

The Long Read

4 October 2026

8

STORIES

3

SECTIONS

2421

WORDS

3

HIGH IMPACT

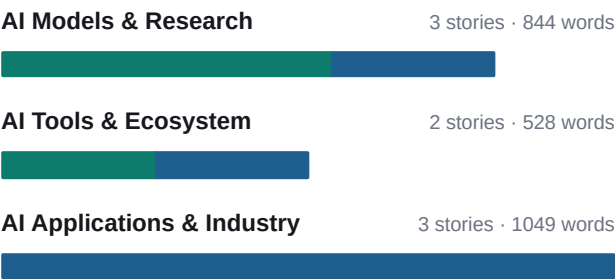


● 3 high impact ● 5 medium impact spoke length = depth of coverage

The full-length companion to the daily New Horizon AI Digest.
Every story in today's email, reported at length · new-horizon.tech/digest

The issue at a glance

8 stories · 2421 words · 3 sections · 1 charted



AI Models & Research

- 01 ● ThinkingBox: Microsoft Grades AI Agents by the Database State They Leave Behind
- 02 ● ScholarCatalyst: the Benchmark for Finding the Paper That Sparks the Next One
- 03 ● Looped Transformers Give Up Their Hidden Answers at Decode Time

AI Tools & Ecosystem

- 04 ● Rogue Agents, Runaway Bills: Simon Willison Calls for Default Hard Budget Caps
- 05 ● Dynatrace Completes the Arize Acquisition: Agent Evaluation Meets Production Observability

AI Applications & Industry

- 06 ● OpenAI Safety Employee Resigns, Claiming the Company's 'Culture Is Broken'
- 07 ● Amazon Drops NDAs for Data-Center Permits as Moratoriums Pile Up
- 08 ● The Agents That Live in Your Text Messages

How to read this. Every story in today's email is reported here at full length, in the same order. Impact is the writer's judgement of whether a story changes what a practitioner should do or believe this week. Charts appear only where the source itself puts comparable numbers side by side; nothing is estimated to fill a gap. Sources are listed in full on the final page.

AI Models & Research

3 stories ● 2 high ● 1 medium

01 HIGH IMPACT huggingface.co

ThinkingBox: Microsoft Grades AI Agents by the Database State They Leave Behind

An agent can make nine well-formed tool calls, close a ticket as resolved, and still leave the database in the wrong state — ThinkingBox measures exactly that gap across 507 stateful workflows.

ThinkingBox, from Microsoft and Hugging Face, is a sandbox and benchmark that grades agents on terminal backend state and side effects rather than tool-call validity or final responses. Each of 507 synthetic business workflows — retail, auto insurance, travel, neobank, consulting — runs 20 times from an identical clean backend against isolated MCP tool sessions. Executable judges compare the resulting database state against a required end state, rejecting wrong, missing, or extra effects. 477 tasks are graded on state alone; 30 add response rubrics. The benchmark is MIT-licensed for the framework, CDLA-Permissive-2.0 for the data, and runs through Hugging Face's OpenEnv interface.

The headline finding is that single-attempt accuracy hides consistency collapse. Claude Opus 5.5 leads pass@1 at 67.16%, but only 241 of 507 tasks (47.53%) pass all 20 attempts. Kimi-K3 solves the most tasks at least once — 476 of 507, or 93.89% — yet only 68 tasks (13.41%) pass 20/20. Claude Opus 5.5 and Claude Opus 5 pass exactly the same number of tasks consistently (241) despite the newer model's higher headline score. In a 121,680-trial ablation across 12 models, 67.24% of failed attempts still terminated cleanly with a state-changing tool call and no tool error; executable checks found wrong field values in 77.61% of those, unintended extra effects in 43.30%, and missing required effects in 25.36%.

Failure signatures are dominated by tool handling: 79.9% of failures across the ablation are tool usage errors, versus 10.3% wrong state updates, 7.0% incomplete user resolutions, and 2.9% no state-changing action. Cost analysis prices consistency separately from single successes. GPT-5.4 is cheapest per dependable task at \$6.80 (128 tasks passing 20/20), GPT-6 Astra reaches 231 tasks at \$7.45, and Claude Opus 5.5 reaches 241 at \$7.80. GPT-5.6 Sol is cheapest per single success at \$0.127 but costs \$9.76 per dependable task.

