• Gives comprehensive details on how to recognize convex optimization problems in a wide variety of settings

• Provides a broad range of practical algorithms for solving real problems

• Contains hundreds of worked examples and homework exercises with solutions available for instructors

Convex Optimization
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Convex optimization problems arise frequently in many different fields. This book provides a comprehensive introduction to the subject, covering the theory, many applications and examples, and numerical methods. The book begins with the basic elements of convex sets and functions, describes various classes of convex optimization problems, and then treats duality theory. The second part covers a wide variety of applications, in estimation, approximation, statistics, computational geometry, and other areas. The last part of the book presents numerical methods for convex optimization problems, moving from basic methods for unconstrained problems to interior-point methods. The focus of this book is on recognising and formulating convex optimization problems, and then solving them efficiently. It contains many worked examples and homework exercises and will appeal to students, researchers and practitioners in fields such as engineering, computer science, mathematics, finance and economics.

Contents