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DeepSeek

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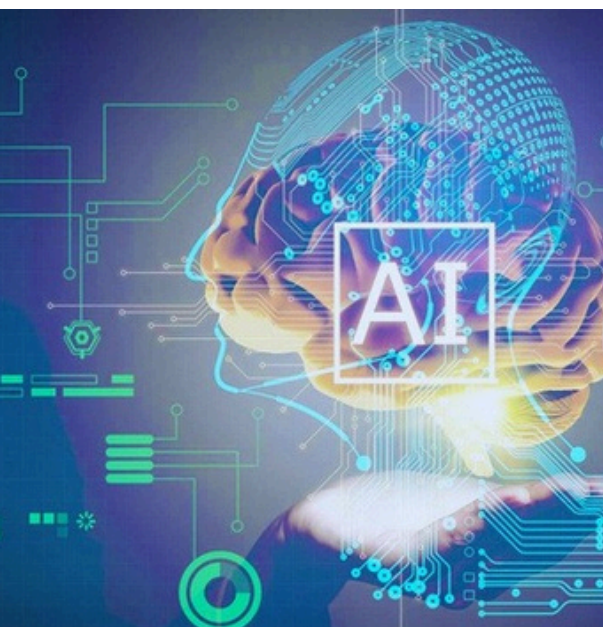
DeepSeek: China's AI Chatbot Shaking Up the Global Tech Race

DeepSeek is the name of a free AI-powered chatbot, which looks, feels and works very much like ChatGPT. It is developed by a Chinese start-up company named DeepSeek. The company was founded in 2023 in Hangzhou, China.



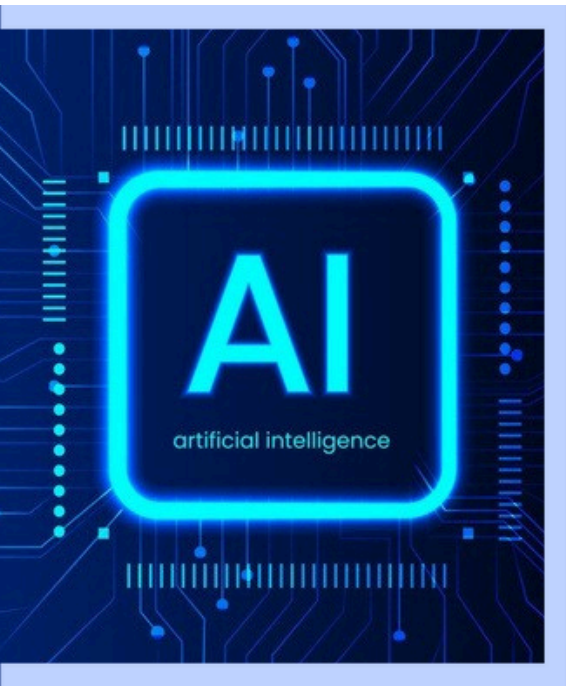
How DeepSeek is different from OpenAI:-

With its sudden rise, comparisons are being made between DeepSeek and OpenAI. The one thing that sets DeepSeek R1, which is said to mimic human thinking, apart from other AI models is that it also provides its reasoning before delivering a response to a prompt. The company claims its performance is on par with OpenAI's latest technology.



DeepSeek's AI models are developed at a fraction of the cost compared to leading products from OpenAI and Meta, raising questions about the need for huge investments in high-end AI accelerators like those from Nvidia.

DeepSeek claims its R1 is better than rival models for mathematical tasks, general knowledge and question-and-answer performance. It also ranks among the top performers on a UC Berkeley-affiliated leaderboard called Chatbot Arena.



