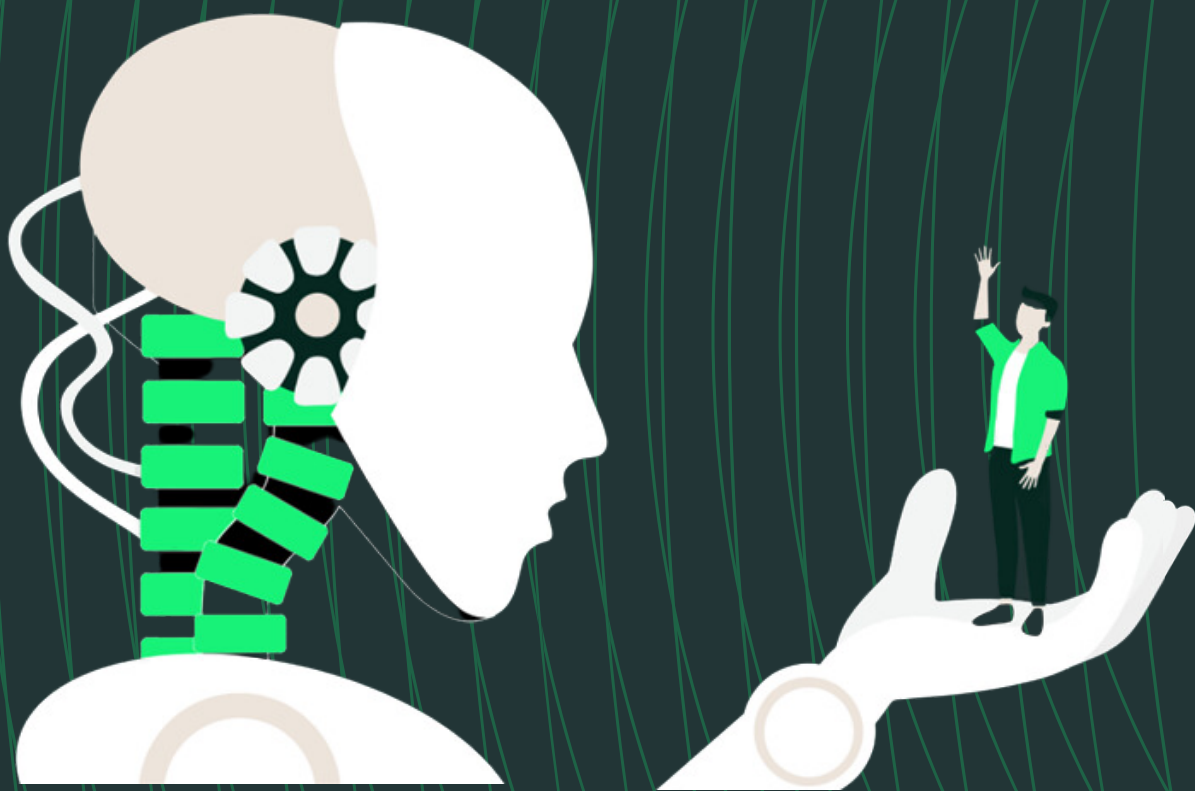


kubrick

The Impact of Artificial Intelligence on the Talent Agenda



SEPTEMBER 2023

Artificial Intelligence's (AI's) influence is prevalent in our lives, from recommending music and delivering targeted advertisements, to driving our cars and aiding drug development [1]. It has even been called the Fourth Industrial Revolution [2]. There has been a significant shift in how AI is perceived in both popular culture and among technical experts. Terms like 'ChatGPT' and 'Deep Learning' have been met with a mixture of confusion and enthusiasm, sparking conversations in boardrooms, coffee shops, and around dining tables worldwide. But what does this mean for our workplaces, businesses, and job prospects?



Though generative AI has the potential to displace jobs, the focus placed on training workforces to exploit AI and big data indicates the opportunities for new roles which harness its potential to help achieve business goals.

