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# AI IN ACADEMIC HIRING: CREATING A SUSTAINABLE WORKPLACE THROUGH RIGHT SOURCING AND HUMAN RESOURCE MANAGEMENT

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*Abstract: AI has proven useful in sports, healthcare, transportation, and industry. Recruitment practises including locating applicants, vetting them, holding interviews, and hiring them have gained in popularity. This can affect a company's policies, candidate attitudes, and HR duties. In some circumstances, recruiters may not know about this technology, or companies may still be using it. HR's duty is to provide a safe and supportive workplace while giving employees the independence, intelligence, and empathy they need to accomplish their best work. AI has greatly improved the HR department. AI has taken over low-value HR tasks to free up time for strategy.*

*Keywords: Artificial Intelligence, Higher Education, Human Resources Management, Technology Advancement, Recruitment*

## **1. Introduction**

After a lengthy hiring freeze due to Covid-19, things are looking up (Collings et al. 2021).<sup>1</sup> HR managers' either in the corporate settings or be it academic world, the priorities have shifted due to new recruiting practices. Adapting recruiting and job offers to be more personalized and focused on the candidate's needs; establishing a culture of diversity, equity, and inclusion by identifying and eliminating hiring team biases; and using data, automation, and artificial intelligence (AI) to improve the

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<sup>1</sup> Collings, D. G., Nyberg, A. J., Wright, P. M., & McMackin, J. (2021). Leading through paradox in a COVID-19 world: Human resources comes of age. *Human Resource Management Journal*, 31(4), 819– 833.



recruitment process. Artificial intelligence (AI) is a broad term for a set of technologies that enable machines to reason and take autonomous action based on large amounts of data. Human resource management is one area where artificial intelligence can be used to greatly benefit the organisation. The world of work will enhance the usage of AI, big data, machine learning, mobile technology, the Internet of Things, geo-tagging, virtual reality, speech recognition, and biometrics (Shank et al. 2019).<sup>2</sup> Cutting-edge technology has impacted workplace design, personnel engagement, and process modification. AI and other intelligence-based technologies empower companies to improve service quality, productivity, and cost-effective service excellence. Many studies suggest that automation can affect HR management. AI-based tools and procedures can boost employee satisfaction, commitment, and job engagement, say local and MNEs. However, opponents of AI in recruiting worry that it would perpetuate disparities in the workplace and lead to the elimination of employment, while proponents argue that it minimizes bias, helps discover suitable candidates, and frees up the time of human resource personnel to do other things.

AI uses computers and other technology to replicate human intellect. Knowledge representation, retrieval, speech recognition, and machine vision are AI applications. John McCarthy of Dartmouth College coined the phrase in 1955 for an AI summer project (AI). Marvin Minsky defines AI as "the science of having robots do jobs that demand intelligence from men." AI includes robots' explicit and implicit intelligence. AI has been around for a while, yet many don't understand it (Kaplan & Haenlein, 2019).<sup>3</sup> AI interprets and adapts to new conditions depending on external inputs. Studies have focused on AI in HR, Recruitment, and Selection to show its importance and relevance in these domains (Poitevin and Chandra, 2017).<sup>4</sup> AI refers to several ways for teaching computers to think like humans. Machine learning teaches machines to learn, whereas neural networks and deep learning explore deeper into data to recognize patterns (Wired). Neural networks "replicate the web of neuron in the human

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<sup>2</sup> Shank, D. B., Graves, C., Gott, A., Gamez, P., & Rodriguez, S. (2019). Feeling our way to machine minds: People's emotions when perceiving mind in artificial intelligence. *Computers in Human Behaviour*, 98, 256–266. <https://doi.org/10.1016/j.chb.2019.04.001>

<sup>3</sup> Kaplan, Andreas, and Michael Haenlein (2019). "Siri, Siri, in My Hand: Who's the Fairest in the Land? On the Interpretations, Illustrations, and Implications of Artificial Intelligence." *Business Horizons*, 62, 1, 15–25.

<sup>4</sup> Poitevin, H. Chandra, R. (2017). *Impacts of Artificial Intelligence and Machine Learning on Human Capital Management* Gartner Available from: <https://www.gartner.com/doc/3778864/impacts-artificial-intelligence-machine-learning>



brain" (Yano, 2017). AI includes machine learning approaches that educate a computer by example (Wisskirchen et al. 2017).<sup>5</sup> AI software can behave intelligently. Intelligent software imitating cognition, learning, problem-solving, perception, and knowledge representation. AI software is used in your smartphone assistant, ATMs that scan checks, speech and image recognition software on your favorite social network, and ad delivering software on many of the websites you visit. These are some AI-powered software examples. As AI's popularity grew, providers scrambled to show how they use it. Machine learning is often referred to as AI. AI creation and training require specialized hardware and software. Python, R, and Java are popular AI languages.

AI systems consume large amounts of labelled training data, analyze it for correlations and patterns, and use these patterns to forecast future states. A chatbot fed examples of text dialogues can learn to engage with people by analyzing millions of examples, while an image recognition computer can learn to recognize and describe items in images (Nawaz and Anjali Mary, 2019).<sup>6</sup> AI programming emphasizes learning, reasoning, and self-correction. AI learning includes acquiring data and developing rules to turn it into valuable information. Algorithms give computers step-by-step instructions for completing a task (Kellogg et al., 2020).<sup>7</sup> AI programming involves choosing the best algorithm to achieve a goal. This AI programming aspect fine-tunes algorithms to produce accurate results.

