**Neural Networks**

Neural networks are a class of machine learning models inspired by the structure and functioning of the human brain. They consist of interconnected nodes, also known as neurons or artificial neurons, organized into layers. The basic building blocks of neural networks are:

* Neurons
* Layers
* Activation Functions
* Weight and Bias
* Backpropagation networks
* Feedforward Networks

Neural networks have demonstrated remarkable success in various fields, including computer vision, natural language processing, and reinforcement learning. Convolutional Neural Networks (CNNs) are commonly used for image-related tasks, while Recurrent Neural Networks (RNNs) are employed for sequential data, such as in language modeling.

Neural networks come in various architectures, each designed for specific types of tasks. Here are some common types of neural networks:

* Feedforward Neural Network
* Multilayer Perceptron
* Convolutional Neural Network
* Recurrent Neural Network
* Long Short-Term Memory
* Gated Recurrent Unit
* Generative Adversarial Network
* Autoencoders