionally, there is apprehension that machine-learning algorithms may perpetuate or intensify unconscious bias in the context of hiring decisions. This heightened scrutiny has resulted in a surge of legislative and regulatory initiatives aimed at establishing more comprehensive oversight of AI being used in recruiting processes.

Some U.S. states are getting involved by employing data privacy measures and implementing restrictions on traditional hiring practices, such as Ban-the-Box and salary history, with the aim of minimizing discriminatory consequences [5]. This definitely creates an array of guidelines that employers are required to follow and there looks to be more in the near future.

Illinois signed legislation regulating the use of AI in video job interviews. The law requires companies to notify candidates on how the technology will be used to analyze their video interviews, explain how AI works, and obtain consent before any interview takes place [9]. New Jersey and Washington have also signed legislation for AI. New York City introduced its own bill intended to regulate the use of AI in hiring, salaries, and other HR-related decisions. If the bill is adopted, it will prohibit the sale of AI technology to companies, unless they have previously been assessed for bias.

The following includes a list of some state and local laws for reference:

- (IL) Artificial Intelligence Video Interview Act, 820 ILCS 42, requires demographic recordkeeping and reporting;

- (IL) Biometric Information Privacy Act, 740 ILCS 14 et seq. requires, inter alia ("among other things"), notice and consent and imposes data retention requirements;
- (NYC) Automated Employment Decision Tools law, Int. No. 1894-A, requires, inter alia, independent audit of tools;
- (MD) Facial Recognition Technology law, H.B. 1202, bans employers from using FRT pre-employment without notice and consent.

AI Case Laws in Foreign Countries

There have been legal cases and developments related to AI innovations in various jurisdictions. The legal landscape is obviously very active and new cases and regulations continue to develop. While ethical principles for AI are becoming more globally aligned, there are significant disparities in AI regulations across regions, with more than seven hundred policy initiatives implemented in sixty countries. For instance, the European Union is advocating for a ban on various high-risk AI applications, such as facial recognition. In contrast, China, with a more permissive approach to AI governance, actively promotes the technology [8]. The prospect of establishing a comprehensive global AI regulatory framework in the medium or long term seems highly unlikely. As a result, organizations adopting AI technologies need to be vigilant regarding public scrutiny. In case of allegations of ethical lapses, they should understand the nature of the criticism to develop an appropriate strategy for responding and safeguarding their reputation [8]. There are several notable AI-related legal developments in foreign countries. Some of these are as follows:

- Brazil - In early October 2021, Brazilian legislators successfully approved a legislation that establishes AI. The legislation delineates the parameters within which AI can be designed and employed in the country, particularly emphasizing transparency within the public sector. Additionally, it underscores the necessity for the implementation of regulatory measures that foster innovation. Despite these positive strides, challenges in the development of AI in Brazil have been acknowledged in the legislation. These challenges include resource constraints and potential tax burdens on companies involved in AI development. The bill places a strong emphasis on transparency throughout the AI development process, requiring the disclosure of operating systems through an AI agent responsible for overseeing the technology's development and operation [18].
- United Kingdom (UK) - The UK government, in its national AI strategy unveiled in September 2021, highlighted its current absence of comprehensive, AI-specific regulations. Instead, the government has favored a sector-led approach to regulate AI. However, this stance could potentially shift with the release of governance and regulations of AI by the UK's Office for AI in 2024 [19]. The UK has agreed to partner with the US AI Safety Institute and the Government of Singapore to collaborate on AI safety testing. The UK is uniting globally to tackle the challenges of this fast-paced technology [19]. The UK’s AI Safety Institute Chair Ian Hogarth said, “The support of international governments and companies is an important validation of the work we’ll be carrying out to advance AI safety and ensure its responsible development [19].”

- European Union (EU) - Countries within the EU are governed by the General Data Protection Regulation (GDPR), which enforces strict rules on the processing of personal data. AI hiring tools must comply with these regulations, ensuring the security of applicants' privacy rights. The EU continues to actively work on developing AI regulations. The proposed AI Act aims to establish a harmonized regulatory framework for AI technologies. While not specific case laws, these regulations are indicative of the legal direction the EU is taking concerning AI [20].
- Canada - Canada has seen legal discussions on AI ethics and privacy. The Personal Information Protection and Electronic Documents Act (PIPEDA) governs how private-sector organizations collect, use, and disclose personal information, including that processed by AI systems [21].
- China - China has been actively promoting AI development, and legal discussions have focused on issues such as data privacy and the ethical use of AI. The Cybersecurity Law in China addresses data protection concerns, and there have been regulatory efforts to establish guidelines for AI development and use [22].

Legal frameworks and cases will vary, and ongoing discussions on AI ethics, bias, and privacy continue to shape the legal landscape globally.