Local and multinational enterprises (MNEs) recognise the benefits of AI-based tools and techniques for improving employee satisfaction, commitment, and job engagement (Castellacci & Vias-Bardolet, 2019),<sup>8</sup> job performance, HR cost-effectiveness (Azadeh

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<sup>5</sup> Wisskirchen, G. Biababe, B. Bormann, U. Muntz, A. Niehaus, G. Soler, G. Brauchitsch, B. (2017) Artificial Intelligence and Robotics and Their Impact on the Workplace IBA Global Employment Institute [Online] Available from: <https://www.ibanet.org/Document/Default.aspx?DocumentUid=c06aa1a3-d355-4866-beda-9a3a8779ba6e>

<sup>6</sup> Nawaz, Nishad and Gomes, Anjali Mary. (2019). Artificial Intelligence Chatbots are New Recruiters (January 18, 2020). (IJACSA) International Journal of Advanced Computer Science and Applications, 10, 9, Available at SSRN: <https://ssrn.com/abstract=3521915> or <http://dx.doi.org/10.2139/ssrn.3521915>

<sup>7</sup> Kellogg, K., Valentine, M., & Christin, A. (2020). Algorithms at work: The new contested terrain of control. *Academy of Management Annals*, 14(1), 366 – 410.

<sup>8</sup> Castellacci, F., & Viñas-Bardolet, C. (2019). Internet use and job satisfaction. *Computers in Human Behaviour*, 90, 141–152. <https://doi.org/10.1016/j.chb.2018.09.001>



& Zarrin, 2016),<sup>9</sup> employee retention (Malik et al. 2021),<sup>10</sup> and effective decision-making ( Kim et al. 2016).<sup>11</sup> AI research on HRM sub-functional domains is growing. AI's function in HR, recruitment, and employee sections is enormous. HR hires and trains workers. AI solutions reduce HR specialists' manual labour. HR's role in talent acquisition is crucial to the company's growth (Jia & Jia, 2015).<sup>12</sup> AI in HR is most visible in recruiting. AI decreases the time and effort needed for application screening, database administration, interview scheduling, and contestant enquiries. It shortens the hiring process and saves time, allowing HR to focus on sourcing, personnel management, recruitment marketing, and other tasks. AI-assisted recruitment helps choose candidates that satisfy most of an organization's criteria. The screening method is easy, effective, and valuable. AI-based solutions will teach new employees company information and rules on day one. New employees will receive job profile data, corporate regulations, task assignments, team member information, etc. via a mobile app or structured information on their desktops. Onboarding helps HR retain information and perform more efficiently. New employees are more likely to stay after a well-organized and informed Onboarding process. AI in HR automatically answers recruits' inquiries, saving HR workers time and effort. AI development services will let employee's self-study important duties and needs. It keeps them up-to-date on software and industry innovations. AI analyses employee work papers and exams to assign relevant training (see: Askew et al., 2014;<sup>13</sup> Chamorro-Premuzic et al. 2019).<sup>14</sup>

According to their job description, they'll be given the right skills to advance. AI can analyse HR data to identify employees' training needs. This clever method improves

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<sup>9</sup> Azadeh, A., & Zarrin, M. (2016). An intelligent framework for productivity assessment and analysis of human resource from resilience engineering, motivational factors, HSE and ergonomics perspectives. *Safety Science*, 89, 55–71. <https://doi.org/10.1016/j.ssci.2016.06.001>

<sup>10</sup> Malik, A., De Silva, M. T. T., Budhwar, P., & Srikanth, N. R. (2021). Elevating talents' experience through innovative artificial intelligence-mediated knowledge sharing: Evidence from an IT-multinational enterprise. *Journal of International Management*, 27(4), 100871. <https://doi.org/10.1016/j.intman.2021.100871>

<sup>11</sup> Kim, K., Del Carmen Triana, M., Chung, K., & Oh, N. (2016). When do employees cyberloaf? An Interactionist perspective examining personality, justice, and empowerment. *Human Resource Management*, 55(6), 1041–1058. <https://doi.org/10.1002/hrm.21699>

<sup>12</sup> Jia, R., & Jia, H.H. (2015). An individual trait-based investigation of employee cyberloafing. *Journal of Information Technology Management*, 26(1), 58–71.

<sup>13</sup> Askew, K., Buckner, J.E., Taing, M.U., Ilie, A., Bauer, J.A., & Coovert, M.D. (2014). Explaining cyberloafing: The role of the theory of planned behavior. *Computers in Human Behavior*, 36(1), 510–519. <https://doi.org/10.1016/j.chb.2014.04.006>

<sup>14</sup> Chamorro-Premuzic, T., Polli, F., & Dattner, B. (2019). Building Ethical AI for Talent Management. *Harvard Business Review Digital Articles*, 2–5.



staff productivity, mental capacity, and learning. They can teach employees various programmes and skills so they can self-learn and do company jobs. AI can adjust HR operations to employees' needs and tasks. AI manages the company's contact information and authenticates documents, etc. Chat-bots identify high-potential candidates. These chat-bots place new hires based on their job profiles. It finds the best candidate who fits the job description. Top candidates will be interviewed. Due to the environment's high level of automation and focus on client experience, staff may expect cheerful and productive interactions. Consumer technology is shaping workplace experiences, and employees want new ways to connect and be supported. AI may be integrated across the employee lifecycle, from recruiting and Onboarding to HR service delivery and career trajectories, resulting in a customised employee experience. Human resources organizations can analyse employee engagement and job satisfaction through customised feedback questionnaires and recognition programmes. This is especially valuable given the significance of understanding employees' general wants, but it also has significant organizational benefits. AI will help and grow a company's trainers and project managers. By asking each team's members questions, the AI will assess the leader's attributes and tell them what talents they lack or what traits they must adapt to. Leaders can self-evaluate and grow their skills using the dashboard.

Psychometric-based recruitment tactics may become outmoded in fast-changing companies with uncertain jobs (Black, et al. 2020).<sup>15</sup> Internet sources and e-recruitment are replacing job applications and printed media. Talented, experienced, and qualified HR personnel are vital for growth, competitive advantage, and innovation. Businesses spend money and time to hire and retain top talent. Recruitment is picking the best job candidate. The organisation analyses employment needs, then announces job openings, screens and selects candidates, and ultimately hires and greets the successful candidates. AI-based solutions are utilised to solve difficulties in HR and recruitment (Sao et al. 2020).<sup>16</sup> Increasing technical complexity and a fast-changing business environment have changed the previous method of hiring (Simsek & Simsek, 2019).<sup>17</sup>

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<sup>15</sup> Black, J. Stewart, and Patrick van Esch (2020). AI-Enabled Recruiting: What Is It and How Should a Manager Use It?. *Business Horizons*, 63, 2, 215–226.

