

Ethical Concerns While Using Artificial Intelligence in Recruitment of Employees

[http://doi.org/10.21272/bel.6\(2\).6-11.2022](http://doi.org/10.21272/bel.6(2).6-11.2022)

Aashima Gupta, ORCID: <https://orcid.org/0000-0003-4715-6910>

PhD, Research Scholar, Lovely Professional University, Phagwara, Punjab, India

Mridula Mishra, ORCID: <https://orcid.org/0000-0002-5585-4236>

Dr, Professor, Department of Human Resource Management, Lovely Professional University, Phagwara, India

Corresponding author: aashima.gupta23@yahoo.com

Abstract

Artificial Intelligence has evolved as an alternative to human intelligence. It affects the lives of billions of people. It mimics humans by solving problems and understanding the task. These Artificial Intelligence technologies must have some moral values and ethics incorporated within itself. The usage of AI is growing worldwide, posing more ethical issues to consider. In recent years, many companies have used various Artificial Intelligence tools such as chatbots and face recognition software for fulfilling their hiring needs. This research work will focus on such devices that help manage one of the important functions of human resources: recruitment. It will identify various challenges and ethical issues that a firm faces while assimilating Artificial Intelligence tools in the process of Recruitment. The hiring companies need to make the job seekers realize that AI-powered tools would be free from discrimination and safeguard privacy. The purpose of the study is to identify the ethical issues while incorporating Artificial Intelligence into hiring needs. The study will be based on reviews and features of applications. The study mentions various applications whose features might be unethical for job seekers. Findings reveal that the significant unethical issues faced by the hiring companies are Data privacy and unconscious biasness. The biasness is due to the algorithm that works according to the inputs fed to build it, and the programmer might have subconscious biasness in his mind. AI has restored concerns regarding privacy and data protection. According to a report by UNESCO, Women make up only 22% of all AI professionals. Gender prejudices and stereotyping are perpetuated in AI technologies due to their underrepresentation in the sector. Virtual personal assistants like Siri, Alexa, and Cortana are “female” by default, which is no accident. The submissiveness they display is an illustration of how Artificial Intelligence (AI) might continue to support and extend gender bias in our society.

Keywords: Artificial Intelligence, Recruitment, Applications, Ethical Issues.

JEL Classification: E27.

Cite as: Gupta, A., Mishra, M. (2022). Ethical Concerns While Using Artificial Intelligence in Recruitment of Employees. *Business Ethics and Leadership*, 6(2), 6-11. [http://doi.org/10.21272/bel.6\(2\).6-11.2022](http://doi.org/10.21272/bel.6(2).6-11.2022).

Received: 20 March 2022

Accepted: 20 May 2022

Published: 30 June 2022



Copyright: © 2022 by the author. Licensee Sumy State University, Ukraine. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

Introduction

According to Edwin B. Flippo, “Recruitment is the process of searching the candidates for employment and stimulating them to apply for jobs in the organization”. It performs the vital role of drawing and acquiring human resources in the organization, considered the most important element (Barber, 1998). The Internet has created various opportunities for organizations where some stages of digitalization can be observed over the years globally and in India, impacting the Recruitment function. Online Recruitment is the method of recruiting where the Internet or technology is applied to the source, attract, screen, assess, and prospective job applicants. It is using Information technology to acquire talent within the organization. Online and social networking websites have also helped the prospective employees to build their profiles and search for organization information both formally and informally (Dinesh, 2015; Madia, 2011).

John McCarthy gave the first definition of Artificial Intelligence in 1956. He defined it as “the science and engineering of making intelligent machines” (McCarthy, 1955). In the words of Rich and Knight (2004), “Artificial Intelligence is attempting to build artificial systems that will be performing tasks that humans currently are doing better”. Artificial Intelligence has been assisting Human Resource Functions in recent years. This study focuses on the use of AI in Recruitment and the challenges a company faces morally and ethically. These Artificial Intelligence technologies must have some moral values and ethics incorporated within itself. In recent years, many companies have used various Artificial Intelligence tools such as chatbots, face recognition software, etc. For fulfilling their hiring needs. Before identifying major unethical issues faced by the companies, it is important to look at some of the applications and their features that are used in the Recruitment process.

