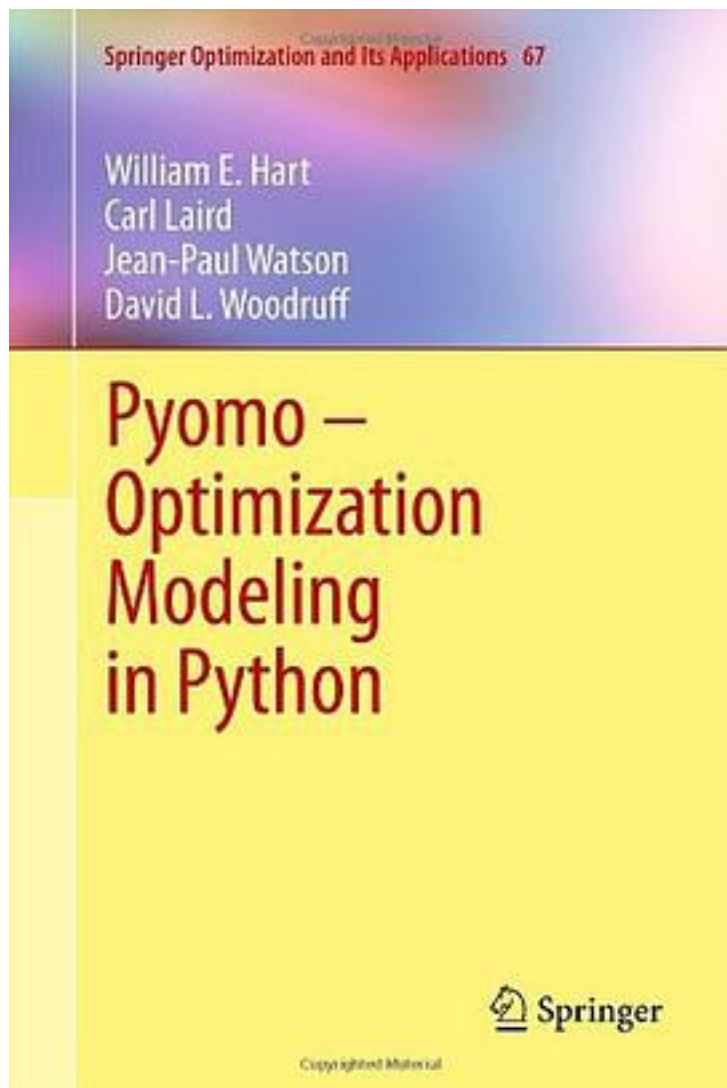# Pyomo - Optimization Modeling in Python

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著者:William E. Hart

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This book provides a complete and comprehensive reference/guide to Pyomo (Python Optimization Modeling Objects) for both beginning and advanced modelers, including students at the undergraduate and graduate levels, academic researchers, and practitioners. The text illustrates the breadth of the modeling and analysis capabilities that are supported by the software and support of complex real-world applications. Pyomo is an open source software package for formulating and solving large-scale optimization and operations research problems. The text begins with a tutorial on simple linear and integer programming models. A detailed reference of Pyomo's modeling components is illustrated with extensive examples, including a discussion of how to load data from data sources like spreadsheets and databases. Chapters describing advanced modeling capabilities for nonlinear and stochastic optimization are also included. The Pyomo software provides familiar modeling features within Python, a powerful dynamic programming language that has a very clear, readable syntax and intuitive object orientation. "Pyomo" includes Python classes for defining sparse sets, parameters, and variables, which can be used to formulate algebraic expressions that define objectives and constraints. Moreover, "Pyomo" can be used from a command-line interface and within Python's interactive command environment, which makes it easy to create Pyomo models, apply a variety of optimizers, and examine solutions. The software supports a different modeling approach than commercial AML (Algebraic Modeling Languages) tools, and is designed for flexibility, extensibility, portability, and maintainability but also maintains the central ideas in modern AMLs.

作者介绍:

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标签

python

优化

数据分析

数据科学

评论

很易读，能帮助快速上手建模。但内容的丰富程度、深度不足以支撑它成为一本精装书，稍微复杂点的场景就需要去查官方文档。个人认为至少应该再多介绍一些常见solver。目前仅简略讲到ipopt、neos，起码应该介绍到coin-or相关solver。另外，AMPL接口、solver选项传入等等也没有涉及。

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书评

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