



## The 0-1 Knapsack Problem

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Condition: New. Publisher/Verlag: VDM Verlag Dr. Müller | A solution by Genetic Algorithm | Optimization algorithms are increasingly popular in engineering design activities like maximizing or minimizing a certain goal, primarily because of the availability and affordability of high speed computers. There is a large class of interesting problems (e.g., optimization) for which no reasonably fast algorithms have been developed. For the last three decades genetic algorithm is being used in structural optimization, function optimization, database query optimization and parametric optimization and so on. The 0-1 knapsack problem is an NP-Hard problem and due to its high computational complexity, algorithms such as backtracking, dynamic programming for exact solution of the 0-1 knapsack problem are not suitable for most real-time decision making applications, such as admission control for interactive multimedia systems or service level agreement management in telecommunication network. The book presents a genetic algorithmic approach for finding near optimal solutions of 0-1 knapsack problem, with reduced computational complexity and is suitable for real-time applications. The analysis should help in the improvement of optimization algorithms and useful in communication fields. | Format: Paperback | Language/Sprache: english | 92 pp.



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