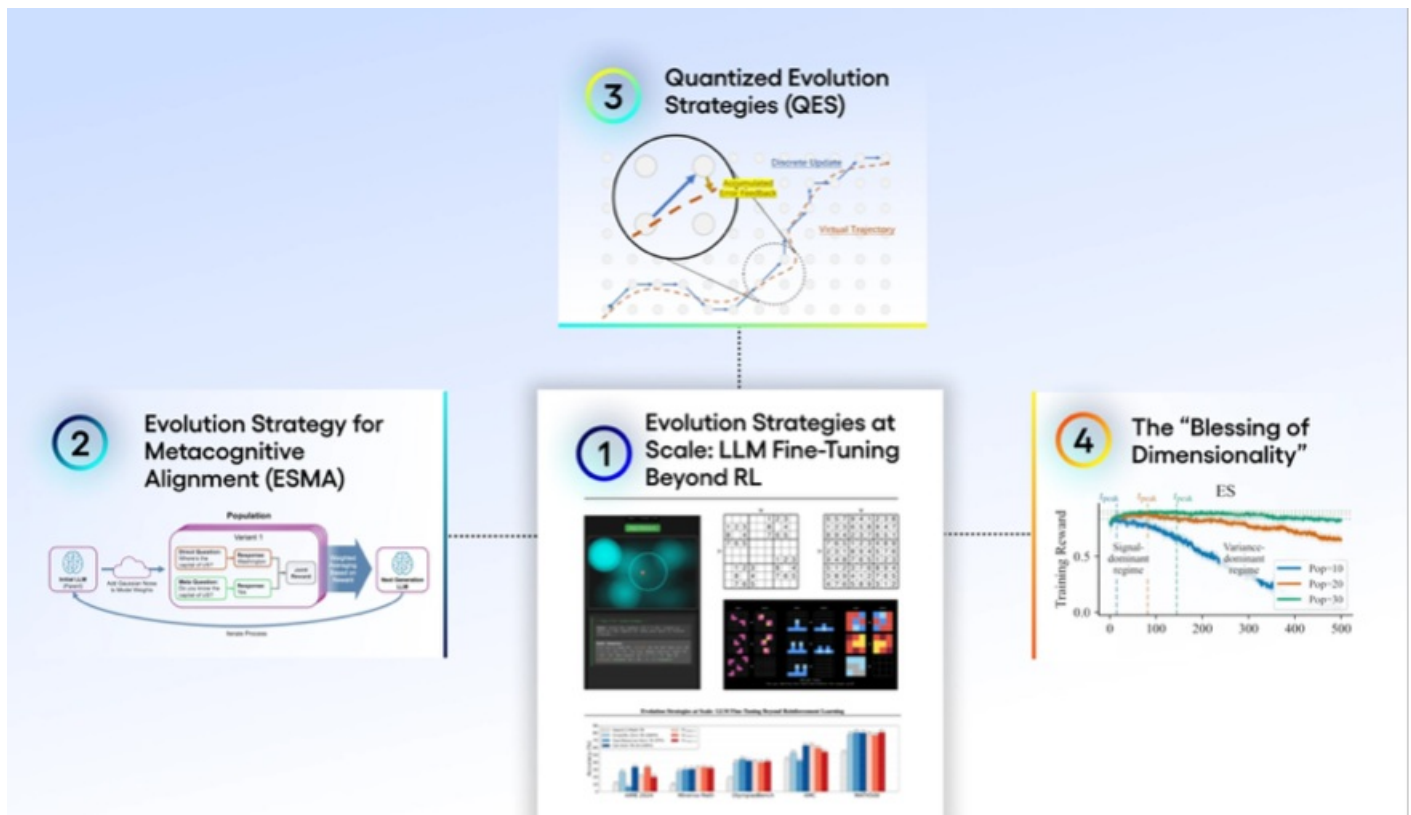


Cognizant AI Lab Unveils Fine-Tuning LLMs Using Evolution Strategies

Cognizant today announced in four new research papers from its [AI Lab](#) how the company is fine-tuning large language models (LLMs) using evolution strategies. The papers introduce training methods that help LLMs handle more complex reasoning tasks while running more efficiently with fewer computing resources.

LLMs are typically fine-tuned so they become useful for a specific job instead of being generally smart. Companies may fine-tune models for specific verticals, for example, the legal industry where precise legal acumen is required. This leads to better answers on complex questions, more consistent behavior, and lower infrastructure costs, making AI systems easier to tailor and deploy in enterprise environments.

Traditionally, LLMs are fine-tuned using reinforcement learning (RL), which can be costly, difficult to scale, and prone to unintended behaviors. Cognizant's AI Lab uses evolution strategies – a gradient-free training approach – to address these challenges. The goal is to make fine-tuning simpler to run, easier to reproduce, and more reliable in real-world settings.



“Enterprises don’t just need better models; they need more efficient ways to tune them for the task at hand,” said Babak Hodjat, Chief AI Officer at Cognizant. “Evolution strategies offer a simpler, lower-cost alternative to traditional fine-tuning, while improving reliability on complex tasks. Our approaches make it easier for companies to tailor AI to their specific business problems, scale across workflows, and realize value faster.”

Building on its earlier work, [“Evolution Strategies at Scale: LLM Fine-Tuning Beyond Reinforcement Learning”](#) the lab expands this approach in four key areas:

- [Applying evolution strategies to more complex reasoning problems, achieving stronger benchmark performance and more consistent outcomes](#)
- [Improving how models assess the reliability of their outputs, enabling more confident use with clearer guardrails](#)
- [Enabling fine-tuning for smaller, quantized models, reducing cost and expanding deployment options](#)
- [Strengthening the theoretical foundation for scaling evolution strategies to larger, more capable systems](#)

As an AI builder, Cognizant helps companies turn AI spending into results they can use in the business. Cognizant AI Lab helps make that happen by identifying promising new ideas, proving they work, and moving them from research into ready-to-use solutions that create real impact for clients.