<sup>16</sup> Sao R, Chandak S, Patel B, Bhadade P. (2020). Cyberloafing: Effects on employee job performance and behaviour, *International Journal of Recent Technology and Engineering (IJRTE)*. 8 (5): ISSN: 2277-3878. <https://doi.org/10.35940/ijrte.E4832.018520>

<sup>17</sup> Simsek, A., & Simsek, E. (2019). Beneficial and detrimental effects of cyberloafing in the workplace. *Journal of Organizational Behavior Review*, 1(1), 97-114.



AI has enhanced staff productivity, cut expenses and time, and reduced recruitment errors and biases. It automates candidate sourcing and search, links candidates with companies, allows real-time applicant dialogue, and supports in interviewing, face expression analysis, candidate selection, and diversity recruiting.

Around the year 2018, recruiters started sourcing millions of social accounts, something humans couldn't do. Social media data gives employers personality information missing from resumes. AI helps organisations re-discover potential by evaluating existing prospects, allowing them to hire proven and experienced people (Elciyar & Simsek, 2021).<sup>18</sup> AI weights prospects based on selection criteria, freeing recruiters of laborious labour. AI speeds up hiring, boosting productivity. AI-powered chat-bots deliver rapid feedback, answer questions, and engage candidates (Bilal HMOUD & Varallyai LASZLO, 2019).<sup>19</sup> AI-powered recruiting software evaluates resumes based on qualifications, experience, and skills and delivers feedback. With AI's immediate feedback, candidates skip the aggravating waiting period and are warned of shortcomings in skills, experience, or qualifications. AI creates present and future jobs. AI helps applications through mobile and web platforms. Chat-bot-powered real-time messaging and emailing. By building rapport with candidates and determining cultural fit, recruiters may become talent counsellors.<sup>20</sup>

## 2. Methodology Adopted to Examine papers

The study searched Google Scholar, Research Gate, and Science Direct. This literature evaluation was forward and backward. Forward searches look for items that cite foundational works. This form of forward search is undertaken using Google Scholar and Research Gate (Schryen, 2015),<sup>21</sup> and the research and search method must be

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<sup>18</sup> Elciyar, K., & Simsek, A. (2021). An Investigation of Cyberloafing in a Large-Scale Technology Organization From the Perspective of the Theory of Interpersonal Behavior. *Online Journal of Communication and Media Technologies*, 11(2), e202106. <https://doi.org/10.30935/ojcm/10823>

<sup>19</sup> Bilal HMOUD & Varallyai LASZLO. (2019). Will Artificial Intelligence Take Over Human resources Recruitment And Selection?. *Network Intelligence Studies*, Romanian Foundation for Business Intelligence, Editorial Department, 13, 21-30, July.

<sup>20</sup> Hinojo-Lucena, F.-J., Aznar-Díaz, I., Cáceres-Reche, M.-P., & Romero-Rodríguez, J.-M. (2019). Artificial intelligence in higher education: A bibliometrics study on its impact in the scientific literature. *Education Sciences*, 9(1), 51. <https://doi.org/10.3390/educsci9010051>.

<sup>21</sup> Schryen, G. (2015). Writing qualitative IS literature reviews—guidelines for synthesis, interpretation and guidance of research. *Communications of the Association for Information Systems*, 37, 286-325.



topic-focused. Our investigation began with a keyword search for "AI in Recruitment" and "AI in selecting process." This returned many results, some irrelevant to "AI in recruitment." Due of significant industrial growth, this research is new. We limited our search to 2015 to 2022 to get more relevant results. The linked publications are examined for relevance, reliability, appropriateness, and rigour to determine if they meet exclusion or inclusion criteria (Mikalef et al., 2018).<sup>22</sup> The article selection criteria focused on the research topic and study scope, while our exclusion criteria limited duplicate studies from different sources. The selection process begins with evaluating the abstract, keywords, exclusion and inclusion criteria based on the study's main theme (Jennex, 2015).<sup>23</sup>

### **3. Recruiters receive feedback on the experience of applicants**

Machine learning eliminates racial, gender, and ethnicity preconceptions. Unintentional bias in employment occurs when an individual or group is treated differently based on age, race, colour, education, or ethnicity. AI eliminates biases and mistakes in candidate screening. AI is revolutionising the recruitment process and creating diverse, vibrant workplaces by assessing an applicant's attributes to anticipate their ability and competency (Brock et al. 2019).<sup>24</sup> Stefano Bini & MD (2018),<sup>25</sup> while promoting the use of AI-powered tools in the hiring process, stressed that staffing firms must also consider job seekers' concerns about exclusion, discrimination, and privacy and find ways to reassure them of the neutrality of the machines while making the interface more user-friendly and comfortable. AI-powered chat boxes let digital economy companies engage with applicants. A chat-box answers candidate queries, while an AI tool solicits input and candidate facts. Recruitment chat-bots can speak with candidates and answer frequently asked questions, lowering a barrier that inhibits many from applying. AI-enabled systems can improve the experiences of most job candidates, according to

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<sup>22</sup> Mikalef, P., Pappas, I. O., Krogstie, J., & Giannakos, M. (2018). Big data analytics capabilities: A systematic literature review and research agenda. *Information Systems and e-Business Management*, 16(3), 547-578.

<sup>23</sup> Jennex, M. E. (2015). Literature reviews and the review process: An editor-in-chief's perspective. *Communications of the Association for Information Systems*, 36, 139-147.

<sup>24</sup> Brock, J. K. U., & Wangenheim, F. von (2019). Demystifying AI: What Digital Transformation Leaders Can Teach You about Realistic Artificial Intelligence. *California Management Review*, 61(4), 110–134. <https://doi.org/10.1177/1536504219865226>

<sup>25</sup> Stefano A. Bini & MD (2018). Artificial Intelligence, Machine Learning, Deep Learning, and Cognitive Computing: What Do These Terms Mean and How Will They Impact Health Care?. *The Journal of Arthroplasty*, 33, 8, 2358–2361.



