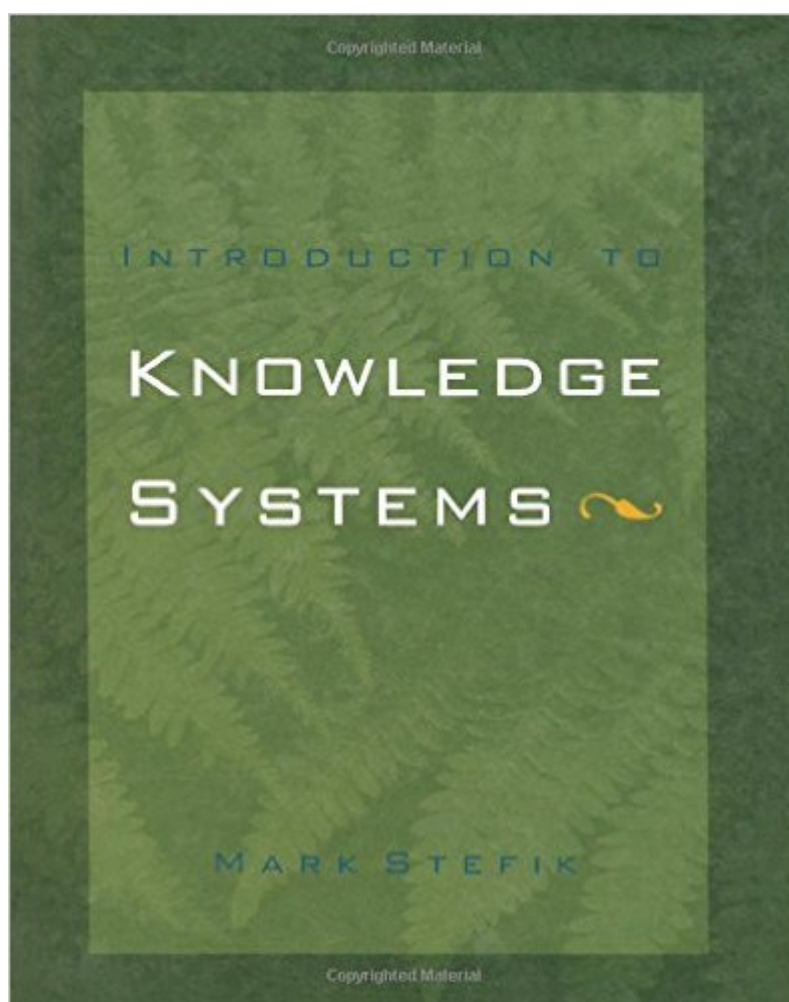# Introduction To Knowledge Systems

Synopsis

Focusing on fundamental scientific and engineering issues, this book communicates the principles of building and using knowledge systems from the conceptual standpoint as well as the practical. Previous treatments of knowledge systems have focused on applications within a particular field, or on symbol-level representations, such as the use of frame and rule representations. Introduction to Knowledge Systems presents fundamentals of symbol-level representations including representations for time, space, uncertainty, and vagueness. It also compares the knowledge-level organizations for three common knowledge-intensive tasks: classification, configuration, and diagnosis. The art of building knowledge systems incorporates computer science theory, programming practice, and psychology. The scope of this book is appropriately broad, ranging from the design of hierarchical search algorithms to techniques for acquiring the task-specific knowledge needed for successful applications. Each chapter proceeds from concepts to applications, and closes with a brief tour of current research topics and open issues. Readers will come away with a solid foundation that will enable them to create real-world knowledge systems using whatever tools and programming languages are most current and appropriate.

Book Information

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Customer Reviews

A bit dated. Got it for Knowledge Based AI class at Georgia Tech. If you're taking the class, you can skip buying this book. Often with class texts, the required reading material is a small portion of the book, but I then find the remainder interesting enough to read on its own. Not the case with this

book. After reading the recommended sections I skimmed the rest and found it uninteresting.Information is circa 1995, which is an eternity away in AI technology. Reminded me of expert systems.

This book is very helpful in learning about the concept of knowledge-based systems. I must caution though, that if you are familiar with artificial intelligence there is a lot of material in this book that will act as a review.When purchasing this book, I was hoping for material on developing a knowledge-based system from scratch. While it does an outstanding job in teaching you the fundamentals (clear through diagnosis and troubleshooting), it seemed to leave me slightly incomplete and in search for additional material on the subject.It's not a all-in-one book, but this is book is definitely one to consider.

The author gives an exceptional and in-depth view of the topics of search, reasoning with time, space and uncertainty and also on classification. It should make a good text at the graduate-level. The book also gives excellent exercises and open- research problems. A true classic in this area. A must on the desk of every AI practitioner

The book covers many aspects of knowledge based systems including knowledge representation, problem solving by search,the marriage between knowledge and software engineering(which is a rising issue at present), temporal and spatial reasoning, uncertainy modeling and many others. The book ends with a chapter on troubleshooting, which attracts many practitioners.The book is rich with good contents. Many examples and illustrations are used to introduce the concepts. I liked chapter 6 very much for its beautiful presentation on probabilistic networks.Chapter 4 and 5 on Reasoning about time and Reasoning about space respectively are also interesting. Readers of different background will find the book extremely useful for its beautiful writing style.

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