

Discover the Ultimate Guide to the Handbook Of The Shapley Value Chapman Hallcrc In Operations Research

Are you interested in operations research? Do you want to explore the fascinating concept of the Shapley value? Look no further! In this comprehensive guide, we will delve into the Handbook Of The Shapley Value Chapman Hallcrc In Operations Research, providing you with all the essential information you need to become an expert.

What is the Shapley Value?

The Shapley value, named after Lloyd Shapley, is a concept in cooperative game theory. It quantifies the contribution of each player in a cooperative game. It provides a fair division of the profits among the players based on their individual contributions.

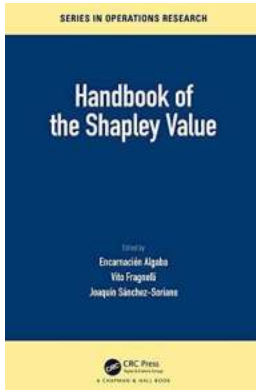
Understanding the Handbook

The Handbook Of The Shapley Value Chapman Hallcrc In Operations Research is a definitive work on the subject, written by renowned experts in the field. It covers various aspects of the Shapley value, including its history, mathematical foundations, applications in different industries, and computational algorithms.

Handbook of the Shapley Value (Chapman & Hall/CRC Series in Operations Research)

by Martin Crook (1st Edition, Kindle Edition)

★★★★☆ 4.7 out of 5



Language : English
File size : 12526 KB
Screen Reader : Supported
Print length : 606 pages
X-Ray for textbooks : Enabled



Key Topics Covered in the Handbook

- The origin and development of the Shapley value
- Mathematical foundations and properties of the Shapley value
- Applications of the Shapley value in economics
- Implementing the Shapley value in cooperative games
- Computational algorithms for calculating the Shapley value
- Challenges and extensions of the Shapley value

Why is the Handbook Important?

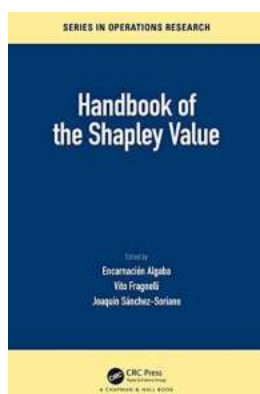
The Handbook Of The Shapley Value Chapman Hallcrc In Operations Research serves as a valuable resource for researchers, practitioners, and students interested in cooperative game theory and operations research. It provides a comprehensive overview of the Shapley value, making it easier for individuals to understand and apply this concept in real-world scenarios.

Real-World Applications of the Shapley Value

The Shapley value has found diverse applications in various fields:

- Economics: The Shapley value helps allocate resources fairly and efficiently in economic models.
- Game Theory: It is used to analyze the power and influence of individual players in strategic interactions.
- Political Science: The Shapley value aids in understanding the importance of individual voters in political elections.
- Social Networks: It helps analyze the influence of different individuals in spreading information or behavior in social networks.
- Supply Chain Management: The Shapley value assists in fair distribution of profits and costs among supply chain partners.

The Handbook Of The Shapley Value Chapman Hall/crc In Operations Research is a must-read for anyone interested in game theory, cooperative games, or operations research. By exploring the origins, properties, and applications of the Shapley value, this handbook provides the necessary tools and knowledge to apply this concept effectively in various industries. Start your journey into the world of the Shapley value today!



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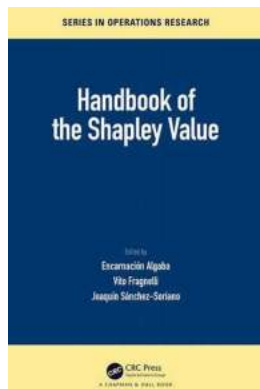
Handbook of the Shapley Value contains 24 chapters and a foreword written by Alvin E. Roth, who was awarded the Nobel Memorial Prize in Economic Sciences jointly with Lloyd Shapley in 2012. The purpose of the book is to highlight a range of relevant insights into the Shapley value. Every chapter has been written to honor Lloyd Shapley, who introduced this fascinating value in 1953.

The first chapter, by William Thomson, places the Shapley value in the broader context of the theory of cooperative games, and briefly introduces each of the individual contributions to the volume. This is followed by a further contribution from the editors of the volume, which serves to introduce the more significant features of the Shapley value. The rest of the chapters in the book deal with different theoretical or applied aspects inspired by this interesting value and have been contributed specifically for this volume by leading experts in the area of Game Theory.

Chapters 3 through to 10 are more focused on theoretical aspects of the Shapley value, Chapters 11 to 15 are related to both theoretical and applied areas. Finally, from Chapter 16 to Chapter 24, more attention is paid to applications of the Shapley value to different problems encountered across a diverse range of fields. As expressed by William Thomson in the to the book, "The chapters contribute to the subject in several dimensions: Mathematical foundations; axiomatic foundations; computations; applications to special classes of games; power indices; applications to enriched classes of games; applications to concretely specified allocation problems: an ever-widening range, mapping allocation problems into games or implementation."

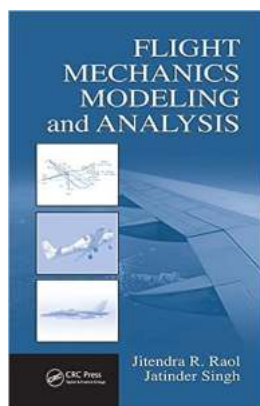
Nowadays, the Shapley value continues to be as appealing as when it was first introduced in 1953, or perhaps even more so now that its potential is supported by the quantity and quality of the available results. This volume collects a large

amount of work that definitively demonstrates that the Shapley value provides answers and solutions to a wide variety of problems.



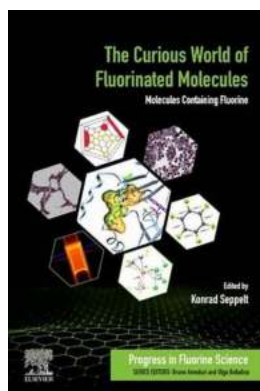
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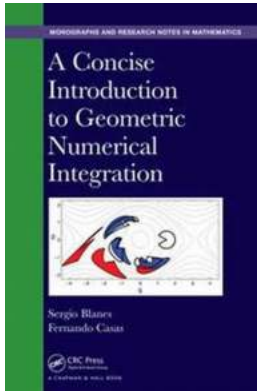
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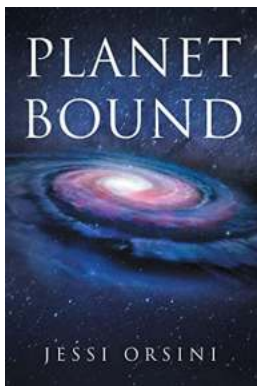
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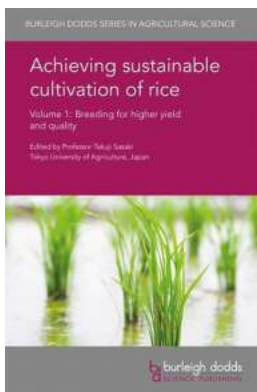
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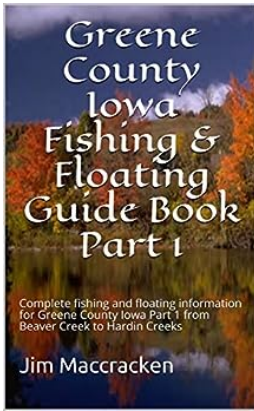
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