

Labour Rights and AI: Impact of AI and Automation in Employment Law

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Executive Summary

Artificial Intelligence (AI) has been seen a rapid development and assimilation into the workforce. Particularly in automation and the hiring process, with AI-based recruitment utilizing machine learning and automation using both robotics and machine learning.

Using artificial intelligence in both aspects of the workforce carries both risks and benefits. Automation has helped workers by taking on repetitive tasks, removing the middleman in reaching customers faster and better through AI-based services and robotized workers. While AI hiring has improved candidate experience through 24/7 AI support and hiring efficiency. However, these applications of AI come with a set back and risk, including the increase job discrepancy, programmed bias and discrimination, infringement on privacy and, negative effects on mental health and well-being.

Moreover, automation will influence how our economy will continue to develop within the prospective year of 2030, especially as both low-skilled and high-skilled jobs become progressively automated. While AI hiring and its methods of decision making will affect the legal system and create more legislations, specifically in America and Canada, to counteract hiring model's ability to infringe on privacy laws and discriminatory decision making.

Introduction

In recent years, artificial intelligence (AI) has been a prevalent and extensive part of the workplace. The rapid advancement of AI has supported individuals that require and provide legal counselling, increased efficiencies in the hiring process, improved analysis and analytical prediction, and creates a safer workplace by providing alternatives for dangerous tasks.

With the rapid growth of AI, many employers have seized the opportunity to replace manual labor with automation, which has created a surging demand for the development of new skills to sustain the increasing reliance on machines—even for high-skilled workers who were once considered irreplaceable. Meanwhile, AI-driven recruitment systems, which often have inherent biases and filters, can limit the pool of preferred applicants, leading to discrepancies in hiring.

How is AI being Used in Automated Process

Automation appears in many forms, from AI-based legal consultations and financial advising to increased use of robots for manual labor in fast-food restaurants. Robotics was among the first types of automation, replacing repetitive manual tasks and encouraging employees to focus on more stimulating work.

Supermarkets like Loblaw's, Walmart, and Costco have implemented self-checkout kiosks, allowing customers to buy goods with minimal assistance from employees. In 2020, Amazon took this process a step further by introducing its first ever grocery store alongside their first edition of the Dash Cart. Amazon defined the Dash Cart as a "smart shopping cart that helps make grocery trips quicker by skipping the checkout line", and it does just that. By scanning and weighing items placed within the shopping cart, it also eliminates the need for employee assistance as it provides a built-in map and search bar to locate items in the store¹.

Like supermarkets, fast food restaurants have also implemented kiosks to eliminate the middleman in customer service. Now that ordering kiosks have become commonplace; some franchises have taken automation further by introducing robotic kitchen staff. For example, robots like Remy can prepare up to 300 salads per hour with accuracy and precision, while the Autocado evaluates the quality of avocados and performs basic culinary tasks. McDonald's has embraced these mechanical advancements by operating a fully automated restaurant at a location in Texas. At the pilot restaurant customers can order digitally,² while mechanical devices that flips burgers and fry fries make customer orders. After meals are prepared, they are sent to customers through a conveyer belt³.

¹ <https://aws.amazon.com/blogs/industries/amazon-fresh-saves-shoppers-time-and-drives-satisfaction-with-dash-cart/>

² <https://www.cbc.ca/news/business/automation-restaurant-industry-1.7089291>

³ <https://foodondemand.com/02132024/robots-are-coming-but-restaurant-automation-is-far-from-easy/>

While robotics is a major aspect of automation, machine learning has progressed to become part of the professional services sector as well.

Companies like Blue J Legal provide an AI-based legal service, where lawyers can input legal question, regarding tax law and the AI will scan through judicial decisions in search of a pattern dealing with similar tax related legal cases to predict an outcome for the original question. The outcome is supported by a set of real and relevant cases which can then be presented to a group of lawyers working on a case based on the initial inputted question⁴.

