

Generative artificial intelligence (AI) describes algorithms (such as ChatGPT) that can be used to create new content, including audio, code, images, text, simulations, and videos. Recent new breakthroughs in the field have the potential to drastically change the way we approach content creation. Ready to take your creativity to the next level? Look no further than generative AI! This nifty form of machine learning allows computers to generate all sorts of new and exciting content, from music and art to entire virtual worlds. And it's not just for fun—generative AI has plenty of practical uses too, like creating new product designs and optimizing business processes. So why wait? Unleash the power of generative AI and see what amazing creations you can come up with!

Artificial intelligence is pretty much just what it sounds like—the practice of getting machines to mimic human intelligence to perform tasks. You've probably interacted with AI even if you don't realize it—voice assistants like Siri and Alexa are founded on AI technology, as are customer service chatbots that pop up to help you navigate websites.

Machine learning is a type of artificial intelligence. Through machine learning, practitioners develop artificial intelligence through models that can “learn” from data patterns without human direction. The unmanageably huge volume and complexity of data (unmanageable by humans, anyway) that is now being generated has increased the potential of machine learning, as well as the need for it.

Machine learning is founded on a number of building blocks, starting with classical statistical techniques developed between the 18th and 20th centuries for small data sets. In the 1930s and 1940s, the pioneers of computing—including theoretical mathematician Alan Turing—began working on the basic techniques for machine learning. But these techniques were limited to laboratories until the late 1970s, when scientists first developed computers powerful enough to mount them.

Until recently, machine learning was largely limited to predictive models, used to observe and classify patterns in content. For example, a classic machine learning problem is to start with an image or several images of, say, adorable cats. The program would then identify patterns among the images, and then scrutinize random images for ones that would match the adorable cat pattern. Generative AI was a breakthrough. Rather than simply perceive and classify a photo of a cat, machine learning is now able to create an image or text description of a cat on demand.