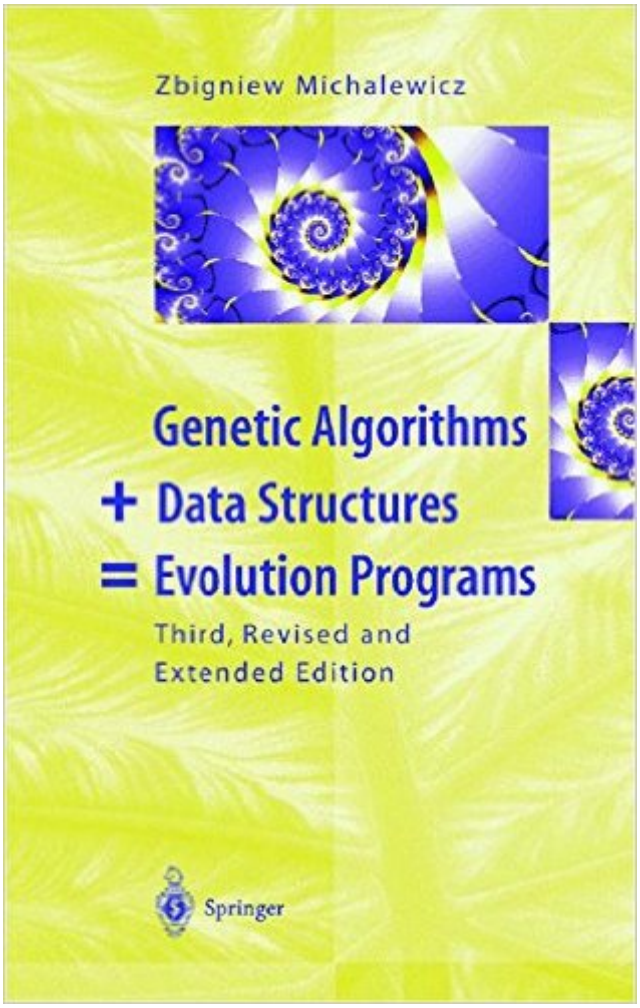
Genetic Algorithms + Data Structures = Evolution Programs



Synopsis

Genetic algorithms are founded upon the principle of evolution, i.e., survival of the fittest. Hence evolution programming techniques, based on genetic algorithms, are applicable to many hard optimization problems, such as optimization of functions with linear and nonlinear constraints, the traveling salesman problem, and problems of scheduling, partitioning, and control. The importance of these techniques is still growing, since evolution programs are parallel in nature, and parallelism is one of the most promising directions in computer science.The book is self-contained and the only prerequisite is basic undergraduate mathematics. This third edition has been substantially revised and extended by three new chapters and by additional appendices containing working material to cover recent developments and a change in the perception of evolutionary computation.

Book Information

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Customer Reviews

It is not a textbook for genetic algorithm but is useful to those whose research domain is numerical optimization which is widely appeared in engineering area. It is the only book describing a float-number based GA whose importance has not been noticed by many researchers. I think it is a natural way for problem of engineering optimization.

I used this book as the primary text for a graduate course on evolutionary computation. I was looking for a book that provided a good introduction to genetic algorithms and provided a wide cross-section of related algorithms and applications. At the time, this was the only book of its type

on the market (other than Goldberg's book). The first couple of chapters (What is a GA, Why Does a GA Work) were pretty good, but then the strong focus of the remainder of the book on numerical optimization resulted in a loss of interest on the part of my students. Since then, I have had to re-organize the class to provide topics such as genetic programming, evolving neural systems, co-evolution, and artificial life -- none of which are covered adequately (if at all) in this book.

I agree with the previous reviewer: books should be clear and get to the point. Forget about this one. Get Michalewicz and Fogel's "How to solve it" book. It is MUCH better than this one in all levels: it is better written and the content is more authorative and helpful to novices and experts.This book is supposed to be a textbook. Maybe that's why it sells so well. I guess I am lucky I didn't have to take a class with this thing.

