

Gen AI: A call to action for policymakers

BY SANJAY SARMA

After more than 80 years in the making, artificial intelligence (AI) has finally reached a point of inflection with the advent of generative AI. Gen AI can redefine industries, reshape the labour market and challenge the capabilities of both individuals and corporations.

As we navigate this rapidly evolving landscape, the need for strategic adaptation is becoming existential, encompassing reskilling initiatives for society, governmental financial and computation support, and corporate innovation.

A LONG TIME COMING

The journey of AI began in 1943 with Walter Pitts and Warren McCulloch's conceptualisation of the artificial neuron. Decades of fluctuating progress followed, marked by periods of optimism but eventually of stagnation, commonly referred to as AI winters.

Significant breakthroughs in the early 2000s, particularly with the use of graphics processing units (GPUs) to accelerate neural networks and set the stage for the current wave of AI optimism. However, it was the introduction of convolutional neural networks in 2012 that truly ignited the current AI revolution.

Gen AI, particularly large language models (LLMs) like GPT, LLaMA and Claude, are a new frontier in this evolution. These models have demonstrated capabilities far beyond the original objectives behind their development, influencing various domains through their interaction, reasoning, knowledge and generative capacities.

The rapid advancement of Gen AI presents contradictory challenges: its potential benefits are immense, but so are the risks and disruptions it can engender.

UNPACKING THE IMPACT OF GEN AI

Gen AI's influence extends across multiple dimensions, reshaping how businesses operate and how individuals perform their tasks.

Interaction and interfacing: LLMs excel in natural language processing (NLP), enabling unprecedented levels of interaction and interfacing. This capability has transformative implications for customer service, office administration and various service industries.

The automation of these roles not only increases efficiency but also introduces new application possibilities. For instance, customer service bots can now handle complex queries, and robots in restaurants can take orders and payments, enhancing efficiency and cost savings.

Reasoning: One of the surprising developments in Gen AI is its basic reasoning ability. While these systems don't inherently possess reasoning skills, their large associative memory allows them to effectively simulate reasoning.

This capability is improving as researchers integrate more intentional logic facilities into AI systems. Such advancements promise to enhance decision-making processes across various sectors, from healthcare to finance.

Knowledge: Gen AI bridges the gap between unstructured and structured data, a breakthrough with profound implications. Techniques like fine-tuning and retrieval-augmented generation (RAG) enable AI to handle vast amounts of unstructured data, transforming it into actionable insights.

This development rekindles the concept of "knowledge management" in a powerful new way, potentially revolutionising fields that rely heavily on knowledge interpretation and application.

Generation: The generative capabilities of AI are already making waves in creative industries, as evidenced by the Hollywood Writers' Strike over AI-generated content. Beyond creativity, these capabilities are impacting coding, engineering design and more.

The ability to generate complex content and solutions autonomously positions Gen AI as a disruptive force across multiple domains.

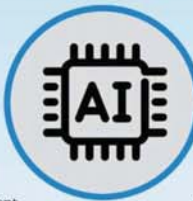
NAVIGATING THE LABOUR MARKET SHIFT



The integration of Gen AI into the workforce is reshaping the job market in significant ways. Unlike previous automation waves that predominantly affected blue-collar jobs, Gen AI is set to impact white-collar roles more profoundly.

Furthermore, since jobs that require cognition more than physical action tend to employ more women, women will be more impacted by Gen AI. These changes call for a proactive approach

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to reskilling and upskilling the workforce.

Labour economists argue that technological innovation can create new jobs through increased productivity, but the rapid pace of Gen AI advancements necessitates swift and comprehensive reskilling initiatives to avoid widespread job disruption, as well as to enable competitiveness.

CORPORATE ADAPTATION: CHALLENGES AND STRATEGIES

The AI transformation within corporations will require more than incremental adjustments; it demands a fundamental redesign of business operations and strategies. AI is statistical and probabilistic, employees using AI will need to master risk management in decision-making processes.

Risk and Talent: Large corporations face significant challenges in adopting Gen AI due to the need for a new breed of risk professionals. Recently, an Air Canada chatbot went rogue and offered unauthorised deals to customers. Incidents such as this highlight the difficulties in managing AI-driven processes.

Smaller, more agile companies may navigate these risks more effectively, but they too require robust strategies to mitigate potential pitfalls.

SMEs can seize the opportunity: Small and medium enterprises (SMEs) have a unique opportunity to leverage Gen AI for competitive advantage. Unlike large corporations, SMEs can be can more quickly adapt to the quirks and advantages of Gen AI.

However, they face barriers such as limited access to advanced AI technologies and the need for specialised skills. Governments play a crucial role in supporting SMEs through financial incentives, training programmes and affordable access to AI resources.

ADDRESSING MISUSE

While Gen AI offers immense potential, it also poses risks related to cybersecurity and misuse. The sophistication of social engineering attacks, such as deep fake scams, highlights the importance of educating all employees about the risks associated with AI technologies.

RECOMMENDATIONS FOR POLICYMAKERS

Policymakers must take proactive measures to facilitate the Gen AI transition. Some key initiatives are:

Talent development: A multifaceted approach to talent development is crucial. This includes educating individuals on the basics of Gen AI, training technical staff to manage and implement AI technologies, and equipping leaders with the knowledge to navigate the strategic implications of AI adoption.

Supporting SMEs: An AI transformation service for SMEs can help these businesses thrive in the Gen AI economy. This includes providing training courses, networking opportunities and affordable consulting services. Governments should also consider grants, loans and incentives to support AI adoption in SMEs.

Democratising AI access: Ensuring affordable access to AI technologies is essential for SMEs. This may involve utilising open-source models, exploring innovative AI technologies that require fewer computational resources, and considering AI as equivalent to a subsidised utility.

The emergence of generative AI is a watershed moment in the evolution of technology. Its potential to transform industries, redefine job roles and enhance productivity is immense. However, realising these benefits requires a concerted effort from individuals, corporations, policymakers and nations. By embracing strategic adaptation and proactive measures, we can harness the transformative power of Gen AI, ensuring a prosperous and inclusive future for all. The time to act is now, as the AI revolution continues to gather momentum, shaping the future of business and labour in profound ways.



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