Proposed Ethical Enhancements

As companies continue to utilize AI recruiting tools, the challenge is how to keep bias out of their own AI algorithms. The problem that is consistent is that the data sets used in the algorithms are “skewed or not fully representative of the groups they serve [1].” The reason for this is because the algorithms are built by humans and of course all humans

have biases. Several companies have deployed AI recruiting practices and are now reacting to the aftermath of errors. “It’s more of a reactive mode than a proactive one,” said Neil Sahota, who advises the United Nations on AI, referring to the way organizations approach limiting AI bias [23]. This reactive and retroactive approach of limiting bias is costly and demands a lot of resources. Conducting an assessment “by a model risk management organization,” testing for potential unintended effects, and ensuring adherence to responsible and ethical AI is the best approach to enhancing AI recruiting tools [2]. A layer of governance to guarantee transparency will definitely reduce algorithmic bias. Continuous monitoring and assessment of practices is always beneficial in any recruiting process [23]. The ACLU has called for regulators to oversee not only the AI software, but the “applicant pools and hiring outcomes for companies that deploy the software,” as well [7]. As previously stated, the EEOC has launched an initiative in which its mission is to research the “implications of algorithms for fair employment [7].” AI-based algorithms will replicate and possibly increase the biases that exist in humanity unless they are planned and monitored very thoroughly. “The right kind of oversight is required to make sure that happens [7].” The following is a list of proposed guidance for enhancements when using AI recruiting tools:

- Define “fairness” within the context of what you want to achieve;
- Optimizing for accuracy isn’t always the best solution;
- Use auditing tools from the beginning;
- Be open about your technology’s shortcomings;
- Convene a comprehensive group of stakeholders; and

- Lastly, try to create some way of testing your algorithm once it is released into the world [4].

Conclusion

There are several key pieces to considering ethical implications of AI-based algorithms in business selection and recruiting processes. Employers are increasingly using AI tools in their practices and will continue to do so as it becomes more common practice in this digital evolving world. Ethical responsibilities need to be defined to guide employers on how to use AI-based algorithm recruiting tools correctly and with fairness. They need to be designed with a proactive approach. The recruiters attempting to utilize these tools need to build it by keeping the human element in mind since AI is still not developed to be able to detect certain human components. It is especially significant to keep in mind the current anti-discrimination laws, such as Title VII and the ADA, so that the tools comply with all current employment laws. Transparency of the tools being deployed seems to be the predominant theme when it comes to using AI recruiting tools. In order for companies to succeed with these AI tools, they need to prepare to have the appropriate resources to launch, monitor, and test them regularly. Another key component to utilizing AI tools correctly and to avoid algorithmic bias is to have a layer of governance and guidance from agencies such as the EEOC and the DOJ Civil Rights Division. As AI has already become a top priority for several countries, including the U.S., there will likely be ongoing research and policy considerations for the future. Nonetheless, the need for ongoing evaluation and refinement will definitely ensure fair and equitable AI recruitment processes.

References

[1] A.L. Hunkenschroer and A. Kriebitz, “Is AI recruiting (un)ethical? A human rights perspective on the use of AI for hiring,” AI and Ethics, vol. 3, Jul., pp.199-213, 2022.

[2] “What is Algorithmic Bias?” *datacamp.com*, July 2023. [Online]. Available: https://www.datacamp.com/blog/what-is-algorithmic-bias. [Accessed: December 5, 2023].

[3] S. Waikar, “Designing Anti-Racist Technologies for a Just Future,” *HAI | Stanford University*, June 28, 2021. [Online]. Available: https://hai.stanford.edu/news/designing-anti-racist-technologies-just-future. [Accessed: December 5, 2023].

[4] U. Verma, “Algorithmic Bias and the Tools Working to Prevent It,” *builtin.com*, updated January 5, 2024. [Online]. Available: https://builtin.com/data-science/auditing-algorithms-data-science-bias. [Accessed: December 5, 2023].

[5] E. Reicin, “AI can be a force for good in recruiting and hiring new employees,” *Forbes*, November 16 2021. [Online]. Available: https://www.forbes.com/sites/forbesnonprofitcouncil/2021/11/16/ai-can-be-a-force-for-good-in-recruiting-and-hiring-new-employees/?sh=e1666c91e167. [Accessed: December 6, 2023].

[6] J. Dastin, “Insight - Amazon scraps secret AI recruiting tool that showed bias against women,” *Reuters*, October 10, 2018. [Online]. Available: https://www.reuters.com/article/idUSKCN1MK0AG/. [Accessed: December 7, 2023].

[7] R. Goodman, “Why Amazon’s Automated Hiring Tool Discriminated Against Women,” *ACLU*, October 12, 2018. [Online]. Available: https://www.aclu.org

/news/womens-rights/why-amazons-automated-hiring-tool-discriminated-against. [Accessed: December 7, 2023].