Black and Van Esch (2019).<sup>26</sup> If they had a nice rejection experience, they will be more responsive to a following opportunity. This reduces anxiety and stimulates people to take better chances. According to Okolie and Irabor, (2017)<sup>27</sup> AI will replace administrative mundane jobs, allowing recruiters and HR managers to focus on strategic tasks. AI is great at recognising potential, but human talent consultants are needed for things like creating rapport, evaluating cultural fit, and negotiating. The recruiter builds relationships with potential employees and identifies and cultivates talent. With massive data, internet connectivity, and computer hardware like memory and high-speed processors, intelligent software and robots can execute difficult tasks humans can't (Poitevin and Chandra, 2017).<sup>28</sup> AI-based software automates the recruiting process by reviewing millions of candidate profiles, running programmed video job interviews, and helping applicants throughout the process. This shortens the hiring cycle and boosts hiring quality. According to Black & van Esch, (2020)<sup>29</sup> AI will help recruiters do their work better by identifying the brightest prospects sooner.

#### **4. The function of artificial intelligence**

AI is crucial because it may provide new insights into corporate processes and, in some cases, do tasks better than humans. AI systems accomplish activities fast and with minimal errors, especially repetitive and detail-oriented duties like analysing legal documents to ensure essential fields are filled correctly. This has improved efficiency and created new commercial prospects for larger companies. Before the current wave of AI, it would have been impossible to use software to connect riders to cabs, but Uber has done just that. It uses machine learning techniques to forecast when people will travel. Drivers can plan ahead. Google has become a dominant force in internet services by using machine learning to analyse how people use them and then improving them.

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<sup>26</sup> Black, J. Stewart, and Patrick van Esch (2020). AI-Enabled Recruiting: What Is It and How Should a Manager Use It? *Business Horizons*, 63, 2, 215–226. <https://doi.org/10.1016/j.bushor.2019.12.001>

<sup>27</sup> Okolie, U. Irabor, I. (2017). E-Recruitment: Practices, Opportunities and Challenges *European Journal of Business and Management* [Online] Available from: <http://web.a.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=39&sid=a6810873-e38d-48d8-91b3-7793b430ca77%40sessionmgr4008>

<sup>28</sup> Poitevin, H. Chandra, R. (2017). *Impacts of Artificial Intelligence and Machine Learning on Human Capital Management* Gartner Available from: <https://www.gartner.com/doc/3778864/impacts-artificial-intelligence-machine-learning>

<sup>29</sup> op cit



Okolie and Irabor (2017)<sup>30</sup> stressed the importance of building AI algorithms that are efficient, helpful, and transparent to examination. This ensures transparency. They add that it's important to be open and transparent about how algorithms work and what an organisation learns if it adopts resume-checking tools. This is true if the company uses aiding tools. It's about discussing the algorithm's ethical consequences and how to run a fair business. Transparency's value grows. Even if human-machine connection improves with intuition and empathy, humans will still be needed (May, 2016).<sup>31</sup> It's important to get along with the candidate. Human recruiters must still evaluate candidates to get the right combination of empathic and emotional responses.

### **5. Artificial intelligence's pros and cons**

These technologies are emerging swiftly because artificial neural networks can analyse large volumes of data faster and more correctly than people. Virtual agents powered by AI thrive at detail-oriented work, save time on data-intensive jobs, and offer predictable results. AI systems using machine learning can quickly translate daily data into meaningful knowledge, which would overwhelm a human researcher. The expensive expense of processing AI's huge volumes of data is its biggest drawback. The technology is expensive, requires a high level of technical competence, there are few trained persons to design AI tools, and it can only understand what it has been shown.

### **6. Applying AI to the hiring procedure**

AI has taken over our lives and businesses during the epidemic. AI can be useful in HR not only for resume screening but also for keeping an eye on potential employees. For office-based and highly qualified positions, LinkedIn is one of the largest databases of employees. Nearly 600 million working professionals are now connected through LinkedIn. Without even posting an ad, you can get tens of applicants by "telling" AI to search for specific candidates in our database. The company's bottom line will also reap the benefits of this change, as posting new job positions regularly is an expensive endeavour. Several research publications discuss AI in recruiting and selection (Banks

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<sup>30</sup> Okolie, U. Irabor, I. (2017). E-Recruitment: Practices, Opportunities and Challenges European Journal of Business and Management [Online] Available from: <http://web.a.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=39&sid=a6810873-e38d-48d8-91b3-7793b430ca77%40sessionmgr4008>

<sup>31</sup> May, R. (2016). How Artificial Intelligence Impacts HR: Incorporating Intelligent Assistants in the Workplace. (Online) Available from: <https://www.hr.com/en?t=documentManager/sfdoc.file.supply&fileID=1472125837608>



et al. 2019).<sup>32</sup> Using data to monitor KPIs like quality of hire, augmented intelligence will help recruiters be more proactive in their hiring, analyse a candidate's cultural fit, and enhance their relationships with hiring managers (Black et al. 2020)<sup>33</sup> Since 2018, AI has been used by a lot of organisations to recruit experts. It's one of the latest recruiting market trends (Chen et al. 2022).<sup>34</sup> Finding a qualified specialist is hard. Modern society spends much of its time on social media, which has become vital (Van Esch & Black, 2019).<sup>35</sup> AI affects talent acquisition and recruitment, from candidate sourcing to on-boarding and engagement. AI tools help recruiters find, analyse, and onboard applicants quickly. AI automates parts of the hiring process in the work environment. AI can recruit, screen, and predict applicant success thanks to machine learning and big data.

