***Date***: August 6th 2025

***To***: JB Abbas

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***Subject***: IT Job Market Trends and Chief AI Officer Research Report and Annotated Bibliography for MGMT-1224

Here is the report you requested on the following subject: *“****What are the IT job market trends? How is the rapid evolution of technology shaping the future of IT roles and the skills needed to thrive in the corporate IT world? The rise of the Chief AI Officer.”***

## What are the IT job market trends?

Skills in AI and machine learning, cybersecurity, data science, software and app development, and cloud computing are highly sought after by Canadian tech companies in the current IT job market. In a report published by Robert Half *2025 Canada Job Market: Tech Hiring Trends and In-Demand Roles* he states, “As business increasingly rely on cloud-based systems and grapple with evolving cyber threats, professionals with expertise in these areas are highly sought after.” (Half, 2025, para.11).

In-demand jobs in the tech market include AI/ML analyst, Business systems analyst, cybersecurity analyst, data scientist, and software engineer/developer. To incentivize candidates for these positions companies focus on providing benefit packages and expanded vacation time. These companies understand that a healthy work/life balance is desirable to candidates, so they are willing to adapt to attract the skilled talent required.

Regarding emerging IT trends AI and machine learning, cybersecurity, and cloud adoption are at the forefront. As stated by Robert Half “cyber-security professionals is increasing as organizations seek to protect sensitive data, cloud adoption continues to accelerate as businesses seek flexibility, scalability, and cost savings, and with strong research institutions and a focus of talent development the country is a leader in AI and machine learning.” (Half, 2025, para.21)

In a similar report *Tech job market in 2025: What to expect* published by Katherina Uribe she states “In Canada there is a significant shortage of cybersecurity experts, with one in six cybersecurity positions remaining unfilled… Similarly, 41% of businesses report difficulties in hiring cloud computing professionals.”(Uribe, 2025, para.5)

## How is the rapid evolution of technology shaping the future of IT roles and the skills needed to thrive in the corporate IT world?

As touched on in the previous question. The emerging IT trends include AI and machine learning, cloud adoption, and cybersecurity. With the rapid emergence of AI and machine learning in the current IT world “one in seven Canadian businesses use or plan to implement generative AI”(Barao, 2024, para.6).

Generative AI is predicted to contribute “US$180 billion annually to the Canadian economy in labor productivity gains by 2030… A study by IBM also shows that generative AI fosters new job creation and risk taking among Canadian CEO’s.” (Barao ,2024, para. 8). Some examples of roles being created by AI include AI risk monitoring and AI for climate action.

With the advancement of quantum computing, cybersecurity standards have evolved. Post-Quantum Cryptography or the encryption of data for security against classical and quantum computer cyber-attacks, has been an important investment for many countries in recent years, and will be important in the coming years as quantum computing continues to develop. “By 2025, Canadian entities will likely accelerate their transition to post-quantum cryptographic systems, emerging as a leader in PQC implementation.” (Barao, 2024, para.23). These advancements in technology could create new roles for quantum cybersecurity.

Deepfake defense is another emerging cybersecurity field. With the technological advancements in AI, cybersecurity threats such as deepfakes has been a growing concern for businesses. “In a study by EY, 80% of companies report that voice or video deepfakes are real threats to operations and that 90% of online content in 2026 may be authentically generated.”(Barao, 2025, para.24).

Due to the advancement of AI and its ability to make realistic voice or video deepfakes, the Canadian Government has already worked to implement legislation and it stands to reason that new AI cybersecurity roles will be developed.

## The rise of the Chief AI Officer.

“A chief artificial intelligence officer (CAIO) is an executive role within an organization focused on overseeing the development, strategy and implementation of AI technologies.” (Stryker, 2024, para.1). The CAIO role is a relatively new role formed by the rapid growth of AI. “According to LinkedIn data, the number of CAIOs has almost tripled in the last five years.”(Stryker, 2024, para.3).

The CAIO plays a critical role in assisting the company reach its AI and technological potential. For this reason the CAIO is presented with a multitude of tasks and responsibilities to help achieve the companies goals. For instance strategic leadership, a CAIO must develop AI strategies and plan the utilization of AI for best outcomes. Technology oversight such as making sure employees are using the right tools and methodologies. Team management For example building teams and attracting AI talent. Ethics, governance, and compliance, As well as advocacy and education.

Skills that A CAIO will need to possess include “technical expertise, strategic vision, leadership and ethical insight.” (Stryker, 2024, para.13). A CAIO will need to utilize these skills to “win stakeholder enthusiasm across the organization in order to fund and promote AI initiatives, by articulating a powerful story that aligns with the company’s broader business goals, identify new market opportunities made possible by AI and possess skills in managing large-scale cross-functional projects.” (Stryker, 2024, para. 15).

Determining whether a CAIO is a good addition to a company relies on that companies “current use of AI, strategic goals and organizational structure.”(Stryker, 2024, para.17). If AI is integral to a company’s strategic goals and organizational structure, a CAIO would be a great addition to the company offering important strategic leadership, technical expertise, and team management skills along with strong ethical insight.

## In Conclusion

AI and machine learning, cloud adoption, and cybersecurity are in high demand within the current IT market. There are rapid technological advancements in AI and cybersecurity which has expanded the IT job market and has opened new roles for specialized talents and expertise. If AI is central to the company’s products and services a CAIO could provide the leadership, ethical insight, strategic vision and technical expertise required to make sure all AI initiatives are utilized for best outcomes.

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