Agent and Healthcare Model Gains Meet Long-Horizon Reality

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GPT-5.6 and Muse Spark 1.1 set new markers for agent and healthcare performance, while fresh benchmarks expose persistent weaknesses in long-horizon execution and safe autonomy. The brief also covers efficient long-context research, video and agent product releases, Oak Lab's launch, and emerging U.S. open-model policy discussions.

Top Stories

Why it matters: leading models are improving on agent and medical benchmarks, but new evaluations still show large gaps in sustained execution and safe autonomy.

- **OpenAI's GPT-5.6 is expanding across products and scoring near the top of agent evaluations.** The Sol, Terra, and Luna family is rolling out in ChatGPT, Codex, and the API, and is now generally available through Amazon Bedrock. GPT-5.6 Sol ranked **#2** on Agent Arena from 7,800 real-world agent sessions, with #1 steerability and #2 confirmed task success; the benchmark tests long-horizon workflows with web, filesystem, and terminal access. [1, 2, 3, 4]
- **Muse Spark 1.1 posted strong healthcare results, while radiology tests retain a human-performance gap.** On HealthBench Professional's 525 clinician tasks, it had a higher overall score than GPT-5.6 Sol and was statistically on par on a length-adjusted score, at \$1.25/\$4.25 per million input/output tokens versus \$5/\$30 for Sol. On RadLE 2.0, it outperformed GPT-5.6 Sol and Gemini 3.1, and led the handover-readiness index at 48.5 against a 52.0 human-expert baseline—but the benchmark

reports that no model reached average human-expert performance overall. [5, 6, 7, 8]

- **Long-horizon agency remains unresolved.** Long-Horizon Terminal-Bench evaluated 18 frontier models on 46 reproducible terminal tasks requiring up to 90 minutes and 120–320 steps. The best mean reward was 0.505; no model solved a third of tasks, and 29 tasks remained unsolved by every model. Separately, the persistent-enterprise simulation Morpheus concluded that tested frontier LLMs are not continual learners in dynamic business settings. [9, 10]

Research & Innovation

Why it matters: progress is moving beyond larger models toward systems that use context, computation, and physical coordination more efficiently.

- **DeepSeek-V4 is presented as a full-stack redesign for native 1M-token context.** The reported architecture combines compressed sparse and heavily compressed attention, multiple residual streams, fused mixture-of-experts kernels, and on-policy distillation. At 1M tokens, the report estimates V4-Pro uses about 27% of DeepSeek-V3.2's single-token inference FLOPs and 10% of its KV cache; V4-Flash targets roughly 10% and 7%, respectively. [11]
- **Sakana AI's Smart Cellular Bricks demonstrate decentralized physical intelligence.** Published in *Nature Communications*, the work uses identical neural-network-equipped cubes that communicate locally to infer a shared shape, identify missing modules, and guide repair. Tests across nearly 200 physical bricks reported 100% convergence; the system tolerated up to 15% module failure and located damage with 95% accuracy. [12, 13]
- **Hugging Face and vLLM removed a common inference bottleneck for open models.** Transformers implementations can now run through vLLM at native speed, avoiding separate research and production implementations; reported benchmarks matched or exceeded native vLLM throughput from 4B to 235B parameters, including tensor-parallel and MoE setups. [14]

Products & Launches

Why it matters: video generation and software agents are being delivered through lower-cost, more accessible workflows.

- **Google's Gemini Omni Flash debuted at #1 in Artificial Analysis's text-to-video and image-to-video leaderboards.** The natively multimodal model accepts text, images, and video; produces 3–10 second 720p/24fps clips with native audio; and supports conversational editing.

It costs $0.10 per generated second and is available through Gemini API, AI Studio, the Gemini app, and free in YouTube Shorts and Create. [15]

- **Devin Fusion entered agent preview with Fable 5.** Cognition reports lower cost per task than Opus 4.8 through better delegation and reasoning chains, while noting that savings are not uniform—serial debugging still needs accumulated context. [16, 17, 18]
- **ChatGPT Sites entered public beta.** Paid-plan users can turn prompts, files, or rough ideas into dashboards, reports, prototypes, and lightweight apps, then build in ChatGPT Work or Codex, preview privately, and publish via URL. [19]

Industry Moves

Why it matters: continual learning and open-weight deployment are becoming strategic fronts alongside frontier-model development.

- **Richard Sutton and Khurram Javed left Keen Technologies to found Oak Lab.** Their stated approach centers reinforcement learning and intelligence maintained through run-time experience; they argue current deep-learning methods require fundamental reworking. Oak Lab says it will first demonstrate limitations in simple settings before pursuing domain-independent algorithms and larger-scale systems. [20, 21]
- **Open-weight usage is rising alongside closed models.** One gateway reported open-weight models accounting for 29% of tokens, up from 11% in April; Baseten says companies are increasingly deploying open-source AI alongside closed providers. [22, 23]

Policy & Regulation

Why it matters: U.S. policy discussions may increasingly tie open-model treatment to international capability comparisons.

- **The Trump administration and AI industry are reportedly discussing a capability framework for U.S. open-source models benchmarked against leading Chinese open-source models.** According to the report, a proposal would streamline U.S. open and licensed models to market when their capabilities match or fall below Chinese open-model capabilities; the same report raises concerns over possible malicious software or exploitable back doors in Chinese models. [24]

Quick Takes

Why it matters: capability gains are arriving alongside practical improvements in collaboration, access, and deployment.

- GPT-5.6 Sol Ultra was reported to have produced a short construction for Erdős problem #793 on 2-primitive sets. [25]
- Claude Artifacts now supports public sharing, multiplayer editing, and creation through Claude Tag on Team and Enterprise plans. [26, 27, 28]
- Step 3.7 Flash joined Baseten's library with 198B total parameters, 11B active parameters, native image/video input, and a 256K context window. [29]
- OpenAI reported 7M active users across Codex and ChatGPT Work. [30]

Sources

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