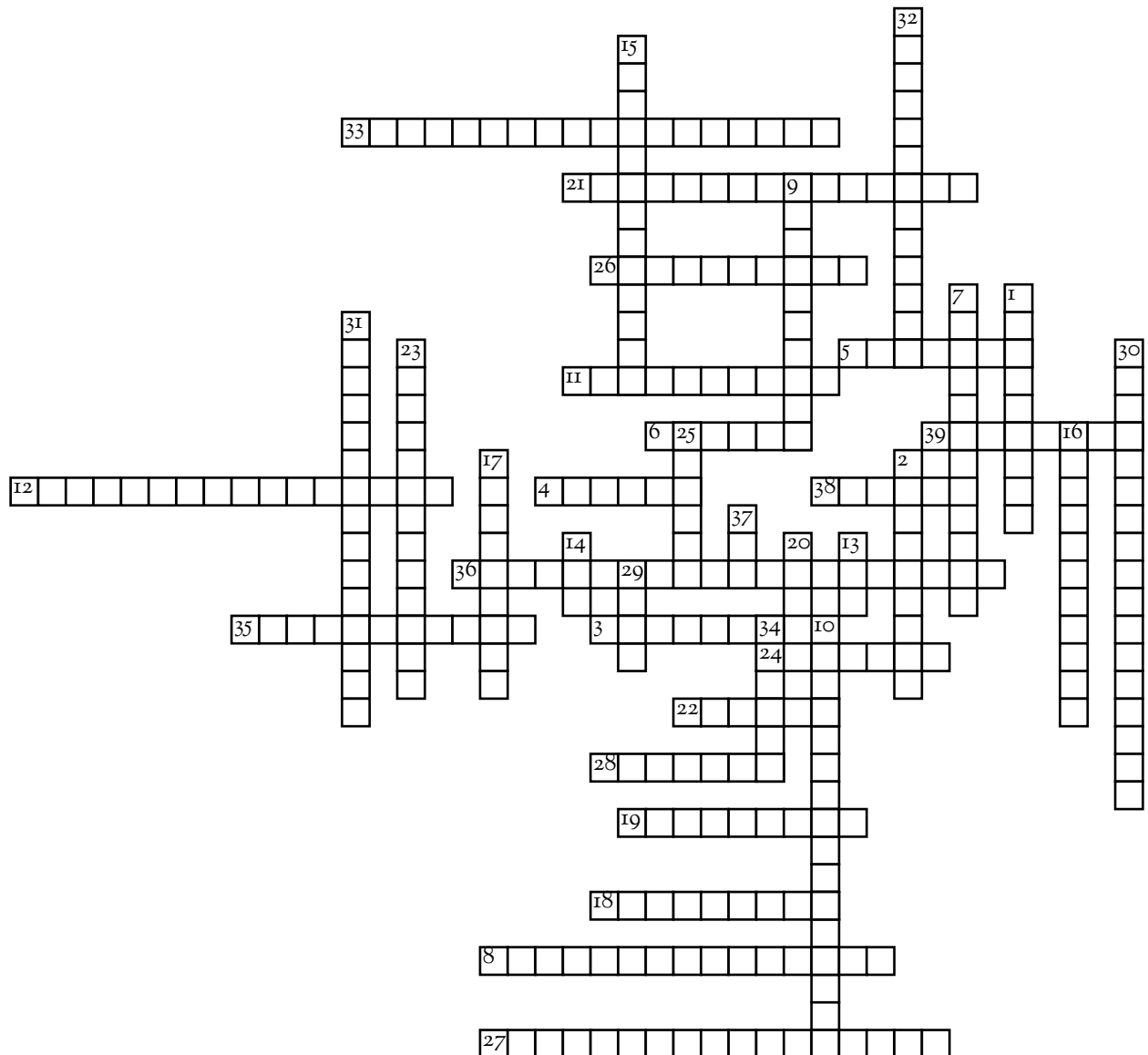


# Generative AI Crossword



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## Across

3. A software or computer program used in AI applications that simulates human conversation using text or voice interactions.
4. A large language model developed by Anthropic designed to generate conversational outputs that are helpful, sophisticated, harmless, and honest. It can assist with a variety of use cases that include summarization, creative writing, general Q&A, software development, and search.
5. The ability for a given application to access information about the physical environment, anticipate changes, and automatically adapt its behavior using real time responses. An example would be generating emergency-based responses due to pattern changes in the weather that detects thunderstorms.
6. In deep learning, this is the collection of text, audio, images, or other source organized into a dataset. Items like newspapers, videos, music, voice recordings, books, tweets, and even recipes can make up the body of information. Once gathered, it can be used to train a model. If an AI use case requires a specific problem or objective to address, it will require a collection of data specific to the use case (e.g., medical journals) to achieve the desired machine learning or natural language output.
8. Generative models focused on creating novel images by adding and removing noise to input images repeatedly over a series of iterations. The final image ends up looking similar to the images used as part of the training dataset.
11. A technique where a model that is trained on a generic dataset, has additional conditions applied in order to gain more specific capabilities, for example using this technique for a specific domain or a private dataset. The process of using this technique is more cost effective than retraining a model from scratch.
12. Also known as 'base models' trained using large datasets, and are suitable for a broad range of generative AI use cases. The process of



