

Afd intelligence and what is the media talking



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afd of broadcast time on new technology. The focus of high-tech media has been aimed at the flurry of advances concerning artificial intelligence (AI).

What is artificial intelligence and what is the media talking about? Are these technologies beneficial to our society or mere novelties among business and marketing professionals? Medical facilities, police departments, and manufacturing plants have all been changed by AI but how? These questions and many others are the concern of the general public brought about by the lack of education concerning rapidly advancing computer technology.

Artificial intelligence is defined as the ability of a machine to think for itself. Scientists and theorists continue to debate if computers will actually be able to think for themselves at one point (Patterson 7). The generally accepted theory is that computers do and will think more in the future. AI has grown rapidly in the last ten years chiefly because of the advances in computer architecture. The term artificial intelligence was actually coined in 1956 by a group of scientists having their first meeting on the topic (Patterson 6). Early attempts at AI were neural networks modeled after the ones in the human brain. Success was minimal at best because of the lack of computer technology needed to calculate such large equations.

AI is achieved using a number of different methods. The more popular implementations comprise neural networks, chaos engineering, fuzzy logic, knowledge based systems, and expert systems. Using any one of the aforementioned design structures requires a specialized computer system.

For example, Anderson Consulting applies a knowledge based system to commercial loan officers using multimedia (Hedburg 121). Their system

requires a fast IBM desktop computer. Other systems may require even more horsepower using exotic computers or workstations. Even more exotic is the software that is used.

Since there are very few applications that are pre-written using AI, each company has to write it's own software for the solution to the problem. An easier way around this obstacle is to design an add-on. The company FuziWare makes several applications that act as an addition to a larger application. FuziCalc, FuziQuote, FuziCell, FuziChoice, and FuziCost are all products that are used as management decision support systems for other off-the shelf applications (Barron 111). In order to tell that AI is present we must be able to measure the intelligence being used. For a relative scale of reference, large supercomputers can only create a brain the size of a fly (Butler and Caudill 5). It is surprising what a computer can do with that intelligence once it has been put to work.

Almost any scientific, business, or financial profession can benefit greatly from AI. The ability of the computer to analyze variables provides a great advantage to these fields. There are many ways that AI can be used to solve a problem. Virtually all of these methods require special hardware and software to use them. Unfortunately, that makes AI systems expensive. Consulting firms, companies that design computing solutions for their clients, have offset that cost with the quality of the system. Many new AI systems now give a special edge that is needed to beat the competition.

Neural networks have entered the spotlight with surprisingly successful results. A neural network is a type of information processing system whose

architecture is similar to the structure of biological neural systems (Butler and Caudill 5). The neural network tries to mimic the way a brain and nervous system work by analyzing sensory inputs and calculating an outcome. A neural network is usually composed of simple decision making elements that are connected with variable weights and strengths. Each one of these elements is called a neurode.

The term neurode is similar to the biological neuron. The term was modified slightly to indicate an artificial nature. Memory is stored by a certain pattern of the connection weights between the neurodes.

Processing information is performed by changing and spreading the connection's weights among the network. Before it can be used a neural network must be trained. Some can learn by themselves, some require training by doing, and others learn by trial and error.

A computer learns by naturally associating items the computer is taught and grouping