1. XOR

XOR is a modern communication platform that allows recruiting teams to communicate with candidates via text messaging, WhatsApp, E-mail, video, and phone calls. It allows them to employ the best individuals more efficiently. AI chatbots also assist in automating the recruiting process. XOR can engage candidates who apply through job boards (LinkedIn), company career site or are already in the company’s ATS. The chatbots are used for screening, scheduling, and interviewing. It converses with potential employees and records all the information like messages, calls, and data in one place for future references.

2. BRAZEN

The Brazen recruiting chatbot helps pre-qualify the candidates, answer significant questions and even collect the contact information needed so that the company can follow up. It enables the candidates and the organization to walk the path directly linking to each other. Brazen’s recruiting chatbot lets the company save time by having live chats with qualified candidates anytime and anywhere. One of its standout features is that the chatbot provides candidates with replies in the text and video form

3. MYA

Mya is a Recruitment chatbot that helps accelerate applicant communication and conversation with conversational AI. It helps lower the time taken between application and interview, improves the post apply candidate experience, and connects recruiters to qualified candidates. Mya Recruit screens high volumes of applicants faster without sacrificing candidate experience or employer brand.

4. OLIVIA

Olivia is a product of Paradox. The conversational AI assistant saves the world’s best talent acquisition teams countless hours and creates a unique world-class candidate experience by automating recruiting tasks through intelligent, simple conversations. Olivia can collect feedback at every stage in the hiring process—from someone’s first interaction to their first day on the job.

5. PYMETRICS

Unilever is one of the companies that has been using an effective AI tool known as Pymetrics. It transforms the hiring process for future generations. It helps identify the highest potential candidates to move forward with fairness and accuracy. The assessments of Pymetrics are based on Gold-Standard behavioural research. It uses core games to measure cognitive and emotional attributes fairly and accurately – Attention, Generosity, Risk Tolerance, Fairness, etc. It has additional games which can measure the quantitative reasoning and numerical ability.

6. OCTOPARSE

Although this is not directly a recruiting tool, it is a data scraping tool that the companies might use to scrape data of potential employees to gather information about them. A social media scraping tool is an AI recruiting tool that collects a large amount of data through an applicant's social media profile and uses that information to analyze such behaviors as future engagement levels and turnover (Ahmed, 2018). It is helpful for the recruiters to gather leads that would help find job seekers who might be interested in working in the organization.

Literature Review

Recruitment is an important aspect of an organization's human resource planning. Companies conduct Recruitment activities using various methods, including internal searches, advertisements, employee

referrals, employment agencies, and the Internet. Recruitment is an important part of human resource management. It is defined as finding suitable people and encouraging them to apply for jobs within the company. It is the process of identifying potential personnel sources to meet the staffing agenda's criteria and recruiting enough employees to pick applicants properly. Hiring is the process of employing new employees, engaging the services of (someone) for a charge, or employing (someone) for wages (Dinesh, 2015).

Artificial Intelligence can be defined as a collection of numerous analytic tools that work together to mimic the behaviour of living things (Zurada, Jacek, Marks, and Robinson, 1994). Artificial Intelligence is on the verge of revolutionizing every industry, from banking to health care, logistics, legal education, and HR services (Rathi, 2018). "An ideal intelligent machine is a flexible agent that recognizes its environment and takes actions that maximize its likelihood of success at some goal", according to the definition (Yawalkar, 2019).

Upadhyay, Ashwani Kumar, and Komal Khandelwal (2018) looked at the use of Artificial Intelligence in the employment process and the ramifications for employers. Clients and applicants involved in the recruiting process may benefit from the findings. The study suggests that AI may be used to screen applicants. AI will assist in the screening of CVs and the screening of social media data to determine ethics, views, attitudes, and personality traits. AI is unbiased, and it screens resumes in a fair manner.

This paper has adopted secondary data sources to extract information about various tools and applications of Artificial Intelligence and to identify various ethical issues that the companies might be facing to assimilate them into their organization for fulfilling hiring needs. There are still a lot of obstacles to overcome when it comes to implementing AI in the Recruitment process. People looking for work have a positive perception and belief that they will have human interaction throughout the recruiting process (Maduravoyal, 2018). AI still has some shortcomings and flaws that can cause it to fail to recognize patterns and draw conclusions. AI may reject a candidate's profile if it cannot scan a specific font used in the resume. It is a clear example of how every technological advancement has positive and negative consequences (Zahidi, Farah, Yasar Imam, Ahmad Umair Hashmi, and Mirza Mashkoo Baig, 2020).