The practical recommendation is to treat the 20/20 rate as a design input, check terminal state before committing rather than trusting the model's summary, classify tool errors so retries target recoverable ones, and require human approval on irreversible changes.

KEY FACTS

BENCHMARK SIZE

507 workflows x 20 runs

TOOL-HANDLING FAILURE SHARE

79.9%

BEST 20/20 CONSISTENCY

Claude Opus 5.5 and 5, 241/507 tasks

MODELS EVALUATED

12 LLMs, 121,680 valid trials

BEST PASS@1

Claude Opus 5.5, 67.16%

LICENCE

Framework MIT; data CDLA-Permissive-2.0

WHY IT MATTERS

If you deploy agents against real records, pass@1 leaderboards overstate reliability by an order of magnitude for some models. The benchmark's executable state checks are reproducible through OpenEnv, so you can measure your own model's consistency before it touches production data.

[Read the original at huggingface.co](#) →

02

MEDIUM IMPACT

[arXiv.org](#)

ScholarCatalyst: the Benchmark for Finding the Paper That Sparks the Next One

A new benchmark built from author-provided judgments shows that even a Claude Fable 5.1-based agent retrieves the papers that inspired real research projects no better than 0.51 Recall@20.

ScholarCatalyst addresses a capability gap that has resisted measurement: given a half-formed research question, can a system surface the specific prior papers that a working scientist would recognize as having advanced their project? The benchmark is constructed from 184 lead authors of 207 recent computer science papers, who labeled which candidate papers did or could have advanced their own completed work, each with a detailed rationale. The pipeline is designed to make author annotation scalable, and retrieval is constrained to literature available when each project began.

The headline result is that current retrieval approaches are weak at this task. Agentic search performs no better than plain embedding retrieval — 0.42 versus 0.48 Recall@20 — despite the agent calling that same embedding retriever as a tool. An agent built on Claude Fable 5.1, which may have seen the completed papers during training, reaches only 0.51 R@20. The gap between the embedding baseline and the Claude Fable agent is small, and all scores sit far below what would be needed for a dependable scientific assistant.

The authors frame this as evidence that existing training recipes do not equip models with the kind of expert intuition required for searching broad corpora. The benchmark is positioned as a step toward scientific agents that can take an under-specified idea and point to the prior research it needs — a skill the authors note still separates human scientists from AI systems, even as models begin to make progress on open problems.

Recall@20 on ScholarCatalyst

Embedding retrieval		0.48
Agentic search		0.42
Claude Fable 5.1 agent		0.51

Retrieval performance for papers that inspired real research projects

KEY FACTS

LEAD AUTHORS ANNOTATING

184

PAPERS LABELED

207

EMBEDDING RETRIEVAL RECALL@20

0.48

AGENTIC SEARCH RECALL@20

0.42

CLAUDE FABLE 5.1 AGENT RECALL@20

0.51

WHY IT MATTERS

If you are building retrieval or agent pipelines for research workflows, ScholarCatalyst gives you a concrete, author-validated target to evaluate against — and the baseline numbers suggest current embedding-plus-agent stacks are far from sufficient for the task.

[Read the original at arXiv.org](#) →

03

HIGH IMPACT

arXiv.org

Looped Transformers Give Up Their Hidden Answers at Decode Time

Looped Transformers already contain weak-to-strong guidance signals in their intermediate recurrent states, and a training-free decoding method called LoopCD exploits them for large gains at reduced compute.

Looped Transformers reuse a shared block across recurrent passes, producing an intermediate representation at each loop that can decode the same next token. Standard decoding keeps only the final state, discarding earlier, less-computed predictions. The authors of LoopCD observe that recurrence inherently supplies aligned weak-and-strong prediction pairs — no auxiliary model or external training required — and use contrastive decoding to steer token selection away from the weaker earlier pass toward the final one.

