Genetic Programming: An Introduction (The Morgan Kaufmann Series in Artificial Intelligence)

Von Wolfgang Banzhaf, Peter Nordin, Robert E. Keller, Frank D. Francone
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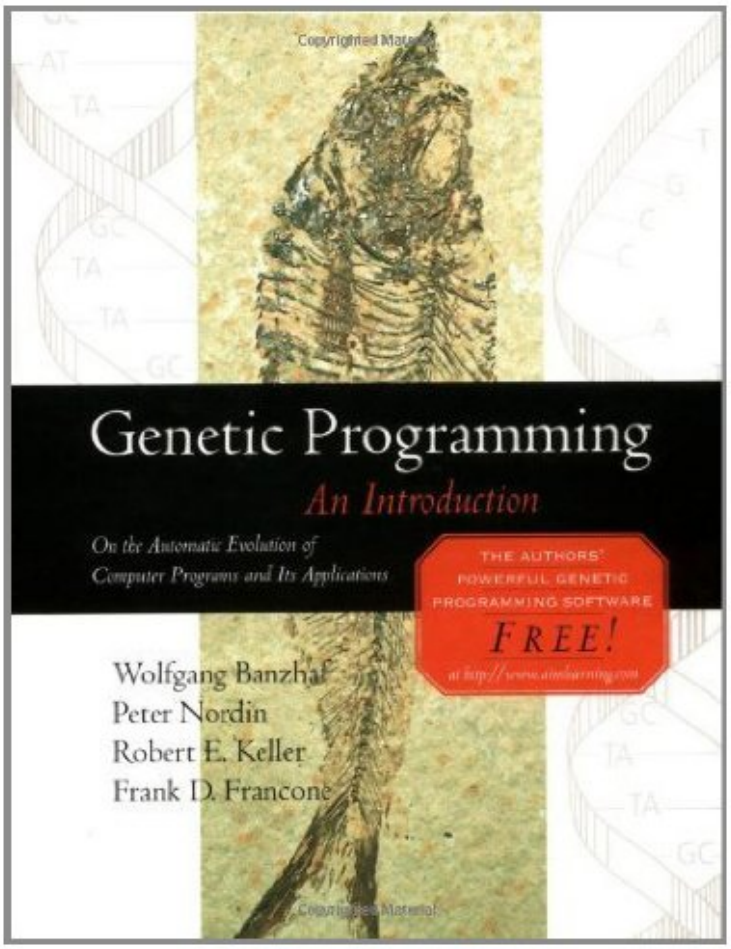

Produktinformation -Verkaufsrang: #740394 in eBooksVerffentlicht am: 1998-02-24Erscheinungsdatum: 1998-02-24File Name: B002ACPAI8 | File size: 47.Mb

Von Wolfgang Banzhaf, Peter Nordin, Robert E. Keller, Frank D. Francone : Genetic Programming: An Introduction (The Morgan Kaufmann Series in Artificial Intelligence) before purchasing it in order to gage whether or not it would be worth my time, and all praised Genetic Programming: An Introduction (The Morgan Kaufmann Series in Artificial Intelligence):

KundenrezensionenHilfreichste Kundenrezensionen3 von 3 Kunden fanden die folgende Rezension hilfreich. Kultbuch zur genetischen ProgrammierungVon Jan DererDas Buch lt fast keine Wnsche offen. Wollen wir gleich mit dem "kleinen Problem" anfangen. Was ich als einzigstes bemngel ist ein praktischer Bezug mit dem zu schreibenden Quellcode. Htten die Autoren im Buch eine einfache Variante mal besprochen, wre das Buch Gold wert. Nichts desto trotz, ist es eine Pflichtlektre. Jeder GP-Operator wird auseinander genommen und seine Auswirkungen gezeigt,