Wealth Management systems also use Robo-Advisor, an automated financial advisor, to create and manage an investment portfolio providing unique financial advice for each client. At a fundamental level, robo-advisors are machine learning models that use algorithms to create an ideal portfolio based on a multitude of demographic and psychographic questions. Some advisors analyze previous financial transactions to provide the investor with a more detailed report on their overall financial behaviour and suggest the most-appropriate investments for the prospective client⁵.

How is AI being Used in Hiring Process

As application submissions continue to rise, more companies are opting to utilize machine learning-based recruitment tools to help seek out the best candidates for their company.

With a staggering number of resumes and CVs sent to human resources, hiring managers have taken the opportunity to use AI resume screeners and online recruiters to seek the best candidates before proceeding to an interview stage. Digital resume and CV screenings use algorithms like random forest to search for specific keywords set out by employers to classify information to find qualified applicants.⁶ These keywords may be skills, necessary qualifications, or relevant experiences within the position's field⁷.

For large organizations with many qualified candidates to interview, the process can be tedious and time-consuming for hiring managers. This is where automated video interviews (AVIs) come in. In an AVI, candidates respond to automated questions, and an AI algorithm analyzes their answers, helping to narrow down the pool of qualified applicants more efficiently.⁸

Automation

Automation continues to encroach upon society, but how much technological advancement is a positive thing, what are the negative aspect of it, and how will it affect us economically?

⁴ <https://www.utoronto.ca/news/u-t-startup-blue-j-legal-raises-us7-million-plans-cross-border-expansion>

⁵ <https://www.forbes.com/advisor/in/investing/what-is-a-robo-advisor-and-how-does-it-work/>

⁶ <https://ceur-ws.org/Vol-3387/paper7.pdf>

⁷ <https://www.testgorilla.com/blog/resume-screening-software/>

⁸ <https://www.flexjobs.com/blog/post/ai-interviews-what-they-are-and-how-they-work/>

Positives

Automation has improved the overall outlook of the workforce by encouraging more stimulating tasks and generating new job opportunities, while replacing monotonous roles.

Repetitive tasks are now handled by automation, allowing employees to focus on more engaging and meaningful work, which creates a more efficient workplace. According to one survey, over 90% of workers agreed that automation increased their productivity, and 85% believed that AI-based tools enhanced collaboration across projects and teams.⁹ In the finance industry, for example, automation has led to cost savings of over \$1,000,000 and up to 25,000 hours saved on rework and revisions due to human error.¹¹

While AI has taken over certain job responsibilities, it has also opened up new employment opportunities in emerging fields like renewable energy. As climate change becomes a more pressing concern, organizations and governments could create over 10 million jobs globally in manufacturing, engineering, construction, and the installation of energy-efficient technologies to meet sustainability goals. Additionally, it is estimated that by 2030, 8 to 9 percent of labor-intensive jobs will be in new occupations.¹⁰

Worker safety has long been a concern for many organizations, but advancements in AI and automation are making a hazard-free workplace more attainable. The integration of automation in the manufacturing industry has helped reduce musculoskeletal injuries; according to OSHA data, between 2005 and 2011, automation reduced approximately 1.2 physical injuries for every 100 employees. Another study found that a 10% increase in robots per 1,000 employees led to a 10% reduction in injuries. In Japan, where there is a shortage of young healthcare workers, nursing homes that adopted automation saw a decrease in worker illnesses and physical strain while increasing employment, staff retention, and quality of work.¹¹ During the pandemic, automation also helped maintain social distancing in factories and manufacturing sites, allowing workers to continue their jobs without facing displacement.¹²

Negatives

While automation has helped organizations improve efficiency and accuracy and created new jobs within the workforce, it has also led to job displacement for both

⁹ <https://hbr.org/sponsored/2023/04/how-automation-drives-business-growth-and-efficiency>

¹⁰ <https://www.mckinsey.com/featured-insights/future-of-work/jobs-lost-jobs-gained-what-the-future-of-work-will-mean-for-jobs-skills-and-wages>

¹¹ <https://www.brookings.edu/articles/keeping-workers-safe-in-the-automation-revolution/>

¹² <https://jhfooster.com/automation-blogs/the-safety-benefits-of-automation/>

low-skilled and high-skilled workers and negatively impacted workers' mental health.