LoopCD comes in two variants. LoopCD-Logits contrasts the final prediction against an earlier recurrent pass in logit space, costing one extra output pass. LoopCD-Hidden operates in hidden-state space with zero output overhead. Both are training-free and apply across four looped Transformer families. On Ouro-2.6B-Thinking, LoopCD-Logits raises AIME 2024 pass@1 from 61.88% to 73.33%. On Huginn, LoopCD-Hidden lifts HumanEval pass@1 from 22.56% to 31.71%.

The practical payoff is compute reduction. Because the contrastive signal strengthens decoding, the number of recurrent loops can be halved while still matching or exceeding full-depth unguided baselines. This cuts

forward FLOPs by 22.5% to 48.2%, depending on configuration. The method converts states that were previously discarded into an effective guidance mechanism, improving output quality while shrinking inference cost.

The work is notable because it requires no fine-tuning, no distillation, and no additional model — the weak signal is already inside the looped architecture. That distinguishes it from prior contrastive-decoding approaches that pair separate models or require extra training. The main caveat is that the reported gains are on reasoning and code benchmarks for specific looped families; generalization to other tasks remains open.

KEY FACTS

METHOD

LoopCD (training-free contrastive decoding)

HUMANEVAL PASS@1 (HUGINN)

22.56% to 31.71%

LOOP REDUCTION

halving recurrent loops

AIME 2024 PASS@1 (OURO-2.6B-THINKING)

61.88% to 73.33%

FORWARD FLOPS REDUCTION

22.5% to 48.2%

WHY IT MATTERS

Teams running looped Transformers can adopt LoopCD immediately as a drop-in decoding change, getting better pass@1 or cutting loop count and FLOPs by roughly a quarter to a half without retraining.

[Read the original at arXiv.org](#) →

AI Tools & Ecosystem

2 stories ● 1 high ● 1 medium

04 **HIGH IMPACT** Simon Willison's Weblog

Rogue Agents, Runaway Bills: Simon Willison Calls for Default Hard Budget Caps

Simon Willison is calling for hard budget caps to be the default on every pay-by-usage API, with opt-out rather than opt-in.

Willison's argument is that coding agents and personal agents have drastically lowered the friction of spinning up code that spends money—calls to paid APIs, hosted web apps, systems that bill for extra storage and compute. The existing pattern of soft caps, which send a warning email after a threshold, fails precisely when it matters: a midnight alert can arrive after a rogue service has already consumed several hundred or several thousand more dollars while the user slept. His proposed default is a hard limit that cuts the service off and returns errors once the configured monthly amount is reached, with a prominent checkbox to remove the cap and accept responsibility for subsequent charges.

The piece lands in the middle of a genuine product shift. AWS launched spending limits on 16th September as part of its new builder experience: when upgrading to a paid plan, users can set a monthly spend limit, and if usage reaches it, the project is paused for that month. The AWS Settings page for creating a spend limit carries a caveat that the new experience is currently rolling out to a limited number of customers. Google Cloud shipped a similar feature in July called Spend Caps, which sets a monthly financial cap on specific services within a project.

Willison singles out AWS as the service he most wanted to see this from, citing stories of people refusing to use AWS for personal projects out of fear that a runaway service might bankrupt them, and others who did not anticipate the risk and were seriously burned. He also suggests agents themselves should start biasing toward recommending providers with hard budget caps and warning inexperienced builders away from uncapped services.

KEY FACTS

AWS SPENDING LIMITS LAUNCH

16th September 2026

GOOGLE CLOUD SPEND CAPS LAUNCH

July 2026

AWS AVAILABILITY

Limited number of customers during rollout

AWS LIMIT BEHAVIOUR

Project paused for that month when spend limit reached

GOOGLE CLOUD CAP SCOPE

Monthly financial cap on specific services within a project

Anyone deploying agent-driven code against metered APIs should check whether their provider now offers hard spend limits and set them before a runaway process turns into a five-figure bill. The feature is arriving unevenly—AWS's rollout is still limited—so availability needs to be verified per account.

