DCIF Project – Evaluation Tool 2: Using Artificial Intelligence Powered Tools for Recruitment and Hiring

Tags

Who is this tool for?

High Priority:

- Information Technology Professionals
- Artificial Intelligence Builders

Practical Information:

- Recruiters
- Hiring Managers
- Hiring Committee Members

Useful to Know:

- DEI and HR Professionals

What guidance does this tool provide?

- Understanding the potential harms of using AI for screening applicants
- How to adjust AI tools to screen in candidates with disabilities and allow them to compete fairly on the basis of potential

Take home points

- Focus on the benefits, screen for, and eliminate potential for unintended consequences
- AI has the potential to tackle some of recruitment's most intractable challenges, but only if the underlying algorithms and the data set powering them are trustworthy and free of bias. Biases often occur at the intersections of disability, race, gender, and other identities.
- Optimize for fairness by addressing barriers to develop a meaningful and robust audit of all algorithm-driven tools that may discriminate against persons with disabilities. This can assist to pinpoint and remove and human-introduced biases

What are Artificial Intelligence powered tools used for in Recruitment and Hiring?

Clarifying Key Definitions

Algorithms

An algorithm is a process or series of steps designed to answer a question, make a decision, or carry out a task in domains that traditionally have been handled by humans.

Artificial Intelligence

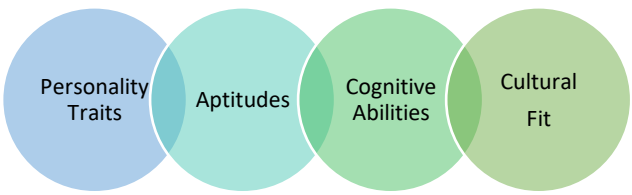
Artificial intelligence (AI) is a set of algorithms that has the ability to change, adapt, and grow based on new data. AI can modify its algorithms and creates new algorithms in response to any inputs and data.

"The goal with Clari is to empower customers with easy, personalized access to information whenever they need it," says Todd Copeland, SVP Digital, TD Bank Group. "Technology does many things for us, but married with a human connection, it gives people an even better experience by building financial confidence with a lighthearted approach. "The report [Responsible AI in Financial Services] found that the majority of Canadians (72%) are comfortable with AI if it means they will receive personalized services. But nearly the same number (68%) said they are concerned they don't understand the technology well enough to know the risks.

When designed and used in an ethical manner, AI has enormous potential to support employment and labour market participation among persons with disabilities. However, many algorithm-driven tools fall short of regulated standards.[1]

AI is most often used for candidate sourcing, candidate tracking, resume screening, pre-employment assessments, and even interviewing. AI tools typically assess candidates based upon how they compare to a 'model worker' – someone who will blend into the workplace culture and effectively match or replicate the best people the employer already has.[2] Here are just some of the uses for algorithm-driven tools[3]:

- **Resume screening:** Screening applicants' resumes for certain terms or patterns
- **Face and voice recognition:** Analyzing applicants' facial movements, word choices, and voices from recorded video interviews
- **Gamified testing:** Gathering data, such as right and wrong answers and reaction time, as applicants play a simple video game
- **Trait testing:** Grading applicants on an online test that purportedly measures certain personality traits or cognitive abilities



The results of these tests provide data to an employer about:[3]

- **Personality traits:** such as openness, conscientiousness, extroversion, emotional stability, adaptability, assertiveness, responsiveness, intensity, optimism, or sociability
- **Aptitudes or cognitive abilities:** such as reaction time, attention span, ability to focus under pressure, problem-solving, or vocabulary
- **Cultural fit:** such as on motivations, ideal work environment, or life priorities

Pop Up: Approximately 76% of organizations with 100 or more workers use algorithms to assess performance on hiring tests.[3] Around 40% of organizations use AI when screening or assessing candidates during recruitment.[4]

The Problem with AI and Algorithm-Driven Tools

An employer may be tempted to use algorithm-driven tools to assess candidacy without stopping to consider:

- *What* exactly they are testing for, and why?
- For example, what specific traits are being evaluated, and whether they are *actually necessary* to perform the essential functions of the job

Almost always, using AI to evaluate personality, aptitudes, or cultural fit will exclude people with disabilities from the labour market. They are highly unlikely to match any employer's picture of an 'ideal' colleague. As classic 'outsiders' they will rarely, if ever, knowingly be presented to the AI developer as a top performing 'insider.'[2]

Exclusion by Design

The use of AI can perpetuate the needless exclusion of people with disabilities in the workplace. Candidates with a wide range of disabilities stand very little chance of getting through AI-powered screening processes – and they will also struggle to prove they were discriminated against by an AI powered process. This is because AI can reproduce human biases in the datasets by which recruitment tools are built. Without thoughtful and responsible application, forcing non-standard candidates into a standardized process will guarantee unfair treatment.[2]

Pop Up: Algorithmic bias can also be harder to detect than human bias, because many people think of technology as "neutral." Managers know to review the hiring history of a human recruiting manager for bias, but they may not think to do so for a computer program.

