

Looking at the AI Skills gap and how to address IT

To millions of people worldwide, artificial intelligence (AI) is an invisible disruptor, a silent horror lurking in the depths of digital space. However, it would be naive to ignore the large-scale transformation that AI has brought to industries across the globe, much like how it has opened new avenues, opportunities, and challenges for businesses.

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We may not be looking at a utopian society where the growing population can live and work in perfect harmony with this transformative technology. However, the likelier and more imminent scenario will see burgeoning AI technology continue to evolve and businesses looking to leverage it more broadly across their enterprises. The real concern, however, is in workers' continued inability to effectively utilise and work alongside this technology.

A significant skills gap has emerged in the UK and countries across Europe like France, where capable workers are in shorter supply than the demand for AI-adept talent in sectors worldwide. This widening chasm between the urgent need for AI-related skills and the growing workforce numbers poses a worsening problem that needs decisive and proactive action to address.

Looking at the AI skills gap

The AI skills gap encompasses a broad range of competencies and

abilities, from foundational STEM knowledge to advanced applications in machine learning (ML), *natural language processing (NLP)* and data science, among others.

Recent surveys suggest that many sector professionals believe they can use AI responsibly and effectively in their roles. However, results would indicate that only a small percentage of those people actually possess all the necessary skills to do so. This discrepancy is evident across various sectors, from finance and healthcare to legal services and cyber security.

For instance, in the cyber security terrain, AI is offering security analysts and threat responders plenty of opportunities to keep pace with AI-powered cyber threats. Malicious actors have been notorious for their usage of AI to infiltrate systems, intercept finances, disrupt economies, and extract personal data, while in many cases eliminating the paper trail in money laundering activities.

Proven cyber security measures like *penetration testing*, red team engagements, vulnerability assessments, and threat detection and response are now being augmented by AI, but this is only half the battle. Not only do these organisations need capable, skilled humans driving AI's innovation as a means for good, but it needs to be done so at a much quicker pace. Thus the skills gap continues to be pervasive.

But this gap isn't exclusively limited to technical roles like those involving algorithms or programming. Non-technical employees organisation-wide can also see AI literacy help them in their daily work, whether it's understanding how best to interact with AI systems, interpreting and analysing AI-generated insights, and making informed, strategic decisions based on aggregated information that AI programmes dispense. As UK and French companies spread their workforces beyond geographical borders, finding AI-literate technical and non-technical roles *across all languages* will be key in bridging this skills gap.

However, this isn't the only challenge ahead of organisations and sector leaders trying to make the best of this rapidly advancing technology.

Main challenges in bridging the skills gap

The pace of AI development is far outshining the speed at which training and education programmes can adapt their curricula and course content. This means that humans are failing to grasp all the up-to-date knowledge they need beyond foundational skills, although that is not to discredit these essential traits. The real challenge lies in how to build on these foundational AI skill sets enough to perform jobs effectively, augment teams, and support businesses in a way that helps them keep pace with the technology's evolution.

It doesn't help matters that there is an absence of a universally accepted framework for AI across sectors. While the EU and UK have been forthcoming about their endeavours to regulate and standardise AI for ethical adoption, much of this legislation is still in limbo, making it challenging for employers to define job requirements and for employees to target their learning efforts.

Concerns about job displacement due to AI still linger. Many workers are growing increasingly concerned about AI's continued (and largely unregulated, currently) advancement, and with very little - if any - red tape, it's understandable that there is resistance to change. While it's encouraging that organisations are keen to use AI for empowering their teams, some - particularly small and medium-sized enterprises - lack the resources to provide sufficient, regular, comprehensive AI training. The scarcity of training materials and specialists further exacerbates the skills gap problem.

Strategies to address the AI skills gap

It's all well and good to express the need to bridge the AI skills gap in economies poised for long-term growth like *the UK* and *France*, but this goal will only be achieved with time, patience, and a methodical, decisive approach. Concentrated efforts from educational institutions, policymakers, and businesses will all be vital.

Integrating AI and data science into educational curricula from an early stage is a great first step to introducing AI concepts to students at a basic level. Expanding this accessibility into higher and further education programmes will also encourage greater adoption across education.

Businesses must be proactive in developing a robust workforce AI policy and encouraging healthy, human-led usage across their workforces. Investments must be made in comprehensive AI training programmes for existing employees to upskill in, and encouraging AI experimentation in low-risk or test environments will also increase their familiarity and reinforce their confidence in AI tools. Mentorship, coaching, and incentives will also make employees feel reassured that their job displacement fears are valid but unwarranted in a secure work environment that values human supervision.

Public sector involvement is also vital in addressing national and international skills gaps. AI strategies that prioritise skills development and learning will go a long way in encouraging more people to pursue it, rather than run from it. Funding for AI research, development and education programmes *has been promised* by the UK Labour government, and extending tax relief and incentives to businesses will also encourage this adoption more methodically and effectively.

AI bias must also be considered heavily as the technology and its availability *continue to propagate*. Culturally diverse and multi-skilled

teams must work on AI development and projects to address, uncover, and mitigate bias while ensuring training programmes are responsibly deployed and inclusive.

It's clear that the AI skills gap presents a prominent challenge but also plenty of opportunities for businesses, education institutions, and policymakers. With sufficient funding, effort, and encouragement from governments, the UK and EU countries can position themselves as key players in AI's revolution and its impact on the future.

It's important to remember that addressing the AI skills gap isn't a case of reviewing their technical abilities or computing literacy. It's about looking at the bigger picture, envisioning how workforces can think critically about AI, understanding its implications and responsible usage practices to solve complex problems and innovate.

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