**Table 1: Applications of Artificial Intelligence in Human Resources, Recruitment, and Selection**

<b>Software</b>	<b>Nature</b>
<b>Gloat</b>	Gloat connects job searchers with new prospects using chat and AI.
<b>WorkStep</b>	WorkStep's cutting-edge technology removes hiring roadblocks. WorkStep helps HR screen and evaluate candidates. Automation reduces recruiters' stress. To keep new recruits motivated and productive, businesses must monitor and evaluate their development.
<b>Restless Bandit</b>	Restless Bandit uses intelligent bot recruiters to find and contact only the most qualified job seekers.
<b>Entelo</b>	Recruiters can source candidates by gender, race, and veteran status. Their strategy uses predictive analytics and NLP to acquire passive talent. Applicants can apply for jobs within the software or on the company's website. Lyft, PayPal, and Target use Entelo to establish teams.
<b>Telemetry</b>	An enterprise recruitment marketing platform with a Source and CRM (candidate relationship management) module that provides firms with automated attraction and sourcing recruitment tools.

<sup>32</sup> Banks, G. C., Woznyj, H. M., Wesslen, R. S., Frear, K. A., Berka, G., Heggstad, E. D., & Gordon, H. L. (2019). Strategic Recruitment Across Borders: An Investigation of Multinational Enterprises. *Journal of Management*, 45(2), 476–509. <https://doi.org/10.1177/0149206318764295>

<sup>33</sup> op cit

<sup>34</sup> Chen, Q., Gong, Y., Lu, Y., & Chau, P. Y. K. (2022). How mindfulness decreases cyberloafing at work: a dual-system theory perspective. *European Journal of Information Systems*. <https://doi.org/10.1080/0960085X.2022.2067490>

<sup>35</sup> op cit



**Table 1: Applications of Artificial Intelligence in Human Resources, Recruitment, and Selection**

Software	Nature
	Thus, the software generates a centralised database suitable for local execution and capable of locating talent immediately.
<b>Wade &amp; Wendy</b>	Employers and job seekers alike benefit from Wade and Wendy, two AI recruiters who learn from every interaction. Wade works with job seekers to provide personalised opportunities, while Wendy helps recruiters with tedious tasks, automates emails, and is well-versed in feedback.
<b>Arya</b>	Allows corporate recruiters, employment agencies, and RPOs to source smarter. The AI-powered tool allows organisations to gather top-tier talent from over 50 social platforms and helps recruiters engage with applicants.
<b>Pomato</b>	Matches skills, screens resumes. Their solution uses ML and PR. Their matching engine uses contextual analysis to match application profiles based on required skills, positions, and expertise, then ranks candidates based on their job scores.
<b>Paradox</b>	Paradox's AI-powered assistant helps recruiters and job hunters. Olivia, a virtual assistant, conducts online, mobile, or social media interviews to identify candidates' abilities, knowledge, and career history.

The recruiter used social media to attract candidates. This leads to a high number of applicants, making it difficult for HR to identify quality individuals quickly (Michailidis, 2018).<sup>36</sup> Firms had to engage expensive recruiters to screen and study a large number of job applications, but digital tools are much more effective and efficient. Humans also have cognitive biases (Black & Van Esch, 2019).<sup>37</sup> AI-powered technology and solutions are used to improve recruitment efficacy and timeliness. IKEA, L'Oreal, Unilever, and Amazon all use AI-powered recruitment technologies like Robot Vera, Mya the chatbot, and HireVue Assessments to hire people. Nearly every stage of recruitment now uses AI, revolutionising the business. These AI

<sup>36</sup> Michaelides, Maria P (2018). The Challenges of AI and Blockchain on HR Recruiting Practices. *The Cyprus Review*, 30:2, Fall.

<sup>37</sup> op cit



algorithms are quite good at finding the best candidates and profiles (Vedapradha et al. 2019).<sup>38</sup>

AI technologies can help you write objective, gender-neutral job postings (Rab-Kettler & Lehnervp, 2019).<sup>39</sup> Textio uses AI to customise job ads and job descriptions for clients (Van Esch & Black, 2019). L'Oréal used AI to eliminate gender-biased ads, allowing business to hire an equal number of men and women (Davison and Burke, 2000). An ATS (Application Tracking System) can prescreen applicants by recognising and analysing keywords to match the right candidate with the correct vacancy. AI-powered chatbots are popular in recruitment. These chat-bots may speak with candidates, answer their queries 24/7, and give real-time, personalised connections via text messaging, email, social media, and other channels. Due to natural language processing, these bots can understand and communicate with humans like humans (Nawaz & Anjali, 2019). Olivia, an AI-powered assistant from Paradox, contacted candidates via text and social media to learn about their qualifications, talents, and job experience. Video chat analysis can be used to examine interviewee age, lighting, tone of speech, cadence, keywords, mood, behaviour, eye contact, etc.

Affectiva, HireIQ, and HireVue analyse facial expressions, word usage and frequency, tone, and speech patterns to assess emotional intelligence, honesty, and personality. AI-recruiters can sift through social media data to find the ideal candidate and assess the prospect's social values, attitudes, and attitude. Unilever was able to increase its pool of fresh graduate candidates at a cheaper cost using AI-powered recruiting tools on Facebook, WayUp, and Muse. Chatbots Conversational AI helps L'Oréal, Adecco, Hays, and Deloitte streamline the employment process. Mya helps applicants from job search to on-boarding. AI enables HR to personalise procedures to employees' demands and segregate duties. AI maintains firm contact information and authenticates legal documents (Upadhyay and Khandelwa (2018)).<sup>40</sup> Other research show AI applications assist applicants, HR professionals, and organisations. AI is cost-effective, reduces

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<sup>38</sup> Vedapradha, R., et al (2019). "Artificial Intelligence: A Technological Prototype in Recruitment." *Journal of Service Science and Management*, 12, 03, 382–390.

<sup>39</sup> Rab-Kettler, Karolina, and Bada Lehnervp (2019). *Recruitment in the Times of Machine Learning. Management Systems in Production Engineering*, 27, 2, 105–109. (Accessed: 17 September 2022).