Beneduce G. (2020) states that Artificial Intelligence technologies have exploded in popularity in recent years. Despite the various advantages, there are some doubts that Artificial Intelligence may inherit human prejudice. The purpose of this article is to see how much Artificial Intelligence bias is preventing the use of these technologies in Recruitment. The survey-based questionnaire was used to collect data for the study, which focused on gender bias. According to data, recruiters see Artificial Intelligence to improve the Recruitment process, but bias is a deterrent to implementing those technologies. Despite women's advancement in various aspects of society, there is always a potential risk of Gender biasness in the Recruitment process. Several studies reveal a risk of gender stereotypes that impacts Recruitment through AI. Beneduce G. (2020) takes the example of Google to show how google shows ads to male candidates more frequently than female candidates. Although there is no evidence to prove that it was intentional and might be based on click-through rates, it indirectly shows that even AI shows unconscious gender biasness.

Kumar, V. Uday, A. Mohan, B. Srinivasa SP Kumar, Ramesh Ponnala, B. Sateesh, and P. Dundy Sai Maruthi (2021) asserts that Artificial Intelligence has progressed to the point that it can now function as a virtual human. Artificial Intelligence has ethical norms that are similar to human standards and ethics. Artificial Intelligence technology, on the other hand, should incorporate moral ideals. The amount of work done at the institution has expanded over the years. The amount of effort spent recruiting the necessary faculty has become critical to the longevity of universities. Artificial Intelligence can be employed in the Recruitment process, saving the Recruitment board a lot of time. The primary goal of this study is to investigate all of the AI tools utilized in recruiting and the issues that come with introducing AI into the Recruitment process. The negative element of Recruitment is referred to as bias in AI. It invites AI's unintended consequences. In AI, there seem to be various types of bias. The first one is the Historical bias, which states that companies led by women are more productive than enterprises led by males. Women have demonstrated that they can maintain greater standards than men. If AI takes over the recruiting process to eliminate gender discrimination, the training examples given to Artificial Intelligence technology must be altered. The second form is Representation bias, where the way the data is obtained must be appropriate for all age groups. If the information is acquired using smartphones, older people's data may be absent due to a lack of knowledge about technology usage. The third prejudice is Measurement bias, which states that black people should not be treated differently than white people. The fourth sort of bias is Aggregation bias, in which AI is supposed to ignore racial distinctions. The fifth category is Evaluation bias, in which AI should not display any bias toward lighter coloured people, such as awarding white people more rating marks and

dark-skinned people less. The final type is Deployment bias, in which the final product must be utilized exactly as it may be utilized, or the model will be rendered ineffective.

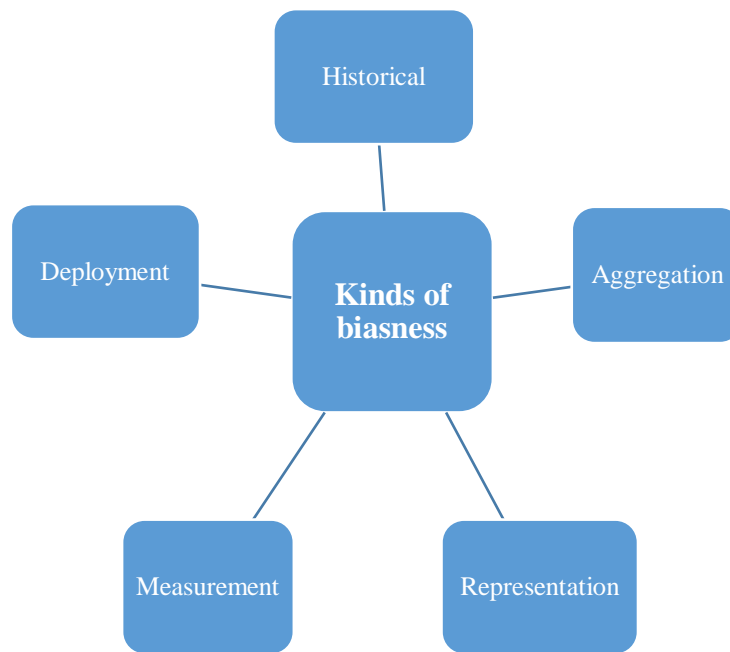


Figure 1. Kinds of Biasness

Source: Kumar, V. Uday, A. Mohan, B. Srinivasa S.P. Kumar, Ramesh Ponnala, B. Sateesh, and P. Dundy Sai Maruthi (2021)

