

What is DeepSeek?

Overview of DeepSeek

DeepSeek is a cutting-edge **open-source AI company** based in Hangzhou, China, specializing in the development of **Large Language Models (LLMs)**. Founded in 2023 by **Liang Wenfeng**, DeepSeek has rapidly emerged as a formidable competitor to established AI giants, offering powerful and cost-effective AI solutions.

Key Features of DeepSeek

- **Open-Source Accessibility:** DeepSeek's commitment to open-source principles allows developers worldwide to access, modify, and build upon their AI models, fostering innovation and collaboration.
- **Cost-Effective Development:** DeepSeek has achieved significant advancements in AI capabilities at a fraction of the cost compared to competitors, making high-quality AI more accessible.
- **High Performance:** Despite lower development costs, DeepSeek's models, such as the R1, have demonstrated performance on par with leading AI models like OpenAI's GPT-4, particularly in tasks requiring logical reasoning and problem-solving.

Evolution of DeepSeek's Models

1. **DeepSeek Coder (November 2023):** The inaugural model focused on coding tasks, trained on a dataset comprising 87% code and 13% natural language, and made freely available for both research and commercial use.
2. **DeepSeek LLM (November 2023):** Aimed to compete with other LLMs, scaling up to 67 billion parameters and approaching the performance of models like GPT-4.
3. **DeepSeek-V2 (May 2024):** Introduced as a strong, economical, and efficient mixture-of-experts language model, achieving significant improvements in performance and cost-effectiveness.
4. **DeepSeek-V3 (December 2024):** Featured 671 billion parameters, trained in approximately 55 days at a cost of \$5.58 million, showcasing significant resource efficiency compared to peers.
5. **DeepSeek R1 (January 2025):** Designed to excel in tasks requiring logical inference, mathematical reasoning, and real-time problem-solving, with performance comparable to OpenAI's models.

Global Impact and Adoption

- **Industry Integration:** DeepSeek's AI models have been adopted across various sectors, including home appliances, with companies integrating DeepSeek's AI into products like TVs and robotic vacuum cleaners.
- **Market Disruption:** The release of DeepSeek R1 led to significant reactions in global markets, highlighting the disruptive potential of accessible and cost-effective AI models.

Future Prospects

DeepSeek continues to innovate in the AI landscape, with plans to release new models and expand its applications across various industries. The company's approach challenges traditional AI development paradigms, emphasizing efficiency, accessibility, and community collaboration.

-notes part of the Udemmy course (Instructor: Bibhatsu Kuri)