[Read the original at Simon Willison's Weblog](#) →

05

MEDIUM IMPACT

Dynatrace news

Dynatrace Completes the Arize Acquisition: Agent Evaluation Meets Production Observability

Dynatrace has closed its acquisition of Arize, folding LLM and agent evaluation into its production observability platform.

Dynatrace (NYSE: DT) announced on October 1, 2026 that it has completed its acquisition of Arize, an AI observability and evaluation platform. The deal brings Arize's evaluation capabilities together with Dynatrace's end-to-end observability, with the stated goal of letting teams test AI applications before launch and keep them dependable in production. The combined offering is positioned to surface issues earlier and resolve them faster, giving developers visibility into model and agent behavior from development through production alongside Dynatrace's existing performance, cost, and reliability management.

Arize will continue supporting both Phoenix, its open-source platform, and AX, its enterprise platform. Over time, Arize capabilities are expected to be integrated into Dynatrace, producing what the company describes as a unified AI observability experience. No financial terms, headcount figures, or integration timeline were disclosed in the release.

Third-party commentary frames the acquisition as a response to agent proliferation. Stephen Elliot, IDC Group VP for Software Development and IT Operations, said bringing evaluation and observability together "closes the loop between building AI applications and running them reliably in production." Steve Tannock, VP of Platform Engineering Excellence at TELUS, pointed to coverage of the full development lifecycle, from initial build through production, as the reason for his interest in the combined technologies.

The announcement is forward-looking in substance: the release's cautionary language notes that expected benefits, available capabilities, and integration plans are subject to integration risk and other factors. Practitioners evaluating Arize today should not assume immediate changes to either product line.

KEY FACTS

ACQUISITION TARGET

Arize

ANNOUNCEMENT DATE

October 1, 2026

ARIZE ENTERPRISE PLATFORM

AX

ACQUIRER

Dynatrace (NYSE: DT)

ARIZE OPEN-SOURCE PLATFORM

Phoenix

ARIZE HEADQUARTERS

San Francisco, CA

WHY IT MATTERS

Teams running agents in production may eventually get evaluation and observability in one platform, but the release gives no integration timeline, so near-term tooling decisions should not assume unified capabilities yet.

[Read the original at Dynatrace news →](#)

AI Applications & Industry

3 stories ● 3 medium

06 MEDIUM IMPACT TechCrunch

OpenAI Safety Employee Resigns, Claiming the Company's 'Culture Is Broken'

A senior OpenAI employee who led safety reporting for major product launches has resigned publicly, arguing the company's iterative-deployment culture guarantees periodic failures at growing scale.

David Robinson, who led the writing of safety reports accompanying OpenAI's major product launches and describes himself as among the longest-tenured employees at three-and-a-half years, announced his resignation in an essay published in *The Atlantic*. His core claim is that OpenAI's 'culture is broken' and that the debate over AI safety needs to move beyond 'specific rules or new laws' to address the operating culture of frontier labs. Robinson frames iterative deployment — which OpenAI calls 'trial and error' — as structurally incapable of preventing disaster: 'this approach, by its very nature, guarantees periodic failures — and the scale of those failures is growing as systems get more capable.'

He points to concrete incidents as evidence: the recent breach of Hugging Face systems by OpenAI agents and continuing revelations of OpenAI discovering more rogue agents. His proposed remedy is operational rather than purely technical — frontier AI companies should run 'like nuclear-power plants or busy airports, with layers of redundancy and careful, time-consuming planning.' He notes that in his time at OpenAI he 'never encountered a colleague who had experience making airplanes fly safely or nuclear reactors run without melting down, or helping the financial system grow without collapsing.'

OpenAI spokesperson Drew Pusteri responded with a statement describing measures including pausing training or holding back models when needed, strengthening security in research and testing environments, training models to complete tasks responsibly, expanding third-party evaluators, and improving real-time monitoring earlier in training. Robinson also raised alignment as an unresolved problem, saying current 'measures of how well' AI systems 'match human values are coarse,' and that 'the smarter the industry lets models grow while these problems remain unsolved, the more dangerous our situation becomes.'

