

Decoding AI series

Fundamentals of Large Language Models Curated resources

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Get inspired by top GenAl consumer apps

Likely to be of interest to:

Business leaders

Technology leaders

Technology experts

All audiences

The number of apps in the generative AI space and their capabilities grow relentlessly. A good starting point to explore what's possible today is this Top 100 list curated by a top Silicon Valley venture capital firm.

The Top !	50 Gen Al We	b Products, b	y Unique Mor	nthly Visits
1. SchatGPT	11. IIElevenLabs	21. 💦 PhotoRoom	31. PIXAI	41. ✦ ⁺ MaxAl.me
2. Gemini*	12. 🥲 Hugging Face	22. 400A40	32. =∰ ideogram	42. 🧪 Craiyon
3. character.ai	13. 🚯 Leonardo.Ai	23. 🥤 Clipchamp	33. invideo Al	43. OpusClip
4. 💙 liner	14. 🔔 Midjourney	24. 🕞 runway	34. IFeplicate	44. BLACKBOX AI
5. 🔮 QuillBot	15. 🕞 SpicyChat	25. YOU	35. (I) Playground	45. CHATPDF
6. 💬 Poe	16. 🔇 Gamma	26. DeepAI	36. 🕈 Suno	46. // PIXELCUT
7. 🕅 perplexity	17. Orushon Al	27. CP Eightify	37. 🚸 Chub.ai	47. Vectorizer.Al
8. JanitorAl	18. cutout.pro	28. candy.ai	38. 抑 Speechify	48. 🤝 DREAMGF
9. CIVITAI	19. 🍞 PIXLR	29. NightCafe	39. phind	49. Photomyne
10. Claude	20. VEED.IO	30. VocalRemover	40. 🔥 NovelAI	50. Oll Otter.ai

https://a16z.com/100-gen-ai-apps

Take a short course on LLMs

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If you are interested in taking a deep dive into LLMs, you can take up free and short courses here:

DeepLearning.Al

☑ <u>https://learn.deeplearning.ai</u>

coursera

☑ <u>https://www.coursera.org/learn/generative-ai-with-llms</u>



Find a top-performing LLM

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LLMs evolve fast. Leaderboards are a good way to find the current high performers. The website Imsys.org runs a go-to leaderboard that is updated regularly.

Rank∗ (UB)	🗑 Model 🔺	🔶 Arena Elo	🚺 95% CI 🔺	📸 Votes 🔺	Organization	License 🔺	Knowledge Cutoff
1	GPT-40-2024-05-13	1287	+4/-4	32181	OpenAI	Proprietary	2023/10
2	Gemini-1.5-Pro-API-0514	1267	+5/-4	25519	Google	Proprietary	2023/11
2	Gemini-Advanced-0514	1266	+5/-5	27225	Google	Proprietary	Online
4	<u>Gemini-1.5-Pro-API-0409-</u> Preview	1257	+3/-3	55731	Google	Proprietary	2023/11
4	<u>GPT-4-Turbo-2024-04-09</u>	1256	+2/-2	59891	OpenAI	Proprietary	2023/12
5	GPT-4-1106-preview	1251	+2/-3	80067	OpenAI	Proprietary	2023/4
6	Claude3Opus	1248	+2/-2	123645	Anthropic	Proprietary	2023/8
6	GPT-4-0125-preview	1246	+3/-2	73286	OpenAI	Proprietary	2023/12
9	Yi-Large-preview	1239	+4/-3	34567	01 AI	Proprietary	Unknown
9	Gemini-1.5-Flash-API-0514	1232	+4/-4	23797	Google	Proprietary	2023/11
11	<u>Bard (Gemini Pro)</u>	1208	+7/-5	11853	Google	Proprietary	Online
11	Llama-3-70b-Instruct	1208	+3/-2	124645	Meta	Llama 3 Community	2023/12
12	Claude 3 Sonnet	1201	+3/-2	96209	Anthropic	Proprietary	2023/8
13	Reka-Core-20240501	1200	+4/-3	41662	Reka AI	Proprietary	Unknown
15	CommandR±	1189	+3/-3	62732	Cohere	CC-BY-NC-4.0	2024/3

☑ https://chat.lmsys.org/?leaderboard

Benchmark LLMs in various scenarios

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Technology leaders

Technology experts

HELM (Holistic Evaluation of Language Models) leaderboards are the place to find scenario based benchmarks in different categories.

