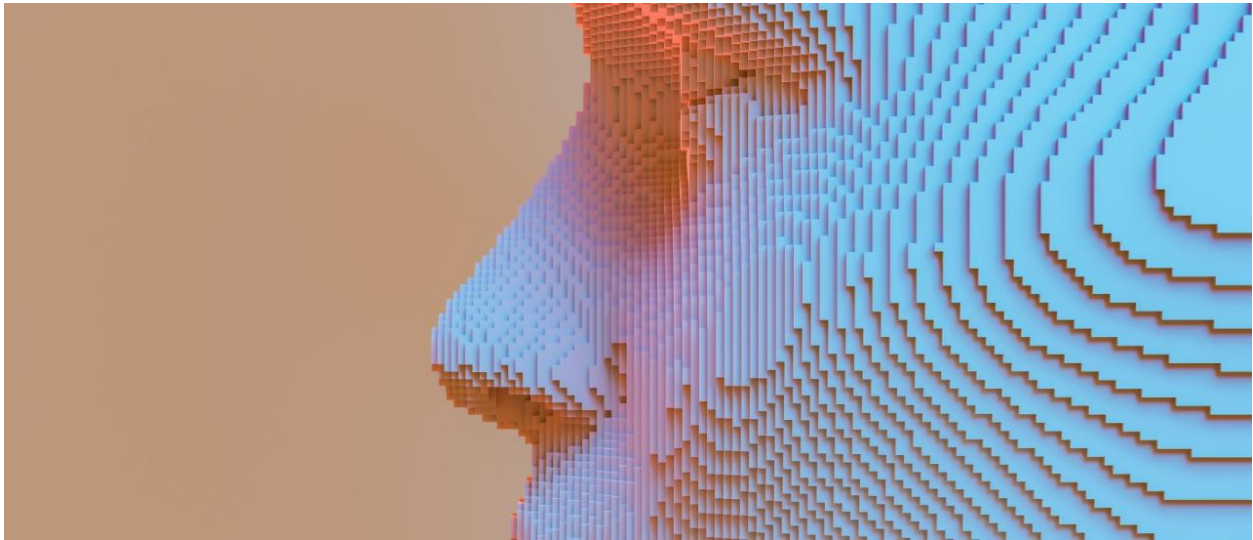

What's Next for Generative AI?



By Miguel Sousa Lobo , Philip M. Parker and Theodoros Evgeniou , INSEAD

INSEAD professors venture an educated guess.

After decades of development in artificial intelligence, generative AI (GenAI) seemingly burst onto the scene not so long ago. The path ahead, in contrast, is likely to be a slow ascent rather than a big leap forward, say INSEAD professors in this [INSEAD Explains](#) video series.

The coming year will witness a meeting of rule-based and non-rule-based systems in GenAI, promising improved accuracy and vast knowledge expansion. Researchers are also aiming to demystify deep learning networks' inner workings and external behaviours to gain more precise control over AI systems and enable safer implementation.

Meanwhile – perhaps to the [relief](#) of many – the timeline for achieving human-like artificial general intelligence remains uncertain, given our limited understanding of our own cognitive process.

1. Incremental progress, long-term potential

[Miguel Sousa Lobo](#), Associate Professor of Decision Sciences

As GenAI evolves, expect gradual improvements in quality and speed rather than revolutionary leaps. The next frontier lies in combining logical reasoning and sense-making with emotion and intuitive systems. But this remains a distant challenge given humans' limited understanding of our own cognitive process.

The role of emotions in decision-making presents a particular conundrum, as evidenced by studies of individuals with impaired emotional systems struggling with logical reasoning. This underscores the complexity of human cognition and the challenges in replicating it in AI.

2. Precision and breadth

***Philip M. Parker**, Professor of Marketing*

The next year in GenAI will see a transformative merger of rule-based and non-rule-based systems. This hybrid approach aims to address current challenges of **hallucinations** and errors by prioritising precise, rule-based computations while leveraging neural networks for more complex tasks.

Industry insiders anticipate vastly improved accuracy and breadth of knowledge. This advancement is partly self-perpetuating, as AI systems generate data that inform and refine their algorithms.

Looking beyond the immediate future, GenAI is poised to dramatically impact formulaic job functions across industries. As these systems continue to evolve, they are expected to increasingly mimic and potentially replace routine human tasks across sectors.

3. More controlled and safe

***Theos Evgeniou**, Professor of Decision Sciences and Technology Management*

Researchers are aiming to demystify the technology of deep learning networks and large AI models that has transformed industries in just a decade. Two key areas of focus have emerged: understanding the intricate mechanics of deep learning networks and analysing their external behaviours.

Scientists are pioneering "artificial neuroscience" or "mechanistic interpretability". These involve manipulating specific parameters within vast networks to alter their outputs. Simultaneously, researchers are studying the vulnerabilities of these systems that make them susceptible to external manipulation.

This dual approach promises to enhance both the capabilities and safety of GenAI, paving the way for more responsible implementation across high-stakes sectors like healthcare.

Find article at

<https://knowledge.insead.edu/strategy/whats-next-generative-ai>

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About the series

AI: Disruption and Adaptation

Delve deeper into developments in artificial intelligence, especially the disruptions across value chains. This series examines AI's impact on a range of sectors, including business consulting, education and the media. It also sizes up the regulatory and ethical questions tied to this game-changing technology.