creating one is time consuming, requiring numerous training cycles, and expensive, due to the amount of compute resources required. GPT, BERT, Titan, and Midjourney are just a few examples.

18. The process of running data points within an ML model to produce or calculate a desired output ('prediction').
19. An open source language framework project that combines your application with LLMs and other sources of data to deliver feature-rich capabilities in a generative AI tool.
21. A sub-field of artificial intelligence (AI) and computer science that focuses on the use of data and algorithms to imitate the way that humans learn.
22. A basic concept of artificial intelligence that enables the generation of outputs based on massively trained datasets, deep learning algorithms, and input prompts from users.
24. This type of inference is a form of in-context learning that enables a model to make predictions about new classes after being trained on a single example of that class.
26. Different variables that developers tune when they are training a ML model that helps it set up patterns for how it will perform on new data.
27. Guiding a model towards providing the best output is the goal of this type of engineering.
28. The text input supplied to large language models to allow it to generate novel text.
33. Using data associated with tags so that computer algorithms can be trained to detect the underlying patterns and relationships between the input data and the output labels.
35. A type of deep learning model used for NLP and other ML tasks. Using a mechanism called "self-attention", they act as an encoder to process sequential input data and a decoder for generating the desired output.
36. Contains no tags and learning implies that the data is not labeled.
38. A mathematical object that represents magnitude and direction.
39. A type of machine learning where the model can make predictions about new classes without being explicitly trained on those classes. This is done by using the model's knowledge of other, similar classes to make inferences about the new classes.

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## Down

1. A startup company founded in 2021 by former members of OpenAI. It is an AI safety and research company dedicated to building reliable AI systems. It is most noted for Claude, a powerful machine learning model capable of generating advanced dialogue and creative content from detailed instruction.
2. A mechanism that allows deep learning models to only focus on specific parts of an input sequence while processing it. It is inspired largely by how humans focus on different parts of a sequence when processing information. Examples include focusing on certain words when reading a recipe, or specific visual cues when watching a sporting event. This is "all you need" according to a well-known paper.
7. A sub-field or sub-discipline of machine learning that imitates how humans learn or obtain certain types of knowledge. Its models can be taught to recognize patterns in photos, text, audio and other data with high levels or accuracy.
9. The mathematical representation of complex data types (e.g., words, sentences, and objects) in a lower-dimensional vector space. They are regarded as the 'numeric mask' of the data that is more palatable for machine learning algorithms.
10. A form of in-context learning that enables a model to quickly adapt and learn new concepts with only a few examples.
13. A \_\_ is a ML model in which two neural networks 'compete' with each other by using deep learning methods to become more accurate in their predictions.
14. A family of neural network models that uses the transformer architecture and is a key advancement in artificial intelligence, powering generative AI applications such as ChatGPT.
15. Models don't have any knowledge of what is right or wrong, instead they just generate what is the statistically most-likely completion. This leads them to make this kind of statement that seems quite believable, but is factually incorrect or entirely fictitious.
16. A company that has developed a platform for building, training, and deploying machine learning models through open source programs and technologies, and a community to enable sharing.
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This type of learning involves prompting models with a few examples of input-label pairs before performing the task on an unseen evaluation example.

20. This subset of foundation models are trained on trillions of words to perform many natural-language tasks.
23. A machine learning process that uses interconnected nodes or neurons in a layered structure that resembles the human brain.
25. Founded in 2015, this company is a research organization dedicated to the development and advancement of artificial intelligence systems. It is most commonly known as the creator of popular generative tools like ChatGPT.
29. The acronym for the technique that relies on human feedback to train a reward model.
30. The ability for AI models to recognize emotions or tone of a statement beyond basic positive or negative connotation.
31. An open source model designed to generate images from natural text inputs of prompts.
32. The technique of shortening long strings of text to create a legible summary that contains the main points from the original document or other form of text input. The two most common forms are abstraction-based and extraction-based.
34. A small unit that is easily understood by a large-language model.
37. A generative AI algorithm that uses deep learning for generating new content, filtering noise, or detecting anomalies.

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