WORLD ECONOMIC FORUM FUTURE OF JOBS REPORT 2023

Stay with us as we examine the latest trends in AI, explore their impact on talent management, and delve into its current and future use in the workplace. We aim to shed light on what the future employment landscape might look like and how we can responsibly embrace new AI technologies to generate value and improve job satisfaction.

1

TRENDS IN AI

Machine learning technologies are transforming the healthcare, manufacturing, transport, and finance industries, to name but a few. As the immense impact of AI is realised, it is being met with fears surrounding job security and loss of human creativity, demonstrated by the recent strikes in Hollywood demanding human writers only [3]. This apprehension is supported by the World Economic Forum who estimates that 34% of tasks within businesses are currently performed by machines, a number which is expected to rise to 42% by 2027 thanks to AI [4].

Some of the most astounding capabilities of AI are showcased by large language models (LLMs) such as OpenAI's ChatGPT and DALL-E. LLMs' ability to read unstructured documents and extract significant information is aiding traditional data entry and administrative roles. These technologies are being woven seamlessly into our arsenal of workplace tools such as Microsoft's Copilot. Owing to the integration of OpenAI's GPT into Office 365, language prompts can be used to generate document summaries, slide presentations, and even spreadsheets [5]. These factors have contributed to data entry clerks being listed within the top 10 declining jobs over the next 5 years as companies look to save money and automate tasks [4]. Customer service is another sector that is leveraging AI through the rollout of chatbots and conversational agents, such as the chatbot your bank undoubtedly uses [6].

Most customer questions can be addressed by these technologies, while more complex cases can be referred to human experts [7]. AI-powered chatbots will enable businesses to reduce the amount of human support required as the accuracy of the responses and quality of customer engagement improves with every interaction.

Cutting-edge examples of AI in healthcare include tumour detection and oncology diagnosis. Radiologists now work alongside these tools, which flag rare and complex cases to human experts for further investigation [8]. Unlike humans, AI does not fatigue which allows humans to focus their efforts on edge cases, leading to a more efficient and accurate diagnostic pipeline whilst improving job satisfaction.

“ ”

The hottest new programming language is English.

ANDREJ KARPARTHY OPENAI FOUNDING MEMBER

Let's get a bit meta: OpenAI's Codex has been integrated into GitHub Copilot and can generate functional code in a variety of programming languages by interpreting written natural language. Most recently Codex is being used for test-driven development, where test cases for code can be generated to automate the process [9]. This AI is capable of both writing and testing new code! We have come a long way since writing assembly code and like it or not, today's engineers code at an increasingly high level of abstraction with growing reliance on these tools. So, it seems that not even the workforce responsible for creating AI is immune from having their job functions transformed.

Fear not - with the rise of generative AI in coding, new jobs are also being created. Enter the prompt engineer, a role that focuses on fine-tuning these larger general models to specific tasks. Where in the past, ground-up development required large amounts of data, now prompt engineers can leverage smaller datasets with an emphasis on domain expertise [10,11]. This new trend significantly reduces the barrier to entry, allowing businesses to implement AI with fewer resources. The emergence of new AI-related occupations demands fresh skill sets and as with previous industrial revolutions, success pivots around the workforce's ability to adapt and embrace new skills.

2

MIND THE SKILLS GAP

AI is accelerating the automation of tasks across industries and leading to the deskilling of roles: a phenomenon where certain roles are being consolidated and specific skills are made redundant. For example, the prompt engineer may replace multiple junior developers by using generative AI in code development. Automation in the workplace is estimated to make a significant percentage of jobs vulnerable to displacement: 35% in the UK, 47% in the US, and 77% in China [12].

Upskilling and reskilling are therefore essential to staying employable in a fast-changing job market where many roles are being deskilled. The deskilling of some jobs has led to a rise in demand for general problem-solving and soft skills. Amongst these, AI literacy is imperative, from understanding its potential to realising its limitations [13, 14].



