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Neural Networks

A series of algorithms that endeavors to recognize underlying relationships in a set of data through a process that mimics the way the human brain operates. Using algorithms, neural networks can recognize hidden patterns and correlations in raw data, cluster and classify it, and over time continuously learn & improve. The objective of such artificial neural networks is to perform such cognitive functions as problem solving and machine learning.

Types

- Feedforward Neural Network – Artificial Neuron
- Radial Basis Function Neural Network
- Multilayer Perceptron
- Convolutional Neural Network
- Recurrent Neural Network(RNN) – Long Short Term Memory
- Modular Neural Network
- Sequence-To-Sequence Models

Benefits

- Stores information on the entire network
- Learns from examples and apply them when a similar event arises
- Works with insufficient knowledge
- Performs multiple tasks in parallel without affecting the system performance
- Good fault tolerance
- Capable of approximating unknown functions
- Distributed memory

Trends

- MarketsandMarkets forecasts the global Artificial Neural Network Market size to grow from $117 million in 2019 to $296 million by 2024, at a CAGR of 20.5% during the forecast period
- With the size of neural networks doubling every 2.4 years, the power of the technology to solve increasingly complex problems becomes more feasible
- A 10% increase in efficiency is probably the most a trader can ever expect from a neural network

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