welche manchmal sehr gravierend sein kann. Auch die verschiedenen Arten der Datenstrukturen fr GP werden erklrt (Automaten, Bume, sequenzielle Liste). Auch ein wichtiger Teil ber die Introns ist drinne, also alles was man braucht.1 von 1 Kunden fanden die folgende Rezension hilfreich. Excellent introduction to Genetic ProgrammingVon Ein KundeIt may be the rich subject matter, but this is the first time I've been happy to pay this much for a textbook. It's also the first textbook I've ever actually read through.It's a well written introduction to a very cool field of study. Now I wish I had gone straight into computer science after I graduated biology in 1993. Even though I'm not doing any work with GP or machine learning, this book lets me feel like an insider. Who knows, maybe it'll mark the start of a new career.I particularly liked the fact that the content is all very current and very relevant (for 1998). The book provides a good starting point for getting into the scientific papers.Anyone coming from first year biology or computer science should have no trouble picking up on the major themes here.1 von 1 Kunden fanden die folgende Rezension hilfreich. This book is well written and comprehensive.Von Una-May O'Reilly (unamay@ai.mit.edu)The authors are to be congratulated on presenting a volume which: - factually and clearly elucidates the relationship between GP and machine learning, or biology. - places GP in the perspective of Evolutionary Algorithms.The volume details the research issues of GP and reviews in a thorough and unbiased manner the current state of the art. It serves well as an introduction and, for the more dedicated reader, it introduces advanced topics such as representation options, optimizing GP performance and the implementation of a practical GP system.The book also contains a useful source of references to printed and electronic materials and internet information regarding GP.I recommend it highly. Read it and enjoy!

KurzbeschreibungSince the early 1990s, genetic programming (GP)a discipline whose goal is to enable the automatic generation of computer programshas emerged as one of the most promising paradigms for fast, productive software development. GP combines biological metaphors gleaned from Darwin's theory of evolution with computer-science approaches drawn from the field of machine learning to create programs that are capable of adapting or recreating themselves for open-ended tasks.This unique introduction to GP provides a detailed overview of the subject and its antecedents, with extensive references to the published and online literature. In addition to explaining the fundamental theory and important algorithms, the text includes practical discussions covering a wealth of potential applications and real-world implementation techniques. Software professionals needing to understand and apply GP concepts will find this book an invaluable practical and theoretical guide..deImagine a world in which computers program other computers based on strategies borrowed from biology and natural selection. Genetic Programming: An Introduction explores fascinating possibilities like these in a thriving area of computer-science research. This research-quality book is for anyone who wants to see what genetic programming is and what it can offer the future of computing.This text begins by situating genetic programming in terms of the history of computing and machine learning. Early sections show the links between Darwinism, molecular biology, and genetic programming. (Genetic programming uses the strategy of natural selection by solving a problem in successive iterations, which produces the "fittest" solution, much like new species evolve in the natural world.)The authors present a lot of molecular-biology background since it is central to the genetic-programming project. (There are interesting parallels here. Just as our DNA contains inert information, programs developed using genetic algorithms usually contain many "extra" instructions, too--which often leads to bloated, though effective, code in the final product.) Even though this is extremely technical material, the authors do manage to engage the reader in the imaginative leap from Darwin and DNA to computers and the world of genetic programming.Later chapters define what genetic programming is and what strategies it uses to let computers program themselves. The authors also examine the state of the art of genetic programming and define what problems need to be solved before it can be widely adopted. The amount of research in this section will mostly benefit specialists in the genetic-programming field.A later chapter on applications that use genetic programming offers dozens of papers, with applications of this approach from a wide variety of fields, including biology, industry, and computers (and some impressive technologies such as robotics and data mining). Though the authors exaggerate somewhat on how "real world" these applications are, it's clear that genetic programming will continue to improve and find its way into more areas of computing--with even more productive results. Though coding by humans is safe for the foreseeable future, genetic programming offers an appealing alternative to some kinds of problems. --Richard V. DraganPressestimmen"The authors have performed a remarkable double service with this excellent book on genetic programming. First, they give an up-to-date view of the rapidly growing field of automatic creation of computer programs by means of evolution and, second, they bring together their own innovative and formidable work on evolution of assembly language machine code and linear genomes."--John R. Koza"[The authors] have performed a remarkable double service with this excellent book on genetic programming. First, they give an up-to-date view of the rapidly growing field of automatic creation of computer programs by means of evolution and, second, they bring together their own innovative and formidable work on evolution of assembly language machine code and linear genomes."--John R. Koza-[The authors] have performed a remarkable double service with this excellent book on

genetic programming. First, they give an up-to-date view of the rapidly growing field of automatic creation of computer programs by means of evolution and, second, they bring together their own innovative and formidable work on evolution of assembly language machine code and linear genomes.---John R. Koza