# 10 THINGS

Healthcare Leaders Need To Know About LLMs and Generative AI

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ChatGPT. LLMs. GenAI. What do these new technologies mean for healthcare? **Here's what you need to know.**

1 Large language models (LLMs) allow computers to understand large sets of unstructured data. They can complete natural language processing tasks like reading, analyzing, summarizing, translating, and generating text, images, voice, etc. — thus the term **generative AI**. This technology works by **filling in the blank** — predicting words or parts of words, given what its seen.

ARTIFICIAL INTELLIGENCE

MACHINE LEARNING

DEEP LEARNING

LLMs

GENAI
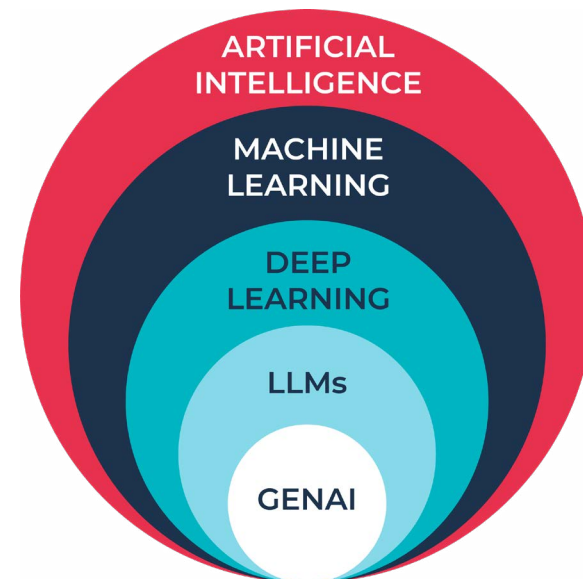
2 LLMs start from a **foundational model** trained on books, articles, and web resources. Some are then released to the public to build on top of them. These open-source models are fine-tuned to focus more on specific industries or expertise.

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During the rise of artificial intelligence (AI) in the 1950s, LLMs were first created **to help process languages**. In 2013, researchers began using unsupervised training for these models and having them learn. Since then, LLMs have been getting bigger, going faster, and using larger data sets.

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The most well-known examples of generative AI include **Open AI's ChatGPT** (short for chatbot generative pre-trained transformer and built on the GPT large language model), **Google's PaLM** (powering Bard), **Meta's LLaMa**, and **Anthropic's Claude**. Plus, text-to-image generators (**Midjourney**) and code generators (**Copilot**). (Did you know ChatGPT holds the [record](#) for fastest user growth by a consumer application?)

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AI isn't perfect. Because LLMs pull from data, they learn the **bias** of that data. They can also **hallucinate**, delivering false information due to inaccurate or incomplete data. There are three main things you can do to help mitigate these risks. Use LLMs for **classification** instead of generation (instead of "tell me something," ask yes/no questions). Build a **human-in-the-loop** process, where an experienced person checks the output for accuracy. Train the LLM on **real data** from your industry.

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75%

of [health system executives](#) say generative AI can **reshape the healthcare landscape.**

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One of healthcare's biggest problems is its massive amount of data. **LLMs can unlock clinical records** (like chart data), in ways computers could never handle. With large language models, all of that is now accessible. Training an LLM to have a deep understanding of the healthcare domain and its data opens up many possibilities. Thanks to this advanced technology, we now have a more straightforward path to solving some of healthcare's major pain points.

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Generative AI and LLMs are currently being used in numerous ways across healthcare, such as delivering real-time **insights to providers**, assisting with **diagnostics**, **streamlining administrative tasks**, **detecting cancer**, and more.

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The [top five ways](#) health systems are looking to **implement generative AI** in the next year include: charge capture and reconciliation, patient data structuring and analysis, automation and optimization of workflows, clinical decision support tools, and predictive analytics and risk stratification.

You can successfully implement LLMs in your organization when you:

- Have a clear AI strategy for the entire organization
- Use a foundational model
- Avoid exposing internal data
- Keep a human in the loop
- Identify the right use cases for your organization
- Start small
- Set guidelines on safe/ethical AI use

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AKASA is using the latest in generative AI and LLMs to improve the revenue cycle. What could this technology do for your healthcare organization?

Chat with an AKASA AI expert to find out

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