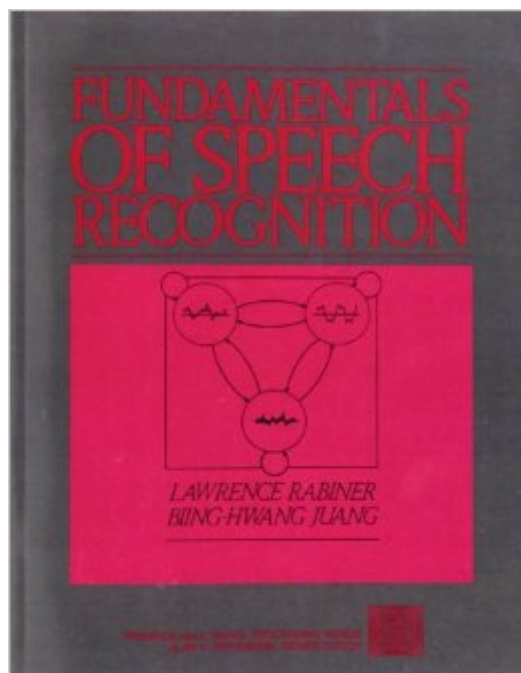The book was found

Fundamentals Of Speech Recognition

Synopsis

Provides a theoretically sound, technically accurate, and complete description of the basic knowledge and ideas that constitute a modern system for speech recognition by machine.   Covers production, perception, and acoustic-phonetic characterization of the speech signal; signal processing and analysis methods for speech recognition; pattern comparison techniques; speech recognition system design and implementation; theory and implementation of hidden Markov models; speech recognition based on connected word models; large vocabulary continuous speech recognition; and task- oriented application of automatic speech recognition.   For practicing engineers, scientists, linguists, and programmers interested in speech recognition.

Book Information

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Average Customer Review: 4.5 out of 5 starsÂ Â See all reviewsÂ (13 customer reviews)

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Customer Reviews

This book is a comprehensive and excellent introduction to the ever-expanding field of Automatic Speech Recognition. Starting with models of speech production, speech characterization, methods of analysis (transforms etc), the authors go onto discuss pattern comparison, hidden Markov models (HMMs), and design and implementation of speech recognition systems, right from isolated word recognition to large vocabulary continuous speech recognition systems. Neural networks and their use in speech recognition is also presented, though somewhat briefly. Rabiner was the author of the first widely-read tutorial on HMMs, so naturally the presentation of HMMs is one of the strong points of this textbook. The theory is developed in detail, but in an easy to follow fashion, starting with the

very basics and with plenty of helpful examples. The implementation is discussed at great length as well, starting with the simplest of tasks and progressing to the state-of-the-art (circa 1993). That isn't to say that HMMs are the only good part of this book - indeed, practically every topic, whether it be perception, transforms, vector quantizationor dynamic programming, is presented with great clarity. This book really is easy to learn from, with numerous examples and illustrations. The field of speech recognition is inherently multi-disciplinary in nature, drawing upon various areas of study, including Physics, Physiology, Acoustics, Signal Processing and Computer Science, to name but a few. The authors do a great job of explaining all these facets, as well as the mathematics that is an essential tool.

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