

Richard Waters, "[The AI revolution's first year: has anything changed?](#)", *The Financial Times*, December 29, 2023.

**Prompt: Summarise the following article in 300 words. Then develop twenty crossword puzzle clues using the 20 most unusual words. Write the word and the clue on the same line. Added text is indicated in square brackets [...].**

2023 [was] a pivotal year for generative AI, marked by the impactful launch of OpenAI's ChatGPT. This innovation, likened to the introduction of the internet and mobile computing, is reshaping the tech landscape. Microsoft CEO Satya Nadella and Google CEO Sundar Pichai have expressed optimism about AI's transformative potential, comparing it to significant historical innovations.

Despite the enthusiasm, generative AI, which deals with probabilities rather than hard logic, faces challenges like producing inaccurate information[: large language models "are capable at times of breathtaking artistry" but also "'hallucinate' by generating plausible-sounding responses that have little relation to reality". Companies like Salesforce acknowledge its limitations but still see its value. The industry is racing to mitigate these issues by involving human oversight and integrating factual databases.

The financial sector is closely watching AI's commercial viability. The technology contributed to a significant rise in tech stocks, particularly benefiting companies like Nvidia. However, its actual influence on profits remains to be seen, with 2024 being a critical year for demonstrating tangible business models and revenue generation.

Private investment in AI startups, including those developing large language models, has risen but hasn't reached the heights of previous tech booms. The slow adoption rate and practical challenges, like the high cost and technical know-how required, may limit the immediate impact of AI on business revenues.

Despite these hurdles, the tech industry remains optimistic. AI is expected to integrate faster into mainstream use compared to past technologies due to existing infrastructure. Goldman Sachs forecasts a significant increase in AI investment in the latter part of this decade.

While consumer applications have yet to find a monetisation strategy, the business sector seems more promising. Companies are exploring AI to enhance productivity and efficiency. Early research indicates potential for significant productivity improvements in areas like call centres.

2024 is poised to be a defining year for generative AI, determining whether it becomes a fundamental part of the IT toolkit or remains a niche addition with limited applications.

**Prompt: List the twenty most common terms relating to AI and give their definitions. Put all the information on one line.**

**GPT-4: Certainly! Here's a list of the twenty most common terms related to AI, along with their definitions:**

- 1/ Artificial Intelligence (AI):** The simulation of human intelligence processes by machines, especially computer systems.
- 2/ Machine Learning (ML):** A subset of AI that provides systems the ability to automatically learn and improve from experience without being explicitly programmed.
- 3/ Deep Learning:** A subset of ML that uses algorithms inspired by the structure and function of the brain's neural networks.
- 4/ Neural Network:** A network or circuit of neurons, or in a modern sense, an artificial neural network composed of artificial neurons or nodes.
- 5/ Natural Language Processing (NLP):** The ability of a computer program to understand, interpret, and respond to human language in a valuable way.
- 6/ Algorithm:** A set of rules to be followed in calculations or other problem-solving operations, especially by a computer.
- 7/ Data Mining:** The process of discovering patterns and knowledge from large amounts of data.
- 8/ Reinforcement Learning:** A type of ML where an agent learns to make decisions by taking actions in an environment to achieve some reward.
- 9/ Supervised Learning:** An approach to ML where the model is trained on labelled data.
- 10/ Unsupervised Learning:** An approach to ML where the model learns from data that is not labelled or classified.
- 11/ Convolutional Neural Network (CNN):** A deep learning algorithm which can take an input image, assign importance to various aspects in the image, and differentiate one from the other.
- 12/ Recurrent Neural Network (RNN):** A type of neural network where connections between nodes form a directed graph along a temporal sequence, allowing it to exhibit temporal dynamic behaviour.
- 13/ Backpropagation:** A method used in training neural networks, involving moving the error from the end of the network to all weights inside the network, allowing for efficient computation of the gradient.
- 14/ Overfitting:** A modelling error in ML when a model is too closely fit to a specific set of data and may fail to perform well on new data.
- 15/ Underfitting:** A modelling error where a machine learning model is too simple, making it difficult to capture the underlying trend of the data.
- 16/ Bias:** A systematic error introduced into sampling or testing by selecting or encouraging one outcome or answer over others.
- 17/ Classification:** In ML, the process of predicting the class or category of a given input.
- 18/ Regression:** A type of problem in ML where the objective is to predict a continuous value.
- 19/ Feature Extraction:** The process of reducing the number of resources required to describe a large set of data accurately.
- 20/ Generative Adversarial Network (GAN):** A class of ML frameworks where two models are trained simultaneously by an adversarial process; a generator that creates samples and a discriminator that evaluates them.