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5b.b (ii) components of fuzzy controller

Fuzzy logic will compute only words rather than the numbers and fuzzy controller will compute only the sentence rather than the equation.

It has non-linear control strategies

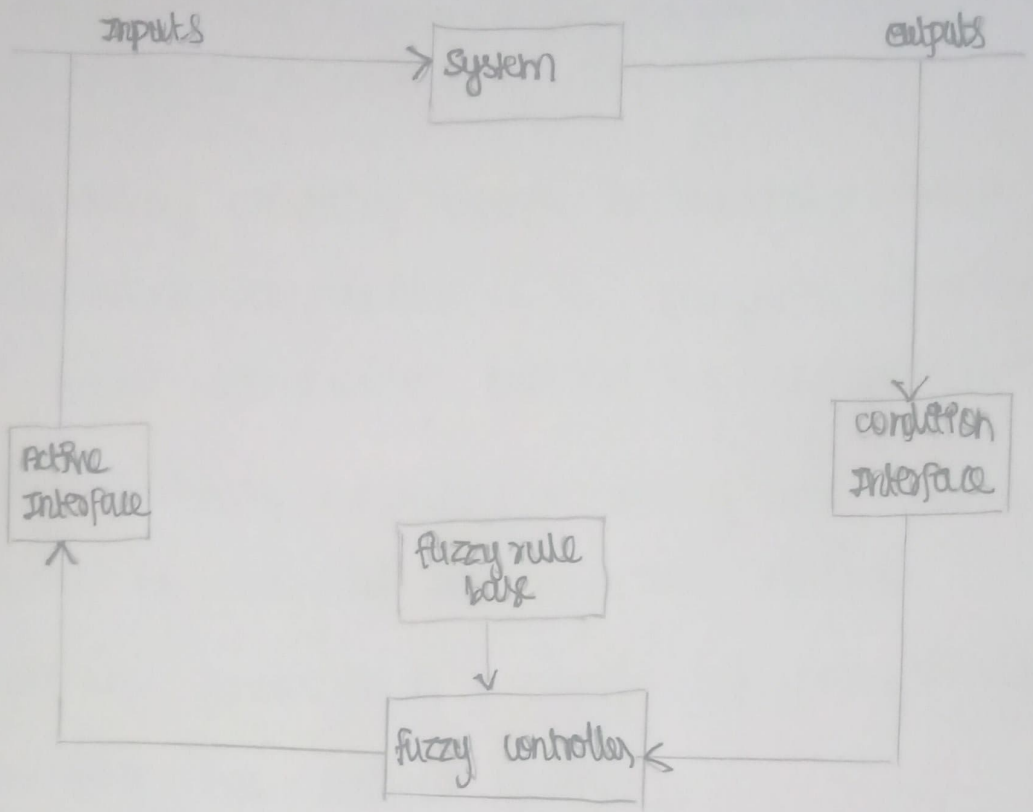
The first application was introduced is steam engine by Amdani and assilan 1976.

Fuzzy controller is used in both consumer products and Industrial process.

Eg : Air conditioners, cement kilns, hydro electrical energy.

Fuzzy controller has nearly 5 components they are

1) Active interface
2) Fuzzy rule base
3) Fuzzy controller
4) condition interface
5) System



Fuzzy Rule base:

Fuzzy Rule base is constructed based on the human knowledge and experience. These rules are nonlinear control strategy. These rules are obtained from human experts and knowledge of evolutionary algorithm and neural network.

condition Interface: The fuzzifier receives the actual output of the system, and transform the non-fuzzy sets into corresponding fuzzy sets.

Activation Interface: The action interface defuzzifies the outcome of Inference engine to produce a non-fuzzy set into fuzzy set.

Inference engine: the Inference engine perform reasoning upon fuzzified inputs to provide a fuzzy output.

5b b (i) Evolutionary computing mimics the natural evolution:-

Evolutionary computation is the family of algorithms for global optimization inspired by biological evolution

In evolutionary computing a initial set of candidate solution is generated and iteratively updated.

Each new generation is produced by stochastically removing less desired solutions.

Evolutionary computation techniques can produce a highly optimized solution in a wide range of problem settings, make them popular in computer science.

Evolutionary biology as an in silico experimental procedure to study common aspect of general evolution process.

Evolutionary automata a generalization of evolutionary turing machine have been introduced

In order to investigate more precisely properties of biological and evolutionary computation

In Evolutionary computing where it mimics the evolutionary of natural evolution because the each neuron in the Evolutionary computing are interconnected where the natural evolution has the work for each generation in the neuron.