<sup>40</sup> Upadhyay, Ashwani Kumar, and Komal Khandelwa (2018). "Applying Artificial Intelligence: Implications for Recruitment." *Strategic HR Review*, 17, 5, 255–258.



time, is fair and impartial, and increases worker diversity in recruitment and selection. It lets recruiters focus on strategic concerns by minimising repetitive chores (Upadhyay and Khandelwal, 2018).<sup>41</sup> AI, specifically advanced algorithms, may be the finest recruitment and selection approach (Bhatt, 2022).

Covid-19 has accelerated the use of new technology in operational and administrative functions. Companies invest extensively in AI technologies for remote working, video interviews, online conferencing, and training. Constant discussion about AI integration in R&S. The benefits include saving time with automated data, eliminating manual data entry, saving time when reacting to candidates, and using AI to give online exams, checks, and outcomes. AI reduces and eliminates unconscious bias because the machine can remove personal information (age, race, gender). People are more impartial and unbiased than AI-enabled recruiting algorithms, according to a study (Van Esch et al., 2019).<sup>42</sup> "AI is unbiased and screens fairly by giving all apps similar weight," say Upadhyay and Khandelwal (2018).<sup>43</sup> AI can be taught to prevent unconscious bias, which is crucial given the skills gap in recruitment.

## **7. Impact of Ai in hiring process**

The majority of recruiters believe that AI will soon be routine in their industry. The following data demonstrates the value of incorporating AI into the hiring process:

1. AI in talent acquisition is the leading trend influencing hiring practises, according to 35% of talent experts and hiring managers.
2. For the 58% of recruiters who have used AI in the hiring process, the most useful applications have been in the areas of Candidate Sourcing, Candidate Screening, and Candidate Nurturing.
3. According to Gartner's 2019 Artificial Intelligence Survey, only 17% of businesses currently utilise AI-based solutions in their HR department, but that number is expected to rise to 30% by 2022.

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<sup>41</sup> ibid  
<sup>42</sup> op cit  
<sup>43</sup> op cit



As valuable as AI was in pre-selection, humans are needed in final selection. Employees want to know if they'll get along with coworkers and the company's culture and if AI systems can make good decisions. AI Recruitment and Selection improves recruiting quality, reduces bias in selecting decisions, and saves time and money. Many organisations and CEOs don't use AI-enabled hiring quickly enough. AI can assist recruiting systems access more diverse and qualified individuals. Time and money saved can be used to establish a better corporate culture and brand, argue van Esch (2019).<sup>44</sup> New technology, like AI, should be approached warily. Protecting consumers' personal information requires rules and procedures. New technology requires updated employee training. Hiring software is promising, and the need for more features only adds to it. AI is rarely used in recruitment (Upadhyay and Khandelwal, 2018). This new technology requires substantial training to integrate and adapt. To locate outstanding employees, companies will always need specialised recruiting and executive search services. In-house Talent Managers and AI are crucial, but the Human Factor (long-term connections with prospects and networking) and expertise of an external recruiter cannot be replaced.

## 8. Some Perspective

AI would revolutionise HR by offering speedier recruiting without sacrificing quality, say Kumar and Khandelwal (2018). AI-based solutions can give new hires information on reporting, team members, and work assignments (2019). New employee questions are answered automatically. Intelligent chat-bots can check recruiters' calendars to see whether they're available and plan the interview for the correct candidate, according to Nawaz and Mary (2019). They might request resume clarifications. Using one-on-one instant messaging services like Facebook Messenger and text messages, chat-bots can collect applicant experience, answer frequently asked questions, and collect a large array of data to be analysed by a human selection representative. According to Black and Van Esch et al. (2019), it would be prohibitively expensive for a company to hire an army of recruiters to review and evaluate job applications. Companies must use AI-powered solutions to screen more job applicants. AI solutions ease labor-intensive and

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<sup>44</sup> Van Esch, Patrick, et al (2019). "Marketing AI Recruitment: The Next Phase in Job Application and Selection." *Computers in Human Behavior*, 90, 215–222.



time-consuming repetitive activities like sourcing, applicant screening, and administrative chores. This will minimise recruitment expenses and improve quality. Webster et al. (2016) highlighted the importance of time in several industries, including recruiting, to show how AI may save recruiters time. AI-powered software may analyse application data quickly and give HR with clear conclusions. Employers can use personalised and automated interactions to address candidates' accessibility, current position, mobility, and requirement for a new certification, according to Vedapradha et al. (2019).<sup>45</sup>

In the not-too-distant future, the HR hiring process is likely to change slightly. Time and effort will be saved, and accuracy will increase. The study of facial expressions is a prime example. There are two primary benefits to this:

1. Resume photo analysis
2. Video-interview-based analysis

However, not every applicant will include a photo of themselves with their résumé. It's even looked down upon in some nations like Canada and Japan. You can throw your application away if you do that. However, in other contexts, it may be a useful tool for revealing a candidate's unique personality features to a hiring manager. It's worth noting that some Canadian professionals do upload pictures to their LinkedIn profiles, suggesting that these facial expression recognition tools could find widespread use. Where do we stand on video interviews? So, a recruiter is having a Skype conversation with a potential employee; all throughout the conversation, the AI algorithm is providing real-time feedback on the candidate's demeanour and attitude. The recruiter can determine if the candidate is at ease or anxious, and it may even be feasible to verify if they are being truthful. How useful might it be? Undoubtedly!

Further, Van Esch, Patrick, and Stewart Black (2019)<sup>46</sup> says firms can add value to their databases by spreading chat-bots. A chatbot can help candidates by talking to them over

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<sup>45</sup> Vedapradha, R., et al (2019). "Artificial Intelligence: A Technological Prototype in Recruitment." *Journal of Service Science and Management*, 12, 03, 382–390.