As automation continues to advance, many jobs and industries have become increasingly dependent on AI to handle manual tasks, necessitating the development of new skills to thrive in a digital workforce. However, without organizational support, acquiring these new skills can impose a financial burden on older workers or those with minimal education, who may struggle to adapt to the changing market. Furthermore, a lack of new or enhanced skills could result in job displacement as employers use AI to replace human labor to boost efficiency and revenue.¹³ Studies estimate that between 400 million to 800 million people could be displaced by automation by 2030.¹⁵

Although automation has reduced the physical strain and illness among workers, it has adversely affected their mental health and well-being. The increasing prevalence of automation has led to widespread job insecurity, causing anxiety and uncertainty among many workers. One study found that exposure to robots increased the number of mental health-related days off by 14.9%. This rise in mental health issues has also been linked to increased alcohol and drug use, with the same study reporting a 10.5% rise in deaths due to substance abuse associated with increased exposure to automation. Among men aged 45-54, this increase equated to more than eight additional deaths per 100,000, while women in the same age group experienced approximately four more deaths per 100,000.¹⁴

Economical Impact of Automation

Automation has both positive and negative impacts on the job market, but its overall effect on the economy will determine whether the rapid advancement of AI poses a significant concern for employment in the coming decade.

Job displacement due to AI is a key factor influencing economic performance in the next few decades as automation continues to permeate all fields of work. AI can lead to significant job displacement, potentially increasing income inequality, particularly among low-skilled workers or those lacking higher education, as many jobs created by automation require advanced skills. If displaced workers receive support for skill development and are reemployed within a year, automation could boost the economy by maintaining full employment. However, without adequate support and training, low-skilled workers who remain unemployed for several years

¹³ <https://pub.towardsai.net/the-rise-of-automation-how-it-is-impacting-the-job-market-e8a6c7d5e6e3>

¹⁴ Ibid.

could see a decline in average wages, leading to serious economic consequences in the short and medium term.

As automation becomes more integral to the economy, concerns about its impact on global GDP persist. A study by PricewaterhouseCoopers (PwC) estimated that AI could increase global GDP by up to 14%—or around \$15.7 trillion USD—by 2030 due to accelerated development and integration. Similarly, McKinsey & Company projected that AI could boost global GDP growth by about 1.2% annually, primarily through labor substitution with automation and increased innovation in products and services.

While the rapid development of AI could lead to the highest productivity growth yet, this growth might not be evenly distributed if unemployment rates continue to rise, ultimately diminishing domestic consumption.

AI in Hiring

Recruitment has become a large and strenuous process, but with the advancement of AI the hiring process can and has been significantly faster. But what are the risks and benefits of using AI-algorithms to filter and recruit applicants?

Associated Benefits

The hiring process has become tedious for many hiring managers, but with advancements in AI and its algorithms, organizations have started using e-recruitment tools, resume screeners, and automated video interviews (AVIs).

The use of AI in recruitment offers benefits for both hiring managers and organizations by effectively identifying the most qualified candidates for open positions. One survey reported that 44.2% of respondents experienced a significant increase in hiring efficiency due to AI's involvement. AI-based tools can screen resumes about 70% faster than traditional manual methods.¹⁵

A major concern for applicants is unconscious bias, but advancements in AI have helped address this issue. According to a survey, 63% of hiring managers form a first impression within the first 15 minutes of an in-person interview, and 56% do so during a virtual interview. However, 63% of recruiters stated that AI-based tools helped minimize biases in hiring, demonstrating that AI algorithms can better

¹⁵ <https://www.wearedevelopers.com/blog/ai-recruiting-improve-hiring>

assess and select qualified candidates without the inherent biases that hiring managers may have toward certain demographics.¹⁶

Automated recruitment can also improve the experience for prospective employees, increasing the likelihood that they will accept job offers. A survey found that 58% of candidates had rejected a job offer due to negative experiences during the hiring process, such as delayed responses to inquiries or unexpected changes to interview schedules. Additionally, 46% of those who rejected offers felt that their time was not respected during the interview process. In these situations, AI can enhance the recruitment experience by providing 24/7 availability and responsiveness.