[8] Y. Wen and M. Holweg, "A phenomenological perspective on AI ethical failures: The case of facial recognition technology," AI & Society, Mar. 2023.

[9] D. Zielinski, "Addressing Artificial Intelligence-Based Hiring Concerns," May 22, 2020. [Online]. Available: https://www.shrm.org/topics-tools/news/hr-magazine/addressing-artificial-intelligence-based-hiring-concerns. [Accessed: December 7, 2023].

[10] A. Engler, "Auditing employment algorithms for discrimination," *Brookings.edu*, March 12, 2021. [Online]. Available: https://www.brookings.edu/articles/auditing-employment-algorithms-for-discrimination/. [Accessed: December 9, 2023].

[11] U.S. Equal Employment Opportunity Commission, "Title VII of the Civil Rights Act of 1964," *U.S. Equal Employment Opportunity Commission*. [Online]. Available: https://www.eeoc.gov/statutes/title-vii-civil-rights-act-1964. [Accessed: December 5, 2023].

[12] A. Peyush, "AI Discrimination in Hiring, and What We Can Do About It," *NewAmerica.org*, September 27, 2022. [Online]. Available: https://www.newamerica.org/oti/blog/ai-discrimination-in-hiring-and-what-we-can-do-about-it/. [Accessed: December 9, 2023].

[13] U.S. Equal Employment Opportunity Commission, "Facts About the Americans with Disabilities Act," *U.S. Equal Employment Opportunity Commission*. [Online]. Available: https://www.eeoc.gov/fact-sheet/facts-about-americans-disabilities-act. [Accessed: December 5, 2023].

[14] U.S. Equal Employment Opportunity Commission, “EEOC Launches Initiative on Artificial Intelligence and Algorithmic Fairness,” *U.S. Equal Employment Opportunity Commission*, October 28, 2021. [Online]. Available: https://www.eeoc.gov/newsroom/eeoc-launches-initiative-artificial-intelligence-and-algorithmic-fairness. [Accessed: December 5, 2023].

[15] M. Capezza and E. Piercey, “EEOC Issues Guidance Addressing How the Use of Artificial Intelligence in Employment Decisions Could Violate the ADA,” *Mintz*, June 8, 2022. [Online]. Available: https://www.mintz.com/insights-center/viewpoints/2226/2022-06-08-eeoc-issues-guidance-addressing-how-use-artificial. [Accessed: December 6, 2023].

[16] J. Flynn, “15+ AI Recruitment Statistics [2023]: Hiring Trends, Facts, and Data,” *zippia.com*, May 16, 2023. [Online]. Available: https://www.zippia.com/employer/ai-recruitment-statistics/#Ai%20Recruitment%20FAQ. [Accessed: December 8, 2023].

[17] B. Timko, D. Schmidt, and G. Boudjalis, “EEOC Settles First AI Hiring Bias Lawsuit,” *DCI Consulting*, August 24, 2023. [Online]. Available: https://blog.dciconsult.com/eeoc-settles-ai-hiring-lawsuit. [Accessed: December 6, 2023].

[18] “Brazil approves AI regulation bill,” *Indiaai*, October 12, 2021. [Online]. Available: https://indiaai.gov.in/news/brazil-approves-ai-regulation-bill. [Accessed: December 8, 2023].

[19] “Prime Minister launches new AI Safety Institute,” *Gov.*UK, November 2, 2023. [Online]. Available: https://www.gov.uk/government/news/prime-minister-launches-new-ai-safety-institute. [Accessed: December 8, 2023].

[20] “EU Commission proposes new rules for excellence and trust in AI,” *Indiaai*, April 22, 2021. [Online]. Available: https://indiaai.gov.in/news/eu-commission-proposes-new-rules-for-excellence-and-trust-in-ai. [Accessed: December 8, 2023].

[21] S. Mehra, “These 5 countries are championing the grey area of AI regulations,” *Indiaai*, October 13, 2021. [Online]. Available: https://indiaai.gov.in/article/these-5-countries-are-championing-the-grey-area-of-ai-regulations. [Accessed: December 7, 2023].

[22] Q. Xijia, “China, EU are suggested to strengthen cooperation on AI governance, legislation,” *GlobalTimes*, December 10, 2023. [Online]. Available: https://www.globaltimes.cn/page/202312/1303343.shtml. [Accessed: December 8, 2023].

[23] I. Bousquette, “Rise of AI Puts Spotlight on Bias in Algorithms,” *The Wall Street Journal*, March 9, 2023. [Online]. Available: https://www.wsj.com/articles/rise-of-ai-puts-spotlight-on-bias-in-algorithms-26ee6cc9. [Accessed: December 6, 2023].