What is Deep Learning?

Deep Learning is a subset of machine learning that focuses on training artificial neural networks to learn from large amounts of data. The term “deep” in deep learning refers to the architecture of neural networks, which typically consist of multiple layers, allowing them to learn hierarchical representations of data. These neural networks are inspired by the structure and function of the human brain, where interconnected neurons work together to process information.

Unlike traditional machine learning algorithms, which require handcrafted feature engineering, deep learning models can automatically learn relevant features from the data, making them highly effective for complex tasks such as image recognition, natural language processing, and playing games. Deep learning has gained significant popularity and success in recent years due to its ability to scale effectively with large datasets and powerful computational resources.

History and Evolution of Deep Learning

The concept of neural networks dates back to the 1940s and 1950s, with early models like the perceptron. However, deep learning, as we know it today, began to gain momentum in the 2000s and 2010s due to several key developments:

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