

## **Abstract**

In a computer network, normal or abnormal condition has become a tough proportion problem to predicts because of unconfined in straits. Fuzzy classifier system, which is reffering to fuzzy concept, would be used to alleviate this problem.

This final project will examines a process to find an optimal fuzzy rule as the determining condition of computer network with genetic programming. This have some parameter which is affecting the result. The parameters are population size, generation maximal size, crossover and mutation probability. Programming language with Delphi7.

The experiment shown that optimal fuzzy rule have probability correct 51.65% with 100 of population size, 0.1 of mutation rate, and 0.6 of crossover rate. Maximal population size and fitness value does not guarantee evolve an optimal rule. The performace of the classification rule output shown that the securities was high while comfort rate was low.

**Keywords:** fuzzy rule, fuzzy classifier system, genetic programming, intrusion detection system