For example, using AI requires decomposing a problem and communicating these smaller tasks effectively to the likes of ChatGPT [15]. A recent report from Boston Consulting Group reveals that while 86% of employees believe they will need upskilling, only 14% have received it in 2023 [16]. Swift action is needed to bridge the skills gap.

Wouldn't it be great if we could use AI to remedy the problem that AI created? Turns out we can. Chatbots aid in upskilling and reskilling by acting as virtual tutors, guiding individuals through learning modules, providing real-time feedback, and answering questions [17]. This personalised approach enhances the effectiveness of upskilling initiatives by delivering targeted content and adaptive learning pathways. Upskilling chatbots offer the flexibility of anytime, anywhere access, enabling employees to engage in continuous learning at their own pace.

Machine learning models are also being used to link workers to projects aligned with their skills and interests [18]. These recommendations may be used to allocate talent effectively across departments and geographical locations. This is the perfect example of allowing people to remain relevant within an organisation, matching people to job swaps, new positions, and projects that align with individual goals [19].

In the face of an immediate skills gap, relying solely on internal upskilling won't be enough. As the tech sector expands rapidly, traditional recruitment is struggling to keep up with the demand [20]. Increasingly, businesses are choosing to outsource talent by way of technical and strategic consultants, bolstering and futureproofing their workforce for a competitive edge. There is a need to navigate and balance short-term advisory support with long-term talent augmentation to take advantage of these emerging technologies. This flexible approach will help support existing efforts or establish new departments and can catalyse and nurture a culture of continuous upskilling.

Whether training up an existing workforce or bringing in talent from elsewhere, collaboration with AI improves employee satisfaction, retention, and productivity. Organisations must adopt AI technologies to stay relevant, baking continuous upskilling into their workforce culture.

AI has the potential to revolutionise the workforce, but its rapid adoption, coupled with increasing reliance, brings risks that need to be carefully considered. There has been a recent shift in strategic business thinking towards general robustness in global markets following mass supply chain disruption during the coronavirus pandemic, as reported by 94% of Fortune 1000 companies [21]. The adoption of AI is no exception to this trend and the over-reliance on large AI models developed by tech providers could lead to an undesirable loss of sovereignty, allowing these companies to alter their services and pricing strategies at will.

Another hurdle businesses will face is new AI regulations and policies. The European Union is actively developing guidelines to govern AI usage, emphasising individuals' rights, privacy, and ethical considerations [22]. The proposed ban on facial recognition and real-time biometrics, for example, will have an impact on an organisation's capacity to tailor personalised products [23]. This highlights why businesses must retain and develop talent, adapting to new regulations without relying on AI-driven services. An emerging role is the AI Regulation officer, similar to Data Protection officers introduced by data protection regulations [24].

It is also worth acknowledging the limitations of AI. One hurdle is explainability. Highly complex AI, such as Deep Learning, are typically less interpretable than their simpler cousins [25]. Since the internal workings are not fully understood, they are known as 'black box' models. This results in business challenges where transparency in decision-making is key, or where users require confidence and justification in critical applications. Building explainability and interpretability into AI systems is a key agenda for societal acceptance [26, 27]. Another priority in maintaining LLMs is stability and consistency as new data is used to train the models and updates are made over time. Such changes can lead to uncertainty in response quality as training data becomes increasingly polluted with AI-generated content [28].

