A Visual Guide to Generative AI: Understanding the Next Wave of Artificial Intelligence

What is Generative Al?

Generative AI is an area of Artificial Intelligence that uses algorithms to generate new data with similar characteristics and patterns to existing data (text, images, videos, or music) but different enough to be considered original.

How does it work?

To produce new information, Generative AI models train on large volumes of data and can use different techniques, which allow them to learn the patterns and structures of existing data and originate new ones. The process involves the following steps:

Data Collection Selection of the primary data according to the intended objectives and expected results.

Training Model

2

4

6

Application of different algorithms or architectures, such as <u>Variational Autoencoders</u> (VAEs), <u>Generative Adversarial Networks</u> (GANs), and <u>Autoregressive models</u>. The model learns the chosen database's patterns, structures, and representations during training.

Sampling

1

3

5

Creating new data by sampling according to learned representations. For example, the model can generate new text from the distribution of learned words or phrases.

Evaluation

Analysing the new information regarding similarity and quality against the existing data. To make this comparison, we can use quantitative metrics or human judgment.

Improvement

Optimizing the model to improve the quality of the generated data.

Implementation

The model can be implemented in its intended context when the data is according to the expected results.



Chatbots

This AI model can be used in creating chatbots, increasing their knowledge base by inserting new forms of requests/questions.



Whether in text, images, or videos, Generative AI automates content production and can, for example, generate realistic images, compose music, and more.

Games and Virtual Reality

Produce virtually realistic environments, characters, and objects to enhance virtual worlds' immersion and reality experience.

Education and Training

Make interactive learning material and practical exercises, and deliver results to students.

Advertising and Marketing

Create personalized advertising messages adapted to users' preferences, interests, and browsing behavior.

Medicine and Health Care

Generate synthetic medical images for training and testing diagnostic algorithms. Generative AI can also formulate personalized treatment plans and aid in drug discovery.

Examples of tools with Generative Al

DeepArt.io

A web-based platform that allows users to turn photos into art pieces with different artistic styles.

NVIDIA GauGAN

A tool that enables users to generate realistic images based on their sketches.

OpenAl DALL-E

An AI model that can generate images based on their textual description. In other words, it creates images from text.

Adobe Sensei

A tool that can be used for image generation, content-aware filling, and automatic image tagging.

Google DeepDream

A tool that allows you to create visually intriguing, almost dreamlike images using existing ones.

StyleGAN

Also developed by NVIDIA, is a generative adversarial network that allows you to improve image quality and remove unneeded elements.

Benefits

Creativity and Innovation

Because it can generate new and creative content and inspire new ideas, designs, and concepts, it helps to push the boundaries of creativity and enable new possibilities in fields such as art, fashion, product design, and marketing.

Efficiency and Automation

Automate repetitive tasks such as content creation, product design, and database augmentation to save time and reduce costs. It also speeds up the generation process, enabling rapid prototyping and streamlining workflows.

Personalization

Creating content tailored to users' preferences, interests, and needs leads to personalized experiences. These tailor-made suggestions increase user engagement, satisfaction, and loyalty in advertising and customer service areas.

Profitability

Generative AI provides cost-effective solutions for tasks that require significant resources, such as creating realistic visual content and generating 3D models or prototype designs. Consequently, it reduces production costs and enables small businesses to access advanced design capabilities.

Visor.ai Customer Service Automation

Visor.ai is aware of the trends and already uses this kind of Generative Artificial Intelligence in its solutions. Come to know more and enter the future of intelligent interactions. <u>Talk to us</u>! visit WWW.VISOr.ai