Brishti, J.K. & Javed, A. (2020) asserts Artificial Intelligence is one of the most fundamental technologies that is transforming our society by demonstrating its promise in various fields such as healthcare, transportation, and entertainment. In recent years, it has been popular in the recruiting industry for seeking applicants from enormous amounts of data, assessing candidate profiles, interviewing, and selecting the most suitable prospects, etc. As a result, it has the potential to alter HR's role, candidate perceptions, and even a company's entire climate and policy. The problems in this scenario are very significant since either the existence of this technology is not well understood by recruiters, or the organizations employing it are still in the early stages of adoption. The project investigates the potential for recruiters and candidates and the main problems, and how they may be overcome. The findings demonstrate the benefits and drawbacks of employing AI in the Recruitment process and how it affects hiring. It also enables readers to assess the usefulness and effectiveness of Artificial Intelligence in the Recruitment process. The study suggests that Artificial Intelligence is undoubtedly not error-free as it is built by humans and learns from their inputs. The researcher quotes the Amazon example where biasness against women was caused due to the type of input fed into the algorithm. It is difficult to obtain quality datasets as cheap datasets are available with affordable quality and low validity. If the companies keep using poor quality data sets to minimize their cost, then it may bring risk in unwanted results. Also, integrating AI tools is flawed and expensive, which creates investment insecurities.

Van Esch, Patrick, J. Stewart Black, and Joseph Ferolie (2019) states that one of the obstacles to AI-assisted recruiting is the cost of developing the systems and tools. It may make financial sense to purchase tools from external suppliers unless a firm has many recruits per year and can amortize the expense of designing and implementing those tools. Another kind of ethical issue is privacy. The study states that the employer and the AI-powered tool should not collect personal information unless it is directly related to the job to screen the candidates, which may lead to discrimination. If legislation is passed, or if people begin to restrict data on their social media or professional network profiles in general, AI-enabled outreach tools may be greatly hampered. For instance, if legislation prohibits companies from retaining information on previous applicants, AI technologies designed to mine this pool of prospects would be rendered useless.

According to a report by UNESCO, Women make up only 22% of all AI professionals. Gender prejudices and stereotyping are perpetuated in AI technologies due to their underrepresentation in the sector. Virtual personal assistants like Siri, Alexa, and Cortana are “female” by default, which is no accident. The submissiveness they display illustrates how Artificial Intelligence (AI) might continue to support and extend gender bias in our society.

Methodology

The paper adopted systematic literature on the ethical concerns in Recruitment while using Artificial Intelligence tools and applications. Various articles in this field have been reviewed, and conclusions have been drawn. These papers weren't subject to sectors but studies about general concerns every organization might face while incorporating AI to fulfill their hiring needs. The secondary sources to gather information were Dissertations, Research papers, and Articles, blogs, Application websites. All the information that has been used is from recent papers to make it more reliable and accurate. The selection process of papers included the screening of abstracts, keywords, and the criteria for eligibility and acceptance. The study has broadened its search to include related research on AI and its various applications, the recruiting process, and how it operates in general, which is essential to understand the benefits, drawbacks, and influence of AI on the Recruitment process.

Conclusions

The paper was established to understand Artificial Intelligence and various challenges and ethical concerns recruiters face to hiring employees. It has been concluded that despite of tremendous features and benefits of Artificial Intelligence in Recruitment, there are some ethical concerns that a company faces while assimilating AI into its organization. The two main concerns are Subconscious Biasness and Data privacy. The study concludes that there is different biasness – Gender, Representative, Measurement, Aggression biasness which is only due to the inputs fed by the humans into the algorithm AI (Kumar, V. Uday et al., 2021). Another kind of ethical issue is privacy. The study states that the employer and the AI powered tool should not collect personal information unless it is directly related to the job to screen the candidates, as this may lead to discrimination (Van Esch, Black, & Ferolie, 2019).

