



# Optimization Techniques in Statistics (Statistical Modeling and Decision Science)

By Jagdish S. Rustagi

Download now

Read Online 

## Optimization Techniques in Statistics (Statistical Modeling and Decision Science) By Jagdish S. Rustagi

Statistics help guide us to optimal decisions under uncertainty. A large variety of statistical problems are essentially solutions to optimization problems. The mathematical techniques of optimization are fundamental to statistical theory and practice. In this book, Jagdish Rustagi provides full-spectrum coverage of these methods, ranging from classical optimization and Lagrange multipliers, to numerical techniques using gradients or direct search, to linear, nonlinear, and dynamic programming using the Kuhn-Tucker conditions or the Pontryagin maximal principle. Variational methods and optimization in function spaces are also discussed, as are stochastic optimization in simulation, including annealing methods.

The text features numerous applications, including:

Finding maximum likelihood estimates

Markov decision processes

Programming methods used to optimize monitoring of patients in hospitals

Derivation of the Neyman-Pearson lemma

The search for optimal designs

Simulation of a steel mill

Suitable as both a reference and a text, this book will be of interest to advanced undergraduate or beginning graduate students in statistics, operations research, management and engineering sciences, and related fields. Most of the material can be covered in one semester by students with a basic background in probability and statistics.

### Key Features

- \* Covers optimization from traditional methods to recent developments such as Karmarkar's algorithm and simulated annealing
  - \* Develops a wide range of statistical techniques in the unified context of optimization
  - \* Discusses applications such as optimizing monitoring of patients and simulating steel mill operations
  - \* Treats numerical methods and applications
- Includes exercises and references for each chapter
- \* Covers topics such as linear, nonlinear, and dynamic programming, variational

methods, and stochastic optimization

 [Download Optimization Techniques in Statistics \(Statistical ...pdf](#)

 [Read Online Optimization Techniques in Statistics \(Statistic ...pdf](#)

# Optimization Techniques in Statistics (Statistical Modeling and Decision Science)

*By Jagdish S. Rustagi*

## **Optimization Techniques in Statistics (Statistical Modeling and Decision Science) By Jagdish S. Rustagi**

Statistics help guide us to optimal decisions under uncertainty. A large variety of statistical problems are essentially solutions to optimization problems. The mathematical techniques of optimization are fundamental to statistical theory and practice. In this book, Jagdish Rustagi provides full-spectrum coverage of these methods, ranging from classical optimization and Lagrange multipliers, to numerical techniques using gradients or direct search, to linear, nonlinear, and dynamic programming using the Kuhn-Tucker conditions or the Pontryagin maximal principle. Variational methods and optimization in function spaces are also discussed, as are stochastic optimization in simulation, including annealing methods.

The text features numerous applications, including:

Finding maximum likelihood estimates

Markov decision processes

Programming methods used to optimize monitoring of patients in hospitals

Derivation of the Neyman-Pearson lemma

The search for optimal designs

Simulation of a steel mill

Suitable as both a reference and a text, this book will be of interest to advanced undergraduate or beginning graduate students in statistics, operations research, management and engineering sciences, and related fields. Most of the material can be covered in one semester by students with a basic background in probability and statistics.

### Key Features

- \* Covers optimization from traditional methods to recent developments such as Karmarkars algorithm and simulated annealing
- \* Develops a wide range of statistical techniques in the unified context of optimization
- \* Discusses applications such as optimizing monitoring of patients and simulating steel mill operations
- \* Treats numerical methods and applications

Includes exercises and references for each chapter

- \* Covers topics such as linear, nonlinear, and dynamic programming, variational methods, and stochastic optimization

## **Optimization Techniques in Statistics (Statistical Modeling and Decision Science) By Jagdish S. Rustagi Bibliography**

- Rank: #6090717 in Books
- Published on: 1994-05-09
- Original language: English
- Number of items: 1
- Dimensions: .89" h x 6.20" w x 9.29" l,
- Binding: Hardcover

• 359 pages

 [Download Optimization Techniques in Statistics \(Statistical ...pdf](#)

 [Read Online Optimization Techniques in Statistics \(Statistic ...pdf](#)

## **Download and Read Free Online Optimization Techniques in Statistics (Statistical Modeling and Decision Science) By Jagdish S. Rustagi**

---

### **Editorial Review**

Review

It is well written, nicely organized, with a high degree of mathematical accuracy...all coming together to make the material easily digestible.