“ ”

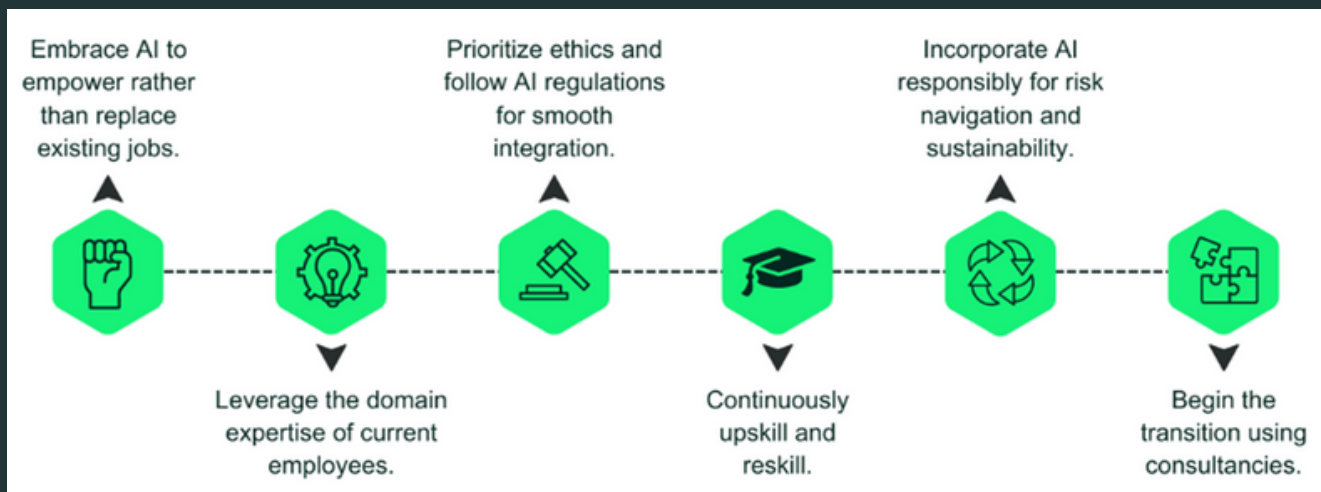
Why did the AI comedian's jokes fall flat? Because it lacked the human touch and couldn't grasp the nuances of humour like a seasoned stand-up!

CHATGPT OPENAI

Humans acquire common sense through years of lived experience and sensory interaction with the physical world. In contrast, AI learns from finite resources, drawing responses based on patterns in select training data. As a result, AI often struggles with interpreting context, making intuitive leaps, and understanding human nuances [29]. The solution to AI's shortcomings is the approach of hybrid intelligence, where human workers are guided by AI and vice versa. With this, regulatory guardrails must ensure rapid but sustainable integration of AI into the workforce.

4 CONCLUDING THOUGHTS*

The rise of AI is reshaping our workplaces and job prospects in remarkable ways. While the influence of AI may evoke mixed feelings of enthusiasm and apprehension, it presents an exciting array of opportunities and has given birth to novel AI-related occupations. Employers, Thought Leaders, and AI Policy Makers are now tasked with embracing this new technology whilst managing job satisfaction as it rapidly changes the day-to-day for many of us. The goal is to empower, rather than replace existing jobs. With the deskilling of certain roles, upskilling and reskilling initiatives become imperative. In the long-term, organisations must embrace continuous upskilling, fostering a culture that harnesses the domain expertise of current employees. In the short term, businesses may look for an immediate injection of technical and business-oriented talent, equipped with the most relevant skills in data and AI. Drawing from a diverse range of technical backgrounds and domain expertise can help to address the acute skills shortage.



MAIN TAKEAWAYS

The rapid adoption of AI calls for a measured approach, avoiding over-dependence on large AI models from tech providers. Learning from past experiences, responsible incorporation of AI is crucial to navigating potential risks and ensuring long-term sustainability. Embracing regulations and prioritising ethical considerations will facilitate a harmonious integration of AI into businesses and society.

The future of work lies in our ability to embrace AI's potential, adapt to evolving skill requirements, and cultivate a workforce that thrives in the age of AI-powered possibilities. Let us stride confidently into this new era, where AI becomes a force for positive change, augmenting our capabilities, and driving innovation to create a brighter and more inclusive future for all [30].

