

Quantum computing

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Abstract

Quantum computers are computing devices that can theoretically have computing power that is many orders of magnitude greater than that of conventional computers. The basic unit of data in a quantum computer is the quantum bit, or qubit, that is the quantum state of electrons in an atom. Qubits can theoretically exist in several superposed states simultaneously, enabling them to carry far more information than is available using conventional two-state bits. The mathematical basis of the proportionality of qubit states is similar to that of the input weights of neural networks. There has been some successful development of quantum computer technology, but a great deal of research and development remains to be done before quantum computers become viable as a mainstream technology, and there are arguments as to why this eventuality can never be achieved. Quantum computing is a quickly growing research field. This article introduces the basic concepts of quantum computing, recent developments in quantum searching, and decoherence in a possible quantum dot realization. Quantum computer is basically from a quantum technologies and in this presentation we are going to learn about what is quantum computer and difference between classical computer and quantum computer and benefits of quantum computer and how many companies developed quantum technologies and how quantum will serve in future.

“Quantum machine learning promises to discover the optimal network topologies and hyperparameters automatically without human intervention”