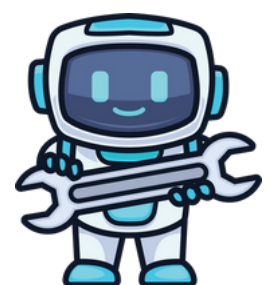
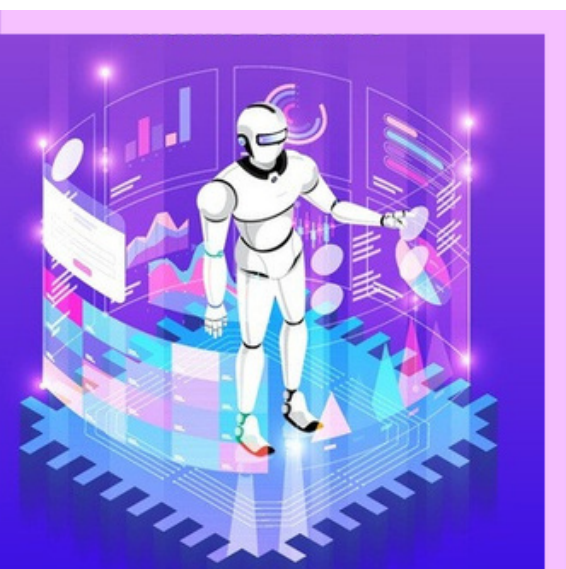
Why has DeepSeek taken the tech world by storm?

Put simply, the company's success has raised existential questions about the approach to AI being taken by both Silicon Valley and the US government.

US tech firms have been widely assumed to have a critical edge in AI, not least because of their enormous size, which allows them to draw top talent from around the world and invest massive sums in building data centres and purchasing large quantities of costly high-end chips.

DeepSeek's arrival on the scene has challenged the assumption that it takes billions of dollars to be at the forefront of AI.

"OpenAI was founded 10 years ago, has 4,500 employees, and has raised \$6.6 billion in capital. DeepSeek was founded less than 2 years ago, has 200 employees, and was developed for less than \$10 million,".



-JHIL CHATTERJEE

The Architecture Behind DeepSeek R1

DeepSeek R1 is built on a transformer-based architecture, much like GPT model. However, it integrates a unique “reasoning engine” that allows the model to simulate multi-step thought processes into simpler sub-tasks before generating a final response, mimicking human logical flow.

Reasoning Before Response:

DeepSeek R1 doesn't just respond—it shows “why” its responding that way. Its transparent reasoning has improved trust and interpretability in AI applications.

Multilingual Fluency:

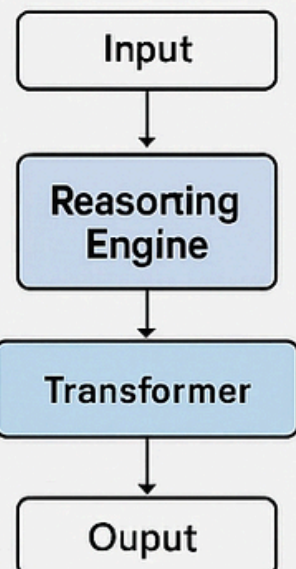
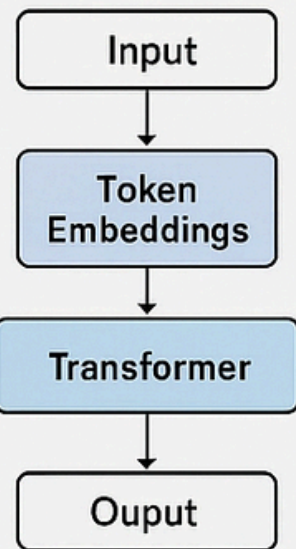
The model supports over 30 languages including Mandarin, English and Hindi, making it globally competitive.

Optimized Performance:

A 40% reduction in computational cost using custom training methods and indigenous GPU clusters,

What's New for DeepSeek R1 as a frontier model from computational cost

AI ARCHITECTURE: DEEPSEEK VS GPT-



Real-World Applications of DeepSeek

DeepSeek has rapidly entered various domains with practical implementations:

Education:

Tailored tutoring systems with explainable answers and interactive problem-solving.

Healthcare:

Diagnostic assistance tools that analyze patient history and symptoms with reasoning explanations.

Business Intelligence:

Automated reporting and forecasting using historical trends and logic-driven predictions.

What's Next for DeepSeek?

The roadmap for DeepSeek includes:

Launch of DeepSeek R2 with advanced memory capabilities.

Expansion into open-source AI tools for education and SMEs.

Partnerships with Asian universities and tech incubators.