🧠 CLASS 1: NEURAL NETWORKS PART 2

Neural networks form the core of deep learning, enabling machines to recognize patterns and make decisions. This session will delve into the structure of neural networks, how they process information, and their various types.

🔍 What are Neural Networks?

At their essence, neural networks are algorithms modeled after the human brain, designed to recognize patterns. They interpret sensory data through a kind of machine perception, labeling, or clustering raw input.

Key Components of Neural Networks:

Neurons: Basic units of the neural network that receive inputs and pass on their signal to the next layer of nodes if a certain threshold is reached.

Layers: Made up of an input layer, hidden layers, and an output layer. Each layer contains nodes that connect to numerous nodes in the next layer, forming a network.

Weights and Biases: Weights are used to connect each neuron in one layer to every neuron in the next layer. Biases are added to a neuron's output to help the network better fit the data.

📊 Types of Neural Networks

There are several types of neural networks, each designed for specific tasks, including Convolutional Neural Networks (CNNs) for image processing, Recurrent Neural Networks (RNNs) for time series analysis, and more.

📝 Conclusion

Understanding the basics of neural networks is essential for diving deeper into the field of deep learning. This knowledge is foundational for exploring more complex networks and their applications in real-world scenarios.