# Fuzzy logic 1266

Technology, Computer

This was a paper on Fuzzy Logic I wrote for my Programming in C++ Intro class, I don't think it is very good myself. You could probably use it in a intro to computers class, or some kind of high school programming class. I have no idea what I got on the paper, I don't have the graded copy any more. This would be a great paper to use as a starting point. Hope this saves you some time and effort.

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Programming In C++ 'A'

Fuzzy Logic

What is fuzzy logic? How does it differ from conventional logic? Who " discovered" fuzzy logic? How can it be used today? How is it being used, and by whom? These questions are questions I will attempt to answer in this brief discussion of fuzzy logic, so let us begin.

The first and most important question is " What is fuzzy logic?" Fuzzy logic the logic people use in day to day decisions. Instead of all items falling into one set, as in conventional logic, items can fall into multiple sets. A good example would be the big cat question. There are two sets in this problem " The cat is golden," and " The cat is black." A lion clearly fits into the first set " The cat is golden. A Black Panther clearly fits into the second set " The cat is black." But what about a jaguar, it has a golden coat with black spots, it does not clearly fit into any one of the sets, so it a part of both. The main difference between fuzzy logic, and conventional logic is this. Conventional

logic holds that something cannot be a mender of two sets. Fuzzy logic holds that things can be a part of multiple sets.

The term fuzzy logic was brought forth in 1965 by a professor at the University of Berkeley, named Lofti A. Zadeh. Zadeh wondered why it was that people can base decisions on imprecise, non-numerical information, yet they are better at making complex decisions that machines. These ideas were presented to the world in 1973, in his paper titles 'Transactions on Systems, Man and Cybernetics'. In this paper Zadeh introduced the idea of a linguistic variable, and a fuzzy IF-THEN rule. The concepts introduced in this paper paved the way for real world applications.

Now a days fuzzy logic is being used in many different fields, and in many different ways. Some fuzzy-based consumer products include camcorders, washing machines, color TV's, and fuzzy computer chips. Unfortunately the US has been very slow to use this new type of logic. All of the products listed above were created by Japanese companies. Part of the reason US companies were so slow to utilize this new type of logic my stem from cultural differences between the eastern, and western ways of thinking.

In conclusion fuzzy logic has many applications that haven't even been explored yet, and in some applications it is better than conventional logic.