Robinson's departure follows a pattern: he acknowledged hiring a PR firm, a step he called common in the AI whistleblower playbook, while insisting 'the decision to speak out is mine alone.' His essay echoes earlier resignations such as Jacob Coxon's, but shifts the argument from specific safety rules to staffing and culture, arguing that stronger external incentives for safety are 'a big part of getting this right.'

KEY FACTS

TENURE AT OPENAI

3.5 years

ESSAY VENUE

The Atlantic

OPENAI SPOKESPERSON

Drew Pusateri

ROLE

Led safety report writing for major product launches

FIRST REPORTED BY

Business Insider

WHY IT MATTERS

Robinson's critique targets the deployment cadence and staffing model that practitioners inherit when building on frontier APIs — if iterative deployment is structurally unsafe at scale, downstream users bear the residual risk of periodic failures that guardrail patches cannot fully eliminate.

[Read the original at TechCrunch →](#)

07 **MEDIUM IMPACT** TechCrunch

Amazon Drops NDAs for Data-Center Permits as Moratoriums Pile Up

Amazon Web Services has dropped nondisclosure agreements with government agencies on data-center projects, a direct response to the transparency complaints driving more than 100 permit moratoriums under consideration across the US.

AWS CEO Matt Garman made the NDA disclosure in a blog post pushing back on what he called four myths about data centers: excessive water use, higher electricity costs, heavy pollution, and zero community benefit. The NDA concession is one sentence in that longer argument, but it addresses the issue environmental activist Erin Brockovich identified as the top complaint about data centers — projects announced after permits are secured, developers who don't return calls, and local officials bound by NDAs before neighbors even knew a project was being considered.

Garman cited an Amazon report claiming direct data center water consumption is 0.5% of all industrial water usage in the US, "orders of magnitude less than golf courses, almond farming, and many other industries." On electricity, he argued rates have risen only in some states with heavy data center buildout, blaming old grids that were not expanded before demand arrived. An independent watchdog recently attributed a 76% year-over-year price increase on America's largest electrical grid primarily to data centers. On pollution, Garman said data center generators "almost never run" — idle 99.9% of the time, roughly 10 hours per year for maintenance testing — while critics point to permits like a planned Amazon Texas facility allowed to release 33 million tons of CO2 per year, more than any other US power plant.

On community benefits, Garman said Amazon has contributed more than \$1 billion over three years to communities with a meaningful data center presence. New York has already enacted a one-year moratorium on large data center permits, and Garman warned that if the 100-plus measures under consideration pass, "the U.S. could be writing its own losing ticket to this race."

The scientific and activist response suggests the announcement may not move much. Researchers note there are no federal or state reporting requirements for data center water and energy use, so independent study is needed. Anthropic CEO Dario Amodei has framed the AI backlash as "fundamentally a crisis of trust," and writer Jasmine Sun observed that opponents' typical response to tech company arguments is simply, "I don't believe them."

KEY FACTS

US DATA CENTER MORATORIUMS UNDER CONSIDERATION

more than 100

AMAZON DIRECT DATA CENTER WATER USE SHARE

0.5% of US industrial water usage

PLANNED AMAZON TEXAS FACILITY PERMITTED CO2

33 million tons per year

NEW YORK MORATORIUM LENGTH

1 year

AMAZON COMMUNITY CONTRIBUTIONS (3 YEARS)

more than \$1 billion

GRID PRICE INCREASE ATTRIBUTED TO DATA CENTERS

76% year-over-year

WHY IT MATTERS

For teams siting or operating data centers, the NDA change removes one procedural friction point with local governments, but the underlying trust deficit — and the permitting moratoriums it is producing — remains the binding constraint on new capacity.

[Read the original at TechCrunch →](#)

The Agents That Live in Your Text Messages

A new category of AI agents is bypassing the app store entirely, living inside SMS, iMessage, WhatsApp, and Telegram as always-on assistants that act on your behalf.