Optimizing AI for Fairness

As these algorithms have spread in adoption, so, too, has the risk of discrimination written invisibly into their codes. For people with disabilities, those risks can be profound.

Addressing Biases: It is essential for employers to identify and mitigate potentially harmful biases in their AI process. To do so, it is necessary to understand and identify how humans carry biases into an AI system. People with disabilities in Canada are less likely to be employed (59%) than those without disabilities (80%).[5] Because of this, they are less likely to be represented in data that are used to build algorithms to identify 'ideal hires'.[6] Here is a list of steps you can take to start addressing bias in the recruitment and hiring process:[3]

- Develop a meaningful and robust audit of all algorithm-driven tools that may discriminate against persons with disabilities
- Pinpoint and remove and human-introduced biases
- Only develop selection criteria that are job-related and consistent with business necessity, and do not systemically disadvantage members of employment equity groups
- Ensure that AI screening algorithms map onto the bona fide (must-have) occupational requirements for the position
- If possible, train AI creators in intersectionality, diversity, equity, and inclusion, to ensure that diverse datasets that include people with disabilities are used in AI powered processes. Provide guidance on responsibilities on diverse selection and procurement
- Include people with lived experience of disability and employment equity groups to weigh in the designing and testing of AI-powered tools

Flexible Application:

IBM treats AI not as a singular solution that replaces human intelligence, but a tool to supplement it.[7]

To leverage AI thoughtfully and inclusively, it is critical that it is not applied in a rigid or structured manner. Companies like IBM do not place an overwhelming emphasis on AI to guide the recruitment and hiring process. Instead, they recognize that AI has a 'black box' issue, where decision-makers are not able to explain or understand why and how AI makes decisions.[6] To balance this, disability confident companies:

- Recognize that no single assessment method will be completely fair for all applicants
- Do not use AI-powered tools in isolation
- Supplement information from AI with human decision-making and other assessments
- Consider how accommodations can be made so each candidate can compete fairly based on their skills and career potential

Procuring Third Party AI Services Accessibly

Many companies, especially smaller ones, may not develop their own AI solutions in house. If your company hires a third party to manage AI-powered tools for recruitment and hiring, do your due diligence to ensure that jobseekers and candidates with disabilities are not being inadvertently screened out. Following these steps is a great start:

- When implementing recruitment technology, especially candidate assessments, find out how the algorithm that the vendor offers works
- Ask them questions about whether their products are safe and inclusive of persons with disabilities
- Inquire about how persons with lived experiences were involved with the design or testing of products

- Communicate with the third party and ensure that your preferences for diversity, equity, and inclusivity are built into the screening process
- Routinely check in with the third party to ensure that existing or new biases are removed

Additional Resources That May Help

The Future of Work and Disability Project

- The Future of Work and Disability project in Canada brought together a study group of fifteen people, many with lived experience of disabilities, with researchers, artificial intelligence (AI) experts, data scientists, employment organizations and others engaged in the data ecosystem. The goal of the group was to understand and examine intersecting topics of AI, automation, standards and employment as they mainly relate to persons with disabilities.
    - Link: https://wecount.inclusivedesign.ca/views/fwd/

Business Disability International

- Business Disability International is leading essential work that focuses on 'Optimizing AI recruitment related tools and machine learning models, for fairness, non-discrimination, accountability and transparency' and planning a 'Global Summit 2022' to challenge key influencers in the field of Ethical & Responsible AI to ground their work firmly in human reality and in the lived experience of disability which is intrinsic to that reality.
    - Link: https://www.businessdisabilityinternational.org/

The Institute for Ethical AI at Oxford Brookes University

- Researchers at the Institute for Ethical AI at Oxford Brookes University published a strong White Paper in 2020 focusing on the unfairness of recruitment AI entitled, "Recruitment AI has a Disability Problem: questions employers should be asking to ensure fairness in recruitment."
    - Link: https://www.researchgate.net/publication/343217484_Recruitment_AI_has_a_Disability_Problem_questions_employers_should_be_asking_to_ensure_fairness_in_recruitment

Center for Democracy and Technology

- The Center for Democracy and Technology is a 25-year-old nonprofit, non-partisan organization working to promote democratic values by shaping technology policy and architecture. They published a White Paper in 2020 entitled "Algorithm-driven Hiring Tools: Innovative Recruitment or Expedited Disability Discrimination?" Several recommendations for the fair and equitable use of AI are listed in the report.
    - Link: https://cdt.org/wp-content/uploads/2020/12/Full-Text-Algorithm-driven-Hiring-Tools-Innovative-Recruitment-or-Expedited-Disability-Discrimination.pdf

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