--Stergios B. Fotopoulos, Washington State University

I enjoyed reading this book and strongly recommend it for its contribution to the field of statistics. I believe that it will have a positive impact on the content of optimization courses taught in both management and mathematical graduate programs.

--Stergios B. Fotopoulos, Washington State University

### **Users Review**

**From reader reviews:**

**Nancy Dabney:**

Book is to be different for each and every grade. Book for children right up until adult are different content. To be sure that book is very important normally. The book Optimization Techniques in Statistics (Statistical Modeling and Decision Science) had been making you to know about other knowledge and of course you can take more information. It doesn't matter what advantages for you. The e-book Optimization Techniques in Statistics (Statistical Modeling and Decision Science) is not only giving you more new information but also to become your friend when you truly feel bored. You can spend your spend time to read your book. Try to make relationship with all the book Optimization Techniques in Statistics (Statistical Modeling and Decision Science). You never truly feel lose out for everything if you read some books.

**Billie Luster:**

People live in this new moment of lifestyle always try and and must have the spare time or they will get great deal of stress from both way of life and work. So , when we ask do people have free time, we will say absolutely yes. People is human not a robot. Then we request again, what kind of activity do you have when the spare time coming to you of course your answer will unlimited right. Then do you ever try this one, reading books. It can be your alternative in spending your spare time, often the book you have read is definitely Optimization Techniques in Statistics (Statistical Modeling and Decision Science).

**Margaret Conley:**

The book untitled Optimization Techniques in Statistics (Statistical Modeling and Decision Science) contain a lot of information on the item. The writer explains the woman idea with easy approach. The language is very simple to implement all the people, so do not worry, you can easy to read the item. The book was compiled by famous author. The author will bring you in the new period of literary works. You can read this book because you can please read on your smart phone, or gadget, so you can read the book in anywhere and anytime. If you want to buy the e-book, you can start their official web-site in addition to order it. Have a

nice learn.

**Ronald Tanaka:**

A lot of book has printed but it is different. You can get it by online on social media. You can choose the best book for you, science, witty, novel, or whatever through searching from it. It is referred to as of book Optimization Techniques in Statistics (Statistical Modeling and Decision Science). You can contribute your knowledge by it. Without departing the printed book, it could add your knowledge and make an individual happier to read. It is most critical that, you must aware about book. It can bring you from one location to other place.

**Download and Read Online Optimization Techniques in Statistics  
(Statistical Modeling and Decision Science) By Jagdish S. Rustagi  
#JBHA7QYTOK8**

## **Read Optimization Techniques in Statistics (Statistical Modeling and Decision Science) By Jagdish S. Rustagi for online ebook**

Optimization Techniques in Statistics (Statistical Modeling and Decision Science) By Jagdish S. Rustagi  
Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Optimization Techniques in Statistics (Statistical Modeling and Decision Science) By Jagdish S. Rustagi books to read online.

## **Online Optimization Techniques in Statistics (Statistical Modeling and Decision Science) By Jagdish S. Rustagi ebook PDF download**

### **Optimization Techniques in Statistics (Statistical Modeling and Decision Science) By Jagdish S. Rustagi Doc**

**Optimization Techniques in Statistics (Statistical Modeling and Decision Science) By Jagdish S. Rustagi Mobipocket**

**Optimization Techniques in Statistics (Statistical Modeling and Decision Science) By Jagdish S. Rustagi EPub**