Creating Faces of the Future: Build AI Avatars With NVIDIA Omniverse ACE

Customize and deploy interactive avatars with Omniverse Avatar Cloud Engine, now available in early access.

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Developers and teams building avatars and virtual assistants can now register to join the early-access program for NVIDIA Omniverse Avatar Cloud Engine (ACE) , a suite of cloud-native AI microservices that make it easier to build and deploy intelligent virtual assistants and digital humans at scale.

Omniverse ACE eases avatar development, delivering the AI building blocks necessary to add intelligence and animation to any avatar, built on virtually any engine and deployed on any cloud. These AI assistants can be designed for organizations across industries, enabling organizations to enhance existing workflows and unlock new business opportunities.

ACE is one of several generative AI applications that will help creators accelerate the development of 3D worlds and the metaverse. Members who join the program will receive access to the prerelease versions of NVIDIA's AI microservices, as well as the tooling and documentation needed to develop cloud-native AI workflows for interactive avatar applications.

Methods for developing avatars often require expertise, specialized equipment and manually intensive workflows. To ease avatar creation, Omniverse ACE enables seamless integration of NVIDIA's AI technologies — including pre-built models, toolsets and domain-specific reference applications — into avatar applications built on most engines and deployed on public or private clouds.

Since it was unveiled in September, Omniverse ACE has been shared with select partners to capture early feedback. Now, NVIDIA is looking for partners who will provide feedback on the microservices, collaborate to improve the product, and push the limits of what's possible with lifelike, interactive digital humans.

The early-access program includes access to the prerelease versions of ACE animation AI and conversational AI microservices, including:

3D animation AI microservice for third-party avatars, which uses Omniverse Audio2Face generative AI to bring to life characters in Unreal Engine and other rendering tools by creating realistic facial animation from just an audio file.

2D animation AI microservice, called Live Portrait, enables easy animation of 2D portraits or stylized human faces using live video feeds.

Text-to-speech microservice uses NVIDIA Riva TTS to synthesize natural-sounding speech from raw transcripts without any additional information, such as patterns or rhythms of speech.

Program members will also get access to tooling, sample reference applications and supporting resources to help get started.

Omniverse ACE can help teams build interactive, digital humans that elevate experiences across industries, providing:

Easy animation of characters, so users can bring them to life with minimal expertise.

The ability to deploy on cloud, which means avatars will be usable virtually anywhere, such as a quick-service restaurant kiosk, a tablet or a virtual-reality headset.

A plug-and-play suite, built on NVIDIA Unified Compute Framework (UCF) , which enables interoperability between NVIDIA AI and other solutions, ensuring state-of-the-art AI that fits each use case.

Partners such as Ready Player Me and Epic Games have experienced how Omniverse ACE can enhance workflows for AI avatars.

The Omniverse ACE animation AI microservice supports 3D characters from Ready Player Me, a platform for building cross-game avatars.

“Digital avatars are becoming a significant part of our daily lives. People are using avatars in games, virtual events and social apps, and even as a way to enter the metaverse,” said Timmu Tõke, CEO and co-founder of Ready Player Me. “We spent seven years building the perfect avatar system, making it easy for developers to integrate in their apps and games and for users to create one avatar to explore various worlds — with NVIDIA Omniverse ACE, teams can now more easily bring these characters to life.”

Epic Games’ advanced MetaHuman technology transformed the creation of realistic, high-fidelity digital humans. Omniverse ACE , combined with the MetaHuman framework, will make it even easier for users to design and deploy engaging 3D avatars.

Digital humans don’t just have to be conversational. They can be singers, as well — just like the AI avatar Toy Jensen . NVIDIA’s creative team quickly created a holiday performance by TJ, using Omniverse ACE to extract the voice of a singer and turn it into TJ’s voice. This enabled the avatar to sing at the same pitch and with the same rhythm as the original artist.

Many creators are venturing into VTubing, a new way of livestreaming. Users embody a 2D avatar and interact with viewers. With Omniverse ACE, creators can move their avatars into 3D from 2D animation, including photos and stylistic faces. Users can render the avatars from the cloud and animate the characters from anywhere.

Additionally, the NVIDIA Tokkio reference application is expanding, with early partners building cloud-native customer service avatars for industries such as telco, banking and more.

Early access to Omniverse ACE is available to developers and teams building avatars and virtual assistants.

Watch the NVIDIA special address at CES on demand . Learn more about NVIDIA Omniverse ACE and register to join the early-access program.

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