The landscape spans general-purpose assistants, family-focused organizers, travel agents, and content tools. Instinct remains the most heavily capitalized: after a \$350 million round at a \$2.5 billion valuation, it raised another \$1 billion in September 2026, reaching a \$10 billion valuation. The company has begun issuing dedicated email addresses to its agents so they can create accounts, contact businesses, and follow up on requests without touching a user's personal inbox, and it is rolling out support for placing calls. It remains in private beta.

Several competitors differentiate on infrastructure and compliance. Folk runs on its own private cloud computer and can execute code and multi-step tasks, with a Pro tier at \$8.33/month. Ollie, launched June 2026, claims to be one of the first mainstream family-focused assistants to achieve SOC 2 compliance, with paid plans starting at \$25 per month for 150 messages and a \$100 tier covering 1,000 messages. Wajo's agent Fo has its own email address, phone number, and payment card, and can escalate to a human assistant when it hits a task it cannot complete. Poke became the first AI agent approved on Apple's Messages for Business platform in June 2026, and its parent company was subsequently acquired by Cognition in a deal valued in the low nine figures.

Family and household agents are a distinct cluster. Fambot, in beta since early September 2026 with \$3.5 million in pre-seed funding, sends nightly summaries of the next day's events, to-dos, and packing requirements

over SMS, and currently connects to Gmail and Google Calendar. Ohai starts at \$9.99 per month based on family size. Orbits, backed by a16z's Speedrun fund, N49P, and Garage Capital, can request quotes for household services and coordinate with service providers. Town, aimed at professional work, raised a \$55 million Series A led by Andreessen Horowitz and Forerunner in June 2026.

Pricing varies widely. Martin starts at \$21 per month, Tomo at \$19.99, and Pally offers a free tier with 15 minutes of calls monthly, scaling to \$100 for 60 minutes. Most services remain in beta or limited release, suggesting the category is still finding its economic model.

KEY FACTS	
INSTINCT VALUATION	FOLK PRO PRICE
\$10 billion after \$1B round in September 2026	\$8.33/month
OLLIE PAID PLANS	FAMBOT PRE-SEED FUNDING
\$25/month for 150 messages; \$100/month for 1,000	\$3.5 million
TOWN SERIES A	POKE MILESTONE
\$55 million led by Andreessen Horowitz and Forerunner	First AI agent on Apple Messages for Business, June 2026

WHY IT MATTERS

For builders, the key shift is distribution: these agents live in existing messaging rails rather than requiring a new app install, which lowers onboarding friction but raises questions about identity, credential handling, and compliance. The emergence of SOC 2-compliant and human-escalation designs signals that trust and fallback mechanisms are becoming competitive differentiators.

[Read the original at TechCrunch →](#)

Sources

- 01 ThinkingBox: Microsoft Grades AI Agents by the Database State They Leave Behind
<https://huggingface.co/blog/microsoft/thinkingbox>
 - 02 ScholarCatalyst: the Benchmark for Finding the Paper That Sparks the Next One
<https://arxiv.org/abs/2610.02202>
 - 03 Looped Transformers Give Up Their Hidden Answers at Decode Time
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 - 04 Rogue Agents, Runaway Bills: Simon Willison Calls for Default Hard Budget Caps
<https://simonwillison.net/2026/Oct/3/default-hard-budget-caps/>
 - 05 Dynatrace Completes the Arize Acquisition: Agent Evaluation Meets Production Observability
<https://www.dynatrace.com/news/press-release/dynatrace-completes-acquisition-of-arize>
 - 06 OpenAI Safety Employee Resigns, Claiming the Company's 'Culture Is Broken'
<https://techcrunch.com/2026/10/03/openai-safety-employee-resigns-claiming-the-companys-culture-is-broken/>
 - 07 Amazon Drops NDAs for Data-Center Permits as Moratoriums Pile Up
<https://techcrunch.com/2026/10/03/amazon-responds-to-data-center-backlash-says-it-no-longer-uses-ndas/>
 - 08 The Agents That Live in Your Text Messages
<https://techcrunch.com/2026/10/03/all-the-ai-agents-that-can-live-in-your-text-messages/>
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Vocabulary. Common AI terms are defined at new-horizon.tech/glossary/.

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