I saw this book once with one of my buddies,and read the first chapter,,,it was after looking up the first chapter i decided to buy it...I have read some other books on this topic,and since i was kinda in rush for a project which needed GA,i found no other book which explains the concepts and procedures, this straightforward and "right to the point".As far as writing this book goes, "Michalewicz" has done a really really great job.Go for it guys!!!cheers,Amir

This man needs to invest in a good editor. Many times I'd read through half a page or so, stop to think about it and then rephrase it into one or two sentences. Blobs of math appear to be thrown in with little justification, and the book isn't improved by them.But this book is not only unreadable, it's also not useful. It's more an overview of the area than anything else; it doesn't give adequate information about genetic programming or neural networks. It skims many areas in a close to incomprehensible fashion without covering any in what I would consider to be good detail.Finally, I'm not dim. I have a PhD myself and am used to ploughing through gibberish. But save your money and don't buy this book (Unless you have a wobbly table that needs fixing).

Note that a genetic algorithm is different from a genetic algorithm(Holland is responsible for the latter, Michalwicz for the former). The text is meant as an introduction to successful strategies for implementing EA's. As such, the text doesn't really cover any other areas(save a brief introduction to genetic algorithms at the beginning). Good as a primer and textbook. Not meant as a handbook of applications.

Genetic Algorithms + Data Structures = Evolution Programs The Design of Innovation: Lessons from and for Competent Genetic Algorithms (Genetic Algorithms and Evolutionary Computation) Analytics: Data Science, Data Analysis and Predictive Analytics for Business (Algorithms, Business Intelligence, Statistical Analysis, Decision Analysis, Business Analytics, Data Mining, Big Data) Genetic Algorithms and Genetic Programming in Computational Finance Data Structures and Algorithms Made Easy in Java: Data Structure and Algorithmic Puzzles, Second Edition Swift: Programming, Master's Handbook; A TRUE Beginner's Guide! Problem Solving, Code, Data Science, Data Structures & Algorithms (Code like a PRO in ... engineering, r programming, iOS development) Ruby: Programming, Master's Handbook: A TRUE Beginner's Guide! Problem Solving, Code, Data Science, Data Structures & Algorithms (Code like a PRO in ... web design, tech, perl, ajax, swift, python,) Java Programming: Master's Handbook: A TRUE Beginner's Guide! Problem Solving, Code, Data Science, Data Structures & Algorithms (Code like a PRO in ... web design, tech, perl, ajax, swift, python) Php: Programming, Master's Handbook: A TRUE Beginner's Guide! Problem Solving, Code, Data Science, Data Structures & Algorithms (Code like a PRO in ... engineering, r programming, iOS development,) Python: Programming, Master's Handbook; A TRUE Beginner's Guide! Problem Solving, Code, Data Science, Data Structures & Algorithms (Code like a PRO ... engineering, r programming, iOS development) Data Structures and Algorithms Made Easy: Data Structure and Algorithmic Puzzles, Second Edition Data Analytics: What Every Business Must Know About Big Data And Data Science (Data Analytics for Business, Predictive Analysis, Big Data) Data Analytics: Practical Data Analysis and Statistical Guide to Transform and Evolve Any Business. Leveraging the Power of Data Analytics, Data ... (Hacking Freedom and Data Driven) (Volume 2) Data Structures, Algorithms, And Applications In C++ Data Structures and Algorithms Using C# AI Algorithms, Data Structures, and Idioms in Prolog, Lisp, and Java Data Structures, Algorithms, and Software Principles in C Learning JavaScript Data Structures and Algorithms - Second Edition Java: Artificial Intelligence; Made Easy, w/ Java Programming; Learn to Create your * Problem Solving * Algorithms! TODAY! w/ Machine Learning & Data Structures (Artificial Intelligence Series) Javascript Artificial Intelligence: Made Easy, w/ Essential Programming; Create your * Problem Solving * Algorithms! TODAY! w/ Machine Learning & Data Structures (Artificial Intelligence Series)