<sup>46</sup> Van Esch, Patrick, and J. Stewart Black(2019). "Factors That Influence New Generation Candidates to Engage with and Complete Digital, AI-Enabled Recruiting." *Business Horizons*, 62, 6, 729–739, [www.sciencedirect.com/science/article/pii/S0007681319300953](http://www.sciencedirect.com/science/article/pii/S0007681319300953), 10.1016/j.bushor.2019.07.004. Accessed 3 Dec. 2019.



a messenger, addressing any questions they have, and reminding them to fill out missing information. This type of platform will allow the company to assess the frequency of a given issue and potential clients' wants and demands. Chat-bots' responsiveness and accessibility aid recruiters. AI makes speedy decisions. Hutchinson agrees, claiming that AI can reduce "costs" and eliminate human recruiting blunders (2019). AI can help recruiters "obtain insights" and "make better decisions," say Geetha and Bhanu Sree Reddy, (2018).<sup>47</sup> AI systems can gather huge volumes of data and do predictive analytics, which can be used to assess results, according to Rab-Kettler et al. (2019).<sup>48</sup>

### 9. Limitations while using AI

Raviprolu (2017)<sup>49</sup> discusses AI in HR and identifies potential adoption hurdles. AI requires a lot of precise data to correctly evaluate applicants' psyche. Min, Jihyun, et al. (2018).<sup>50</sup> says AI is a black box without data. As data sets grow more secure, organisations risk training AI with less credible data sets, according to Michaelides (2018).<sup>51</sup> Human interaction is lacking. 'Technophobia' is a problem (Vedapradha et al. 2019).<sup>52</sup> Teaching HR workers to use complex AI tools may be tough. AI isn't a bad fit for HR, though. New system installation can be expensive. If the data is credible, machine learning software may need years of sequential data to properly understand success variables. Hmoud, Bilal and VarallyaiLASZLO (2019)<sup>53</sup> favour using AI in recruiting, but admit that the most powerful algorithms can make mistakes. GDPR is another data challenge, and with 80% of recruitment firms failing to comply, it will

<sup>47</sup> R, Geetha, and Bhanu Sree Reddy D (2018). "Recruitment through artificial intelligence: A conceptual study." *International Journal of Mechanical Engineering and Technology (IJMET)*, 9, 7, 63–70.

<sup>48</sup> Rab-Kettler, Karolina, and Bada Lehnervp (2019). *Recruitment in the Times of Machine Learning. Management Systems in Production Engineering*, 27, 2, 105– 109 (Accessed: 17 September 2022)

<sup>49</sup> Raviprolu, A. (2017). *Role of Artificial Intelligence In Recruitment International Journal of Engineering Technology, Management and Applied Sciences [Online] Available from: <http://www.ijetmas.com/admin/resources/project/paper/f201704041491324042.pdf>* (Accessed: 17 September 2022)

<sup>50</sup> Min, Jihyun, et al (2018). "A Comparative Study of Potential Job Candidates Perceptions of an AI Recruiter and a Human Recruiter." *Journal of the Korea Convergence Society*, 9, 5, 191–202.

<sup>51</sup> Michaelides, Maria P (2018). "The Challenges of AI and Blockchain on HR Recruiting Practices." *The Cyprus Review*, 30, 2.

<sup>52</sup> Vedapradha, R., et al (2019). *Artificial Intelligence: A Technological Prototype in Recruitment.* *Journal of Service Science and Management*, 12, 03, 382–390.

<sup>53</sup> Hmoud, Bilal, and VarallyaiLASZLO (2019). "Will artificial intelligence take over human resources recruitment and selection?" *Network Intelligence Studies*, 7, 13.



have a big impact on the organisation. Raviprolu (2017)<sup>54</sup> says AI can't communicate well yet. This inquiry revealed a number of difficult-to-obtain literary works, such as those requiring a price or a free copy from the author. Using the keyword lacked transparency in a literature search. Using numerous terms to search for the same meaning can lead to false or irrelevant results. "AI in recruitment" and "Artificial Intelligence in recruitment" may give different search results. Search results may include articles with the same terms, but the title or context may be ambiguous or deceptive. Several publications were published in well-known journals in other fields but not Information Systems (IS). This may mislead readers because the study focused on IT. Exceptions exist, but following are the most current, exhaustively published investigations.

## 10. Conclusion

This inquiry revealed a number of difficult-to-obtain literary works, such as those requiring a price or a free copy from the author. Using the keyword lacked transparency in a literature search. Using numerous terms to search for the same meaning can lead to false or irrelevant results. "AI in recruitment" and "Artificial Intelligence in recruitment" may give different search results. Search results may include articles with the same terms, but the title or context may be ambiguous or deceptive. Several publications were published in well-known journals in other fields but not Information Systems (IS). This may mislead readers because the study focused on IT. Exceptions exist, but following are the most current, exhaustively published investigations. The obvious conclusion is that the use of AI in recruitment will increase, as it is both useful to the organisation and desired by recruiters.

## 11. Future Research

Human resources recruitment is one area where AI has the potential to dramatically enhance processes and shorten timelines. We anticipate that within the next few years, every major HR firm will have artificial intelligence recruiting software aboard to assist human recruiters in finding the best applicants by analysing everything from resumes and candidate selection to facial recognition. Forbes Technology Council predicts AI will generate \$15.7 trillion by 2030. AI expert Kai-Fu Lee spoke at Northwestern

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<sup>54</sup> op cit



University about the future of AI and its significance, noting its downsides and limitations. "The poorest 90% of the world, especially the bottom 50% in income or education, will be severely hurt by employment dislocation... How routine is a job? That's how likely it is that AI will replace a job, since it can learn to optimise itself in the workplace. The more quantitative the task, the more objective it is. Sorting items into bins, washing dishes, picking fruits, and answering customer service calls are all routine, programmed occupations. In 5-10 years, AI will replace them. AI can predict which topic or session will be more intriguing and direct teachers to make class more engaging. AI will turn student interest data into inferences about the session and faculty efficacy. AI algorithms learn from data to give a new prediction tool, and AI output can be separated from training data. To govern data and its value, all data-derived assets must be controlled. Big data infrastructure should be seen as an asset like any other industry's.

