GPT-5.4 Finds Workflow Fit as World-Model Research Accelerates

AI News Digest

2026-03-08

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By AI News Digest • March 8, 2026

OpenAI's new model is quickly being steered into spreadsheets, coding, and research workflows, with compute demand rising alongside usage. At the same time, DeepMind's D4RT and renewed world-model arguments point to a broader push beyond language-only AI.

Two trajectories stood out

Today's sources split between **workflow capture** and **world modeling**. OpenAI kept pushing GPT-5.4 into everyday work and research settings, while DeepMind's D4RT and fresh commentary from Yann LeCun and Khosla Ventures pointed toward AI systems that model motion, occlusion, and tacit physical skill rather than text alone [1, 2, 3, 4, 5].

GPT-5.4 is being positioned as a practical work model

OpenAI is expanding GPT-5.4 into concrete workflows via a spreadsheets app, with Sam Altman saying the model is especially strong at Excel manipulations inside complex existing spreadsheets and available to Plus, Pro, Enterprise, Business, and Edu users [1, 6]. Altman also described GPT-5.4 as strong at coding, knowledge work, computer use, and conversation, while Greg Brockman said the model now feels more like talking to a smart friend and Nathan Lambert called it much more approachable in Codex CLI/app than earlier OpenAI models [2, 7, 8, 9].

> "GPT-5.4 feels like talking to a smart friend" [8]

Brockman also highlighted a jump in research-level physics reasoning for GPT-5.4 Pro, and Altman thanked Jensen Huang for expanding Nvidia capacity at

AWS as OpenAI Codex token use rises [10, 11, 12, 13]. The broader signal is that OpenAI is trying to land GPT-5.4 as a workhorse across spreadsheets, coding, and research-heavy tasks—and that demand is rising with it [1, 2, 10, 12].

DeepMind's D4RT is a meaningful step toward physical-world AI

Google DeepMind, UCL, and Oxford's D4RT reconstructs dynamic 4D scenes from video, outputting point clouds that model movement over time and can track objects even through occlusions [3]. The system uses one transformer to jointly recover depth, motion, and camera pose, and the explanation cited speedups of up to 300x over earlier approaches, although the point-cloud output is still weaker for editing, physics use, and photorealism than meshes or Gaussian splats [3].

How DeepMind's New AI Predicts What It Cannot See (0:00)

Yann LeCun separately argued that future AI will need world models learned from sensory data rather than text alone, and Khosla Ventures' Nicole Fraenkel argued that physical AI has to capture human intuition that physics engines miss [4, 5, 14]. Taken together, the day's strongest research thread is a push beyond language-only systems toward models that understand scenes, actions, and physical regularities [3, 4, 5].

Karpathy packages autonomous research into a minimal repo

Andrej Karpathy released **autoresearch**, a self-contained single-GPU repo of about 630 lines where the human iterates on the prompt and the AI agent iterates on the training code [15]. The agent runs 5-minute LLM training loops on a git feature branch, searching for changes that reduce validation loss, and Karpathy says a larger cousin is already running on a bigger model across 8x H100 GPUs [15, 16].

Repo: https://github.com/karpathy/autoresearch [15]

That same direction is showing up in frontier-lab framing: Brockman said GPT-5.4 Pro has made a large jump in research-level physics reasoning and tied it to OpenAI's goal of agents that can do real research and find new scientific insights [10, 11]. The notable shift here is that autonomous research is being turned into runnable loops and explicit benchmarks, not just a long-range aspiration [15, 10].

National-security AI debates are getting less abstract

An OpenAI robotics team member said he resigned on principle, writing that surveillance of Americans without judicial oversight and lethal autonomy without human authorization crossed lines that deserved more deliberation [17]. Gary Marcus, reacting to a separate thread about an Alibaba tech report, warned that AI labs "do not know how to control the systems they are building" and that such systems are being put into weapons systems [18, 19].

> "surveillance of Americans without judicial oversight and lethal autonomy without human authorization are lines that deserved more deliberation than they got." [17]

In a separate interview, Dario Amodei said Anthropic has argued for AI regulation even when it could hurt the business and warned that society is still not adequately responding to the risks of human-level AI [20]. The significance is that questions about surveillance, lethal autonomy, and regulation are now being raised in direct, operational terms rather than only abstract safety language [17, 18, 20].

Sarvam broadens the open-model map

Sarvam AI open-sourced 30B and 105B reasoning models trained from scratch in-house, with the 105B described as roughly on par overall with gpt-oss 120B and Qwen3-Next 80B, and the 30B compared favorably on throughput against Qwen3-30B-A3B [21, 22]. The team also reported strong Indian-language results, including 90% judge preference and 4x token efficiency from a tokenizer built from scratch [22].

This stands out as an open-weight release aimed at multilingual quality and deployment efficiency, not just English benchmark visibility [22].

Sources

1. X post by @sherwinwu
2. X post by @sama
3. How DeepMind's New AI Predicts What It Cannot See
4. Yann LeCun: LLMs ! AI "World Model"
5. X post by @khoslaventures
6. X post by @sama
7. X post by @venturetwins
8. X post by @gdb
9. X post by @natolambert
10. X post by @slow_developer
11. X post by @gdb
12. X post by @sama
13. X post by @firstadopter
14. X post by @vkhosla
15. X post by @karpathy
16. X post by @karpathy
17. X post by @kalinowski007
18. X post by @GaryMarcus
19. X post by @AlexanderLong
20. 'Too Much Power' ? | Dario Amodei x Nikhil Kamath | People by WTF
21. X post by @pratykumar
22. X post by @rasbt