Author Contributions: Conceptualization: Aashima Gupta, Mridula Mishra; data curation: Aashima Gupta, Mridula Mishra; formal analysis: Aashima Gupta, Mridula Mishra; investigation: Aashima Gupta, Mridula Mishra; methodology: Aashima Gupta, Mridula Mishra; project administration: Aashima Gupta, Mridula Mishra; resource: Aashima Gupta, Mridula Mishra; software: Aashima Gupta, Mridula Mishra; supervision: Aashima Gupta, Mridula Mishra; validation: Aashima Gupta, Mridula Mishra; visualization: Aashima Gupta, Mridula Mishra; writing-original draft: Aashima Gupta, Mridula Mishra; writing-review editing: Aashima Gupta, Mridula Mishra.

Funding. This research received no external funding.

References

1. Ahmed, O. (2018). Artificial Intelligence in HR. *International Journal of Research and Analytical Reviews*, 5(4), 971-978. [\[Google Scholar\]](#)
2. Ashwani Kumar Upadhyay, Komal Khandelwal (2018). Applying Artificial Intelligence: implications for Recruitment. *Strategic HR Review*, 17(5), 255-258. [\[Google Scholar\]](#) [\[CrossRef\]](#)
3. Barber, A.E. (1998). Recruiting employees: Individual and organizational perspectives. Sage Publications. 184 p. [\[Google Scholar\]](#)
4. Beneduce, G. (2020). Artificial Intelligence in Recruitment: just because it's biased, does it mean it's bad? (Doctoral dissertation). [\[Google Scholar\]](#)
5. Brishti, J.K. & Javed, A. (2020). The viability of ai-based recruitment process: A systematic literature review. [\[Google Scholar\]](#)
6. Dinesh, N., Kumar, M. (2015). Is social media a preferable source of Recruitment? An employer's perspective with reference to IT sector in Bangalore. *International Journal of Business and Administration Research Review*, 2(11), 283-287. Available at: [\[Link\]](#)
7. Kumar, V.U., Mohan, A., Kumar, B.S.S., Ponnala, R., Sateesh, B., & Maruthi, P.D.S. (2021). Analysis and Issues of Artificial Intelligence Ethics in the Process of Recruitment. In *2021 2nd International Conference on Smart Electronics and Communication (ICOSEC)* (pp. 733-738). IEEE. [\[Google Scholar\]](#) [\[CrossRef\]](#)
8. Madia, S.A. (2011). Best practices for using social media as a Recruitment strategy. *Strategic HR Review*, 10(6), 19-24. [\[Google Scholar\]](#) [\[CrossRef\]](#)
9. Maduravoyal, C. (2018). Artificial Intelligence in human resource management. *International Journal of Pure and Applied Mathematics*, 119(17), 1891-1895. Available at: [\[Link\]](#)
10. McCarthy, J. (2007). What is Artificial Intelligence? Kalev Kask, p. 8. [\[Google Scholar\]](#)

11. Rathi, D.R. (2018). Artificial Intelligence and the Future of HR Practices. *International Journal of Applied Research*, 4(6), 113-116. [\[Google Scholar\]](#)
12. Recommendation on the ethics of artificial intelligence (2020). Available at: [\[Link\]](#)
13. Rich, E. & Knight, K. (2004). Artificial Intelligence, Tata McGraw, p.3. Available at: [\[Link\]](#)
14. Schryen, G. (2015). Writing Qualitative IS Literature Reviews – Guidelines for Synthesis, Interpretation, and Guidance of Research. *Communications of the Association for Information Systems*, 37. [\[Google Scholar\]](#) [\[CrossRef\]](#)
15. Van Esch, P., Black, J.S., & Ferolie, J. (2019). Marketing AI Recruitment: The next phase in job application and selection. *Computers in Human Behavior*, 90, 215-222. [\[Google Scholar\]](#) [\[CrossRef\]](#)
16. Webster, J., Watson, R.T. (2002). Analyzing the past to prepare for the future: Writing a literature review. *Management Information Systems Quarterly*. 26(2), xiii-xxiii. [\[Google Scholar\]](#)
17. Yawalkar, M.V.V. (2019). A Study of Artificial Intelligence and its role in Human Resource Management. *International Journal of Research and Analytical Reviews (IJRAR)*, 6, 20-24. Available at: [\[Link\]](#)
18. Zahidi, F., Imam, Y., Hashmi, A.U., & Baig, M.M. (2020). Impact of Artificial Intelligence on HR Management – A Review. Available at: [\[Link\]](#)
19. Zaruda, J.M., Marks, R.J., and Robinson, C.J. (1994). Computational Intelligence Imitating Life, Piscataway, NJ: IEEE Press, 1994. Available at: [\[Link\]](#)