Lenovo AI Innovators
Partner Ecosystem

DEEPBRAIN AI

Lenovo, NVIDIA & DeepBrain power up virtual assistants with generative AI

DeepBrain's integration of generative AI into virtual assistants allows for customized, real time responses for enhanced customer experience

Summary

The growing interest in generative AI is driving companies to explore new application use cases. It also raises concerns for information privacy and complexity for integration into their existing systems and processes.

Lenovo and NVIDIA are enabling DeepBrain to power up virtual assistants with generative AI to create a diverse portfolio of AI solutions. DeepBrain's virtual assistants help companies reallocate resources to higher value tasks in the banking industry, while enhancing the customer experience.

Challenge

Generative AI can add complexity for a best fit business solution. Not all the publicly available generative AI tools have a clear business application or require technical expertise for development and training.

Furthermore, most publicly available generative AI solutions offer the same access to all users, and organizations do not want to risk confidential information to competitors thus risking their competitive advantage.

Solution

Leveraging solutions created by Lenovo and NVIDIA, DeepBrain integrates generative AI into virtual assistants that can respond to queries in real alowing companies to:

Deploy an interactive UI in kiosks located in the lobby of an international bank using semantic AI technology, turning the NLP engine responses into real time generative AI video assistants.

Integrate LLM chatbots into the Virtual Assistants to access a company's text content and provide relevant product information to customer queries.

Deploy interactive kiosks in venues and events matching 40 preloaded video answers to customer queries, with speech to text recognition and loading the video answer.

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Results

DeepBrain's solutions allow companies to reallocate valuable resources to higher value tasks, having an automated real time virtual assistant that can respond to product or service specific customer queries.

Having on premise or on device virtual assistants that are powered with generative AI enhances customer experience, increasing satisfaction and retention. It also enhances decision making as the solution can be integrated into the company's systems.

This also helps companies maintain their confidentiality and competitive advantage by not making their internal processes and information available to competitors who use publicly available models that do not ensure privacy.
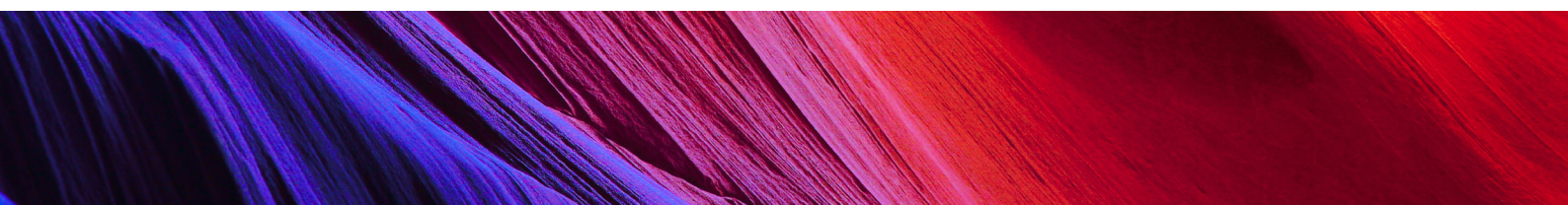
Validated Architecture

In a kiosk deployment, the user can interact with the AI Human via voice or touch interfaces. For conversational use cases, a microphone array and speakers are included with the kiosk front end. Additional sensors, such as a camera, can be integrated at the client's request.

This solution uses Lenovo ThinkEdge SE450 servers as the core infrastructure layer, powered by an NVIDIA L4 GPU. DeepBrain's solution can also be deployed on a ThinkSystem SR650 V2 with an NVIDIA A100 Tensor Core GPU for training or a ThinkSystem SR675 V3 with an NVIDIA L4 or NVIDIA L40S for inferencing.

Design Components

Servers	Storage	Accelerator	Networking	Software
ThinkEdge SE450	1 TB SSD	NVIDIA L4	1Gb 4 Port	AI Human
ThinkSystem SR650V2	1 TB SSD	NVIDIA A100	1Gb 4 Port	AI Human
ThinkSystem SR675 V3	1 TB SSD	NVIDIA L40S	1Gb 4 Port	AI Human

Resources

- Explore Lenovo's AI Innovators Program
- Explore the Lenovo HPC and AI Innovation and Briefing Center
- Lenovo Validated Design for AI Infrastructure on ThinkSystem Servers
- DeepBrain Website
- DeepBrain - AI Human Solution
- Lenovo-NVIDIA Alliance

Why Lenovo

Focused on a bold vision to deliver smarter technology for all, Lenovo is developing world-changing technologies that create a more inclusive, trustworthy, and sustainable digital society. By designing, engineering and building the world's most complete portfolio of smart devices and infrastructure, we are also leading an Intelligent Transformation to create better experiences and opportunities for millions of customers around the world.

Why NVIDIA

NVIDIA pioneered accelerated computing to tackle challenges no one else can solve. Our work in AI and the metaverse is profoundly impacting society and transforming the world's largest industries—from gaming to robotics, self-driving cars to life-saving healthcare, climate change to virtual worlds where we can all connect and create.

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