Associated Risks

While resume screeners and AVIs are extremely beneficial in receiving a multitude of applicants and analyzing them for employers, these practices can be extremely harmful to applicants and organizations that hope to recruit qualified candidates.

While some research states that AI eliminates discrimination and bias, numerous examples prove this may not be the case. Amazon's AI based recruiter is a prime example of this kind of scandal. Back in 2014, Amazon built a computer program, based on the company's 10-year data base, which would review job applications. By 2015, they discovered the program was gender exclusive, reflecting the company's hiring patterns through its selection of candidates. The AI based recruiter penalized resumes that identified applicants as female through their extracurricular or attendance in two specific women's colleges. By 2018, the program was shut down for its discriminatory practices.¹⁷

As digital hiring models gain popularity its methods of advancement and accuracy may require applicants' and employees' privacy to be infringed upon. AI relies on previously collected data to create its algorithms, but for these programs to continue learning, they must process new data, including sensitive information about employees and applicants. This poses a risk to confidentiality, as publicly accessible AI systems could inadvertently share private information with unauthorized individuals.¹⁸ While some automated video interviews (AVIs) analyze a candidate's personality, other software can detect details such as political affiliation, family

¹⁶ <https://www.linkedin.com/pulse/pros-cons-using-artificial-intelligence-hiring-unnanu-nnljc/>

¹⁷ <https://www.reuters.com/article/world/insight-amazon-scraps-secret-ai-recruiting-tool-that-showed-bias-against-women-idUSKCN1MK0AG/>

¹⁸ <https://www.foley.com/insights/publications/2024/08/artificial-intelligence-in-recruitment-its-algorithmic-but-it-may-not-be-private/>

status, or medical conditions through social media analysis, potentially leading to biased hiring decisions and violations of privacy.¹⁹

Legal Impact and Governing of AI in Hiring

As AI recruitment software continues to evolve and become more integrated into the hiring process, concerns remain about its potential to make biased decisions about candidates and violate privacy laws by analyzing social media data to determine an applicant's demographic or assess their suitability for a company. However, governments are introducing legislation to reduce bias and control privacy violations.

In the United States, states like Virginia and California have enacted laws to protect applicants and other individuals from the misuse of AI software. The Virginia Consumer Data Protection Act prohibits companies from using employee data for regulatory purposes, while the California Privacy Act requires businesses using AI-based recruitment tools to provide clear and transparent information about how candidate data is handled. However, as of now, neither state nor federal courts have established laws to protect Americans from discriminatory decisions made by AI.

In Canada, various bills and acts aim to ensure transparency in how personal data is used and protect individuals from discriminatory AI-based decisions. The proposed Bill C-27 would require businesses to disclose how AI systems make decisions that could affect individuals. Meanwhile, Quebec's Act 25 allows individuals to request information from organizations on how their data was used in decision-making and grants them the right to correct personal information used in those decisions.²⁰ Additionally, the Artificial Intelligence and Data Act would impose legal consequences for AI-based systems that produce biased or non-compliant outputs that violate existing regulations.²¹

¹⁹ <https://thebarristergroup.co.uk/blog/algorithmic-discrimination-privacy-concerns-legal-implications-of-ai-in-recruitment>

²⁰ <https://www.torys.com/en/our-latest-thinking/publications/2022/04/automated-decision-making>

²¹ <https://www.lumenova.ai/blog/canada-ai-and-data-act-what-you-should-know/>