



NVIDIA ACE for Games Sparks Life Into Virtual Characters With Generative AI

Custom Model Foundry Produces AI Models That Run in Cloud and PC

COMPUTEX—NVIDIA today announced [NVIDIA Avatar Cloud Engine \(ACE\)](#) for Games, a custom AI model foundry service that transforms games by bringing intelligence to non-playable characters (NPCs) through AI-powered natural language interactions.

Developers of middleware, tools and games can use ACE for Games to build and deploy customized speech, conversation and animation AI models in their software and games.

“Generative AI has the potential to revolutionize the interactivity players can have with game characters and dramatically increase immersion in games,” said John Spitzer, vice president of developer and performance technology at NVIDIA. “Building on our expertise in AI and decades of experience working with game developers, NVIDIA is spearheading the use of generative AI in games.”

Pioneering Generative AI in Games

Building on [NVIDIA Omniverse](#)[™], ACE for Games delivers optimized AI foundation models for speech, conversation and character animation, including:

- [NVIDIA NeMo](#)[™] — for building, customizing and deploying language models, using proprietary data. The large language models can be customized with lore and character backstories, and protected against counterproductive or unsafe conversations via [NeMo Guardrails](#).
- [NVIDIA Riva](#) — for automatic speech recognition and text-to-speech to enable live speech conversation.
- [NVIDIA Omniverse Audio2Face](#)[™] — for instantly creating expressive facial animation of a game character to match any speech track. Audio2Face features Omniverse connectors for Unreal Engine 5, so developers can add facial animation directly to MetaHuman characters.

Developers can integrate the entire NVIDIA ACE for Games solution or use only the components they need.

‘Kairos’ Offers a Peek at the Future of Games

NVIDIA collaborated with [Convai](#), an [NVIDIA Inception](#) startup, to showcase how developers will soon be able to use NVIDIA ACE for Games to build NPCs. Convai, which is focused on developing cutting-edge conversational AI for virtual game worlds, integrated ACE modules into its end-to-end real-time avatar platform.

In a demo, called [Kairos](#), players interact with Jin, the purveyor of a ramen shop. Although he is an NPC, Jin replies to natural language queries realistically and consistent with the narrative backstory — all with the help of generative AI. [Watch the demo](#), which is rendered in Unreal Engine 5 using the latest ray-tracing features and [NVIDIA DLSS](#).

“With NVIDIA ACE for Games, Convai’s tools can achieve the latency and quality needed to make AI non-playable characters available to nearly every developer in a cost-efficient way,” said Purnendu Mukherjee, founder and CEO at Convai.

Deploy NVIDIA ACE for Gaming Models Locally or in the Cloud

The neural networks enabling NVIDIA ACE for Games are optimized for different capabilities, with various size, performance and quality trade-offs. The ACE for Games foundry service will help developers fine-tune models for their games, then deploy via [NVIDIA DGX](#)[™] Cloud, GeForce RTX[™] PCs or on premises for real-time inferencing.

The models are optimized for latency — a critical requirement for immersive, responsive interactions in games.

Generative AI to Transform the Gaming Experience

Game developers and startups are already using NVIDIA generative AI technologies for their workflows.

- GSC Game World, one of Europe’s leading game developers, is adopting Audio2Face in its upcoming game, *S.T.A.L.K.E.R. 2: Heart of Chernobyl*.
- Fallen Leaf, an indie game developer, is using Audio2Face for character facial animation in *Fort Solis*, a third-person sci-fi thriller that takes place on Mars.
- Charisma.ai, a company enabling virtual characters through AI, is leveraging Audio2Face to power the animation in its conversation engine.

Learn more about building on [NVIDIA Omniverse](#) using [NVIDIA ACE](#) and other technology advancements at [COMPUTEX](#).

About NVIDIA

Since its founding in 1993, [NVIDIA](https://nvidianews.nvidia.com/) (NASDAQ: NVDA) has been a pioneer in accelerated computing. The company's invention of the GPU in 1999 sparked the growth of the PC gaming market, redefined computer graphics, ignited the era of modern AI and is fueling the creation of the industrial metaverse. NVIDIA is now a full-stack computing company with data-center-scale offerings that are reshaping industry. More information at <https://nvidianews.nvidia.com/>.

Certain statements in this press release including, but not limited to, statements as to: the benefits, impact, performance, and availability of our products, technologies, and services, including NVIDIA ACE for Games, NVIDIA Omniverse, NVIDIA NeMo, NVIDIA Riva, and NVIDIA Omniverse Audio2Face; the potential of generative AI to revolutionize the interactivity players can have with game characters and dramatically increase immersion in games; NVIDIA spearheading the use of generative AI in games; developers being able to use NVIDIA ACE for Games to build NPCs; and game developers and startups using NVIDIA generative AI technologies for their workflows are forward-looking statements that are subject to risks and uncertainties that could cause results to be materially different than expectations. Important factors that could cause actual results to differ materially include: global economic conditions; our reliance on third parties to manufacture, assemble, package and test our products; the impact of technological development and competition; development of new products and technologies or enhancements to our existing product and technologies; market acceptance of our products or our partners' products; design, manufacturing or software defects; changes in consumer preferences or demands; changes in industry standards and interfaces; unexpected loss of performance of our products or technologies when integrated into systems; as well as other factors detailed from time to time in the most recent reports NVIDIA files with the Securities and Exchange Commission, or SEC, including, but not limited to, its annual report on Form 10-K and quarterly reports on Form 10-Q. Copies of reports filed with the SEC are posted on the company's website and are available from NVIDIA without charge. These forward-looking statements are not guarantees of future performance and speak only as of the date hereof, and, except as required by law, NVIDIA disclaims any obligation to update these forward-looking statements to reflect future events or circumstances.

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