**This conclusion was written with the aid of ChatGPT to illustrate the current abilities of the technology. We prompted the tool to compose a conclusion given the previous sections (written by human experts). Various versions of the generated conclusion were manually combined and refined to reach the final text.*

REFERENCES

- [1] <https://www.deepmind.com/research/highlighted-research/alphafold>
- [2] <https://www.weforum.org/agenda/2016/01/the-fourth-industrial-revolution-what-it-means-and-how-to-respond/>
- [3] <https://www.theguardian.com/culture/2023/jul/14/the-hollywood-actors-strike-everything-you-need-to-know>
- [4] <https://www.weforum.org/press/2023/04/future-of-jobs-report-2023-up-to-a-quarter-of-jobs-expected-to-change-in-next-five-years/>
- [5] <https://blogs.microsoft.com/blog/2023/03/16/introducing-microsoft-365-copilot-your-copilot-for-work/>
- [6] <https://www.netomi.com/banking-chatbots>
- [7] <https://www.forbes.com/sites/rashishrivastava/2023/01/09/chatgpt-is-coming-to-a-customer-service-chatbot-near-you/?sh=4e7fa9ac7eca>
- [8] <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8946688/>
- [9] <https://www.oreilly.com/radar/real-world-programming-with-chatgpt/>
- [10] <https://hbr.org/2023/06/ai-prompt-engineering-isnt-the-future>
- [11] <https://www.zdnet.com/article/six-skills-you-need-to-become-an-ai-prompt-engineer/>
- [12] https://www.oxfordmartin.ox.ac.uk/downloads/reports/Citi_GPS_Technology_Work_2.pdf
- [13] <https://www.forbes.com/sites/forbeshumanresourcescouncil/2021/01/20/soft-skills-are-essential-to-the-future-of-work>
- [14] <https://www.zdnet.com/article/six-skills-you-need-to-become-an-ai-prompt-engineer/>
- [15] <https://hbr.org/2023/06/ai-prompt-engineering-isnt-the-future>
- [16] <https://www.bcg.com/publications/2023/what-people-are-saying-about-ai-at-work>
- [17] <https://weni.ai/en/blog/chatbot-for-corporate-training/>
- [18] <https://www.linkedin.com/pulse/flex-experiences-new-ai-powered-talent-market-place-jeroen-wels/>
- [19] <https://gloat.com/blog/introducing-innerness-the-enterprise-solution-for-career-development-by-gloat/>
- [20] <https://www.peoplemanagement.co.uk/article/1830082/skills-based-hiring-key-plugging-talent-gaps>
- [21] <https://link.springer.com/article/10.1007/s10479-020-03685-7>
- [22] <https://artificialintelligenceact.eu/the-act/>
- [23] <https://thelightbulb.ai/blog/emotion-ai-by-top-companies/>
- [24] <https://www.legislation.gov.uk/ukpga/2018/12/part/3/chapter/4/crossheading/data-protection-officers/enacted>
- [25] <https://docs.aws.amazon.com/whitepapers/latest/model-explainability-aws-ai-ml/interpretability-versus-explainability.html>
- [26] <https://www.mckinsey.com/capabilities/quantumblack/our-insights/why-businesses-need-explainable-ai-and-how-to-deliver-it>
- [27] <https://royalsociety.org/-/media/policy/projects/explainable-ai/Al-and-interpretability-policy-briefing.pdf>
- [28] <https://arxiv.org/pdf/2307.09009.pdf>
- [29] <https://www.forbes.com/sites/robtoews/2021/06/01/what-artificial-intelligence-still-cant-do/>
- [30] <https://chat.openai.com/>

Authors: *Ria Badiani, Semira Demaili, Arthur Farr, Tommy McDonagh, Francesca Middleton, Nathan Roberts*



Copyright 2023 Kubrick Group
All rights reserved.



@kubrickgroup

