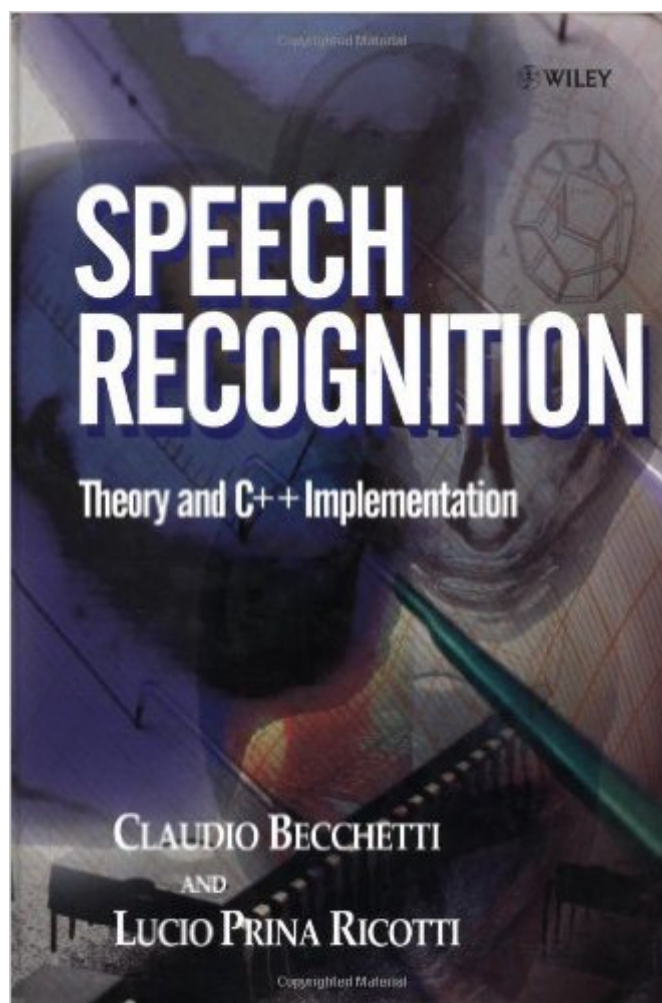


The book was found

Speech Recognition: Theory And C++ Implementation



Synopsis

Automatic Speech Recognition (ASR) is the enabling technology for hands-free dictation and voice-triggered computer menus. It is becoming increasingly prevalent in environments such as private telephone exchanges and real-time information services. Speech Recognition introduces the principles of ASR systems, including the theory and implementation issues behind multi-speaker continuous speech recognition. Focusing on the algorithms employed in commercial and laboratory systems, the treatment enables the reader to devise practical solutions for ASR system problems. It addresses in detail C++ programming techniques used to develop ASR applications, thus offering skills that will prove useful in any large C++ based software project. Possible extensions of the well-established ASR technology are highlighted, based on "Hidden Markov Models" applied to fields such as modelling and prediction of econometric series. Features include: * Accompanying website containing all C++ source code of a complete laboratory multi-speaker continuous-speech ASR system (e.g. Initialisation, Training, Recognition, Evaluation, etc.)

www.wiley.com/go/becchetti_speech * Detailed theoretical, mathematical and technical explanations of ASR * A practical account of the functioning of ASR A