Advances In Genetic Programming (Complex Adaptive Systems)
Synopsis

There is increasing interest in genetic programming by both researchers and professional software developers. These twenty-two invited contributions show how a wide variety of problems across disciplines can be solved using this new paradigm. Advances in Genetic Programming reports significant results in improving the power of genetic programming, presenting techniques that can be employed immediately in the solution of complex problems in many areas, including machine learning and the simulation of autonomous behavior. Popular languages such as C and C++ are used in many of the applications and experiments, illustrating how genetic programming is not restricted to symbolic computing languages such as LISP. Researchers interested in getting started in genetic programming will find information on how to begin, on what public domain code is available, and on how to become part of the active genetic programming community via electronic mail. A major focus of the book is on improving the power of genetic programming. Experimental results are presented in a variety of areas, including adding memory to genetic programming, using locality and "demes" to maintain evolutionary diversity, avoiding the traps of local optima by using coevolution, using noise to increase generality, and limiting the size of evolved solutions to improve generality. Significant theoretical results in the understanding of the processes underlying genetic programming are presented, as are several results in the area of automatic function definition. Performance increases are demonstrated by directly evolving machine code, and implementation and design issues for genetic programming in C++ are discussed.

Book Information

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Customer Reviews

First of all, this is a compilation of works by multiple authors, so the flow is quite illogical. There is a lot of good info here, you just have to poke around a bit. This is great for anyone who has a good notion of what a genetic algorithm is, but wants to take it a bit further and get some inspiration, along with practical tips.

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