AI will affect higher education courses and enrolment most. First, AI will change college courses. AI is fast, accurate, and consistent. Competing with AI is futile. AI lacks creativity, invention, critical thinking, problem solving, socialisation, leadership, empathy, cooperation, and communication. This doesn't mean physics, math, and engineering should be ignored. Higher education should continue to teach science and math, as well as soft skills. Some institutions offer AI and Machine Learning courses to business students since managers and executives need to understand AI's capabilities, limitations, and repercussions. AI affects college enrolment. Liberal arts and humanities majors may become more popular as "AI-invasion" approaches. Accounting and financial analysis may see a reduction in enrolment due to AI. With the income gap and millions (or billions) of unemployed, higher educations may become costly. AI will impact higher education. Many present jobs will become outdated, requiring new skills. Higher education is responsible for preparing students for the AI revolution and equipping them with the essential skills. This experimental investigation aims to show how AI will affect higher education.

## 12. References

1. Abidin, R., Abdullah C.S, Hasnan N & Bajuri A.L (2014). The Relationship of Cyberloafing Behavior with Big Five Personality Traits, Australian Journal of Basic and Applied Science, 8 (12), 61-66.



2. Akbulut Y., Dursun Ö. Ö., Dönmez O., Şahin Y. L. (2016). In search of a measure to investigate cyberloafing in educational settings. *Computers in Human Behaviour*, 55, 616–625. <https://doi.org/10.1016/j.chb.2015.11.002>
3. Andel, S. A., Kessler, S. R., Pindek, S., Kleinman, G., and Spector, P. E. (2019). Is Cyberloafing More Complex than We Originally Thought? Cyberloafing as a Coping Response to Workplace Aggression Exposure. *Computers in Human Behaviour* (101), pp. 124–130. (<https://doi.org/10.1016/j.chb.2019.07.013>).
4. Andreassen C. S., Torsheim T., Pallesen S. (2014). Predictors of use of social network sites at work—A specific type of cyberloafing. *Journal of Computer-Mediated Communication* 19(4): 906–921.
5. Arabacı, I. B. (2017). Investigation faculty of education students' cyberloafing behaviours in terms of various variables. *The Turkish Online Journal of Educational Technology*, 16(1), 72–82.
6. Durak H. Y. (2020). Cyberloafing in learning environments where online social networking sites are used as learning tools: Antecedents and consequences. *Journal of Educational Computing Research*, 58(3), 539–569. <https://doi.org/10.1177/0735633119867766>
7. Elciyar, K., & Simsek, A. (2021). An Investigation of Cyberloafing in a Large-Scale Technology Organisation From the Perspective of the Theory of Interpersonal Behaviour. *Online Journal of Communication and Media Technologies*, 11(2), e202106. <https://doi.org/10.30935/ojcm/10823>
8. Glassman, J., Prosch, M. & Shao, B. B. M. (2015). To monitor or not to monitor: Effectiveness of a cyberloafing countermeasure. *Information and Management*, 52(2), 170–182.
9. Hartijasti, Y., & Fathonah, N. (2015). The importance of internet policies socialisation on cyberloafing in Indonesian workplace. *Asian Journal of Information and Communications*, 7(2), 68-80.
10. Hensel, P. G., and Kacprzak, A. (2021). Curbing Cyberloafing: Studying General and Specific Deterrence Effects with Field Evidence. *European Journal of Information Systems* (30:2), pp. 219–235. (<https://doi.org/10.1080/0960085X.2020.1756701>).
11. Jeong Y., Jung H., Lee L. (2020). Cyberslacking or smart work: Smartphone usage log-analysis focused on app-switching behaviour in work and leisure



- conditions, *International Journal of Human-Computer Interaction*, 36(1), 15–30. <https://doi.org/10.1080/10447318.2019.1597574>
12. Koay, Kian Yeik., Patrick Chin-Hooi Soh & Kok Wai Chew (2017). Do Employees Private Demands Lead to Cyberloafing? The Mediating Role of Job Stress. *Management Research Review*, 40 (9), 1025-1038.
  13. Köchling, A., Riazy, S., Wehner, M. C., & Simbeck, K. (2020). Highly accurate, but still discriminatory: A fairness evaluation of algorithmic video analysis in the recruitment context. *Business & Information Systems Engineering*. <https://doi.org/10.1007/s12599-020-00673-w>
  14. Kusumawati, Aqsa & Rosaly Fransiska (2018). Work-Family Conflict and Cyberloafing: The Mediating Role of Work Stress. *International Journal of Business*, 1 (2), 86-93.
  15. Mason, N. Using social cyberloafing to cope with workplace ostracism. *Nat Rev Psychol* (2022). <https://doi.org/10.1038/s44159-022-00108-1>
  16. Qamar, Y., R. K. Agrawal, T.A. Samad, and C.J. Chiappetta Jabbour. (2021). When technology meets people: the interplay of artificial intelligence and human resource management. *Journal of Enterprise Information Management*, 34, 5, 1339-1370. <https://doi.org/10.1108/JEIM-11-2020-0436>
  17. Ryan, A. M., & Derous, E. (2019). The unrealised potential of technology in selection assessment. *Journal of Work and Organisational Psychology*, 35(2), 85–92.
  18. Simsek, A., & Simsek, E. (2019). Beneficial and detrimental effects of cyberloafing in the workplace. *Journal of Organisational Behaviour Review*, 1(1), 97-114.
  19. Suen, H.-Y., Chen, M.Y.-C., & Lu, S.-H. (2019). Does the use of synchrony and artificial intelligence in video interviews affect interview ratings and applicant attitudes? *Computers in Human Behaviour*, 98, 93–101. <https://doi.org/10.1016/j.chb.2019.04.012>
  20. Yarger, L., Cobb Payton, F., & Neupane, B. (2020). Algorithmic equity in the hiring of underrepresented IT job candidates. *Online Information Review*, 44, 383–395. <https://doi.org/10.1108/OIR-10-2018-0334>
  21. Zhong, J., Chen, Y., Yan, J., and Luo, J. (2022). The Mixed Blessing of Cyberloafing on Innovation Performance during the COVID-19 Pandemic. *Computers in Human Behaviour* (126), Elsevier, p.106982.