Abstract

This paper summarizes recent research on heuristic based learning procedures called Genetic Algorithms (GAs) and particularly focuses on genetic primary operators. There are different types of genetic operators existing that serve to improve the performance of genetic algorithms. Genetic Algorithm is composed of genetic operators and other genetic parameters. The primary genetic operators are selection, crossover and mutation. The performance of Genetic Algorithm mainly depends on its Genetic Operators. While solving a particular problem, 70% of the time will be spent in searching the appropriate genetic operators and their probability values. So it is much important to select the correct operator and their probabilities so as to provide optimal solutions for a given complete problem. The ultimate aim of genetic algorithm is to minimize the
time and space complexities and produces optimized results. This research helps in how primary genetic operator is modified or enriched to improve the performance of genetic algorithms.

References

- European Graduate Student, "Workshop on Evolutionary Computation" 2012
- S. Siva Sathya, S. Kuppuswami, Department of Computer Science, Pondicherry University, "Gene Silencing for Course Time-Tabling with Genetic Algorithm".
- Anabela Simões, Ernesto Costa, 2003, "Improving the Genetic Algorithm?s Performance when Using Transformation", in Proc. of the Sixth International Conference on Neural Networks and Genetic Algorithms (ICANNGAapos;03), Springer, pp. 175-181, April-2003

Index Terms

Computer Science

Artificial Intelligence
Keywords
Genetic Algorithms  Heuristics  Binary Encoding  Crossover Operator  Mutation

Fitness Score

Optimization

Psychology