Model	MMLU All Subjects - EM
Claude 3 Opus (20240229)	0.846 🖉
GPT-4o (2024-05-13)	0.842 🖾
GPT-4 (0613)	0.824 🖻
Gemini 1.5 Pro (0409 preview)	0.81 🖉
GPT-4 Turbo (1106 preview)	0.796 🖻
Llama 3 (70B)	0.793 🖻
Palmyra X V3 (72B)	0.786 ⊵*
PaLM-2 (Unicorn)	0.786 🖉
Mixtral (8x22B)	0.778 🖉
Gemini 1.5 Flash (0514 preview)	0.778 ⊵"

☑ https://crfm.stanford.edu/helm/mmlu/latest



Explore how neural networks work



LLMs are a form of neural networks. To build your understanding of how LLMs work behind-the-scenes, you can simulate the workings of neural networks at this site.



☐ <u>https://playground.tensorflow.org</u>



Explore how tokenisation works



LLMs use the concept of tokens to process inputs, for example in learning mode and when processing prompts entered by us humans. You can explore how this works at these sites.



☐ <u>https://platform.openai.com/tokenizer</u>

☑ <u>https://tiktokenizer.vercel.app</u>



Read a book on the future of AI by an AI insider

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The big picture of where AI is heading is an unknown and contentious. Mustafa Suleyman is a true insider in AI circles and his thoughts on the topic are a useful insight into what the future might hold for us.



https://www.penguinrandomhouse.com/books/722674/thecoming-wave-by-mustafa-suleyman-with-michael-bhaskar



Listen to a panel discussion on the future of Al

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The Founder and CEO NVIDIA hosted an illustrious panel of leading AI experts, including the authors of the groundbreaking paper on transformers that underpins LLMs, to discuss what is happening at the leading edge of AI.



☐ <u>https://www.youtube.com/watch?v=hC_qASRcBhU</u>



Stay up-to-date with Al developments

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Technology experts

Several specialised YouTube channels by technical practitioners give regular updates on technical developments in the field of AI.



Play with opensource models

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Commercial players like OpenAI, Anthropic, and Google tend to get the spotlight, but the open-source community is also active with AI models, datasets, and demo apps. Hugging Face is the leading resource to explore these.



☑ <u>https://huggingface.co/spaces</u>

TechTalk

Read about data science and AI explorations

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The community of data and AI practitioners at Towards Data Science curates vetted deep dive articles that "share concepts, ideas, and code."



☑ <u>https://towardsdatascience.com</u>



Explore data science prompts for LLMs

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LLMs can be used by data analysts and data scientists to increase their productivity and skills. This collection of prompts should inspire you to get more done with the help of your GenAl companion.

42. Suggest Resources

Prompt: I want you to act as a data science coach. I would like to learn about [topic]. Please suggest 3 best specific resources. You can include [specify resource type]

43. Suggest Time Complexity

Prompt: I want you to act as a software developer. Please compare the time complexity of the two algorithms below. [Insert two functions]

44. Suggest Feature Engineering

Prompt: I want you to act as a data scientist and perform feature engineering. I am working on a model that predicts [insert feature name]. There are columns: [Describe columns]. Can you suggest features that we can engineer for this machine learning problem?

45. Suggest Ab Testing Steps

Prompt: I want you to act as a statistician. [Describe context] Please design an A/B test for this purpose. Please include the concrete steps on which statistical test I should run.

☑ <u>https://github.com/travistangvh/ChatGPT-Data-Science-Prompts</u>



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