Accelerating AI skills in Canada
Preparing the Workforce for Jobs of the Future

November 2023

Artificial Intelligence (AI) is increasingly solidifying its foothold on the tasks that we perform today and is expected to be even more pervasive in the next five years.

To better understand how the AI technologies are unfolding in the workspace, Access Partnership collaborated with Amazon Web Services (AWS) to survey over 1,600 workers and 500 organizations in Canada. Findings show that AI may bring a big boost to the Canadian economy and be a strong supporting lever to a large share of employee tasks, but there is currently a lack of AI-skilled talent to fully harness its potential.

Artificial Intelligence (AI) taps into the power of computers and machines to mimic the problem-solving and decision-making capabilities of the human mind, such as visual perception, speech recognition, decision making and translation of languages.

Top Takeaways:

1. **Most organizations in Canada will use AI by 2028**
   
   83% of all surveyed organizations expect to use AI-powered solutions across their organization by 2028. Among these organizations, 82% of employers expect their Sales and Marketing department to be the greatest beneficiary of AI solutions – the highest in this study, followed by the Finance department (80%) and the Information Technology (IT) department (78%). In addition, 55% of employers expect enhanced communication to be the top benefit of AI, in comparison to task automation and enhancing creativity.

2. **Generative AI will transform how we work, with over 70% of respondents expecting to use such tools in five years’ time**
   
   A largely positive outlook on the impact of generative AI has resulted in 86% of employers and 74% of employees stating that they will “somewhat” or “extensively” use generative AI in their organizations in the next five years. Additionally, 93% of employers and 84% of employees can identify at least one benefit from generative AI, even if they don’t plan on using it.

3. **Employers want employees with AI-skills, but are finding it difficult to hire suitable talent**
   
   Two-thirds (66%) of employers prioritize hiring AI talent, but, of these, 77% face difficulty in hiring qualified talent. This could be due to two reasons. First, there is a lack of complementary “soft-skills” like critical thinking and creative thinking among candidates today, which are essential to using AI-tools effectively in addition to core technical skills. Secondly, there are barriers to providing AI skills for employers, such as employers’ lack of knowledge of how to implement an AI workforce training program (70% indicating as top barrier), and acquiring AI skills for employees, including their lack of knowledge on what AI skills training programs are available (57% indicating as top barrier).

**77% of employers who prioritize hiring AI talent, find it difficult to hire suitable talent**

Share of employers responding to each option

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<td>Hiring difficulty</td>
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Generative AI refers to an advanced form of AI that can create new content and ideas. Unlike traditional AI systems that are designed to recognize patterns and make predictions, generative AI creates new content in the form of conversations, stories, images, videos, music and more.
The productivity payoff from an AI-skilled workforce will benefit all types of organizations, and all types of workers will contribute to this.

Employers overall believe that AI can boost productivity by 39%, if fully utilized across all possible work functions. Micro-, small-, and medium-sized firms expect a slightly higher boost of 41%. The productivity boost will materialise in the next five years, with 79% of all surveyed employees predicting that they will use some form of AI-powered tools in their jobs by 2028. At least half of these employees expect to leverage it moderately or extensively. This trend is not exclusive to just ‘tech specialists’, as even ‘non-tech’ workers expect to use AI-powered tools for around a quarter of their job tasks by 2028.

Acquiring AI skills can boost pay and career benefits, and employees across demographics are interested in doing so.

Employers in Canada value AI-skills and are willing to pay at least 25% more to hire employees with AI skills. On the other hand, employees across all gender and age groups signal a strong desire to pick up AI skills to advance their careers, including 54% of female respondents, and nearly half of Gen-Xers and Baby Boomers.

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1. Three types of workers were surveyed: (1) Tech-specialists: employees who develop new technologies and use specialized tech knowledge, (2) Tech-adjacent workers: employees dealing with technological products and services, (3) Non-tech workers: employees who do not require advanced tech knowledge and skills.
2. Large-sized firms refer to organizations that have 250 or more employees, and micro-, small, and medium-sized firms include organizations that have fewer than 250 employees.