Understanding And Using Linear Programming (Universitext)
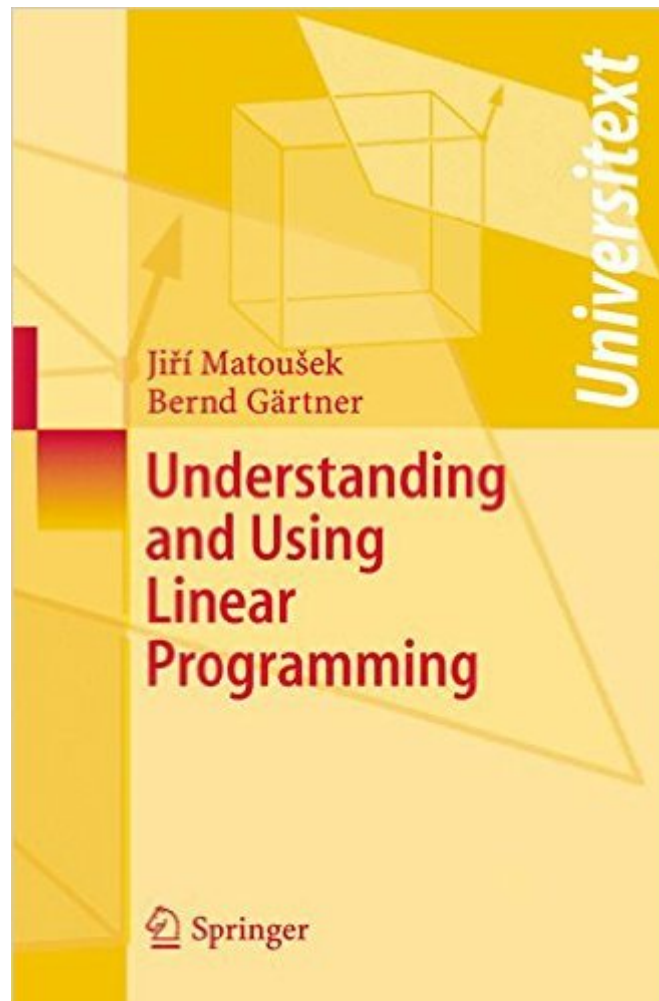
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Understanding and Using Linear Programming

Universitext

Springer

Synopsis

The book is an introductory textbook mainly for students of computer science and mathematics. Our guiding phrase is "what every theoretical computer scientist should know about linear programming". A major focus is on applications of linear programming, both in practice and in theory. The book is concise, but at the same time, the main results are covered with complete proofs and in sufficient detail, ready for presentation in class. The book does not require more prerequisites than basic linear algebra, which is summarized in an appendix. One of its main goals is to help the reader to see linear programming "behind the scenes".

Book Information

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Customer Reviews

This is one of the greatest linear programming books I've ever read.It sets out to teach linear and it only does that. It does not go into any neigbour topics and confuse the reader.It is also picky about the proofs it provides, only the necessary ones.Finally, I also liked the way they introduced the simplex tableus. They completely avoided the more usual tableau look. Instead they only show the equations which form the tableau. This makes simplex much more understandable.All in all, great book for new grad students in industrial engineering, computer science, etc...

This is a great book. The text is very clear and precise, and the pictures are very well chosen.The authors avoid getting into technical details of algorithms and of some more difficult proofs, so the

book is suitable as a first introduction to optimization (there is just enough information in the book to actually understand what optimization is about, what linear programming is, and how some of the algorithms work).There is good coverage of the simplex method, and a not so deep coverage of ellipsoid and interior point methods.The writing style is absolutely refreshing. The authors have a fine sense of humor, so it's hard to get bored reading this book.In short, it's a perfect book for a first course in optimization.

This book was one of the recommended texts to accompany the "Linear and Discrete Optimization" course on Coursera, one of the MOOCs (Massively Open Online Courses). The MOOCs on Coursera have beginning and ending dates, video lectures by professors at major universities, quizzes, assignments and midterm and final exams. They're free; you don't receive university credit, but wow, is it great to hear these educators share their knowledge.The preview of this book looked so interesting that I ordered it and signed up for the above-mentioned course (which begins February 8th). The book is just as interesting as the preview suggested. I've already begun to read it, and I'm looking forward to the start of the class. Check out the class that accompanies this book on: [...].This is an area of mathematics I never thought I'd find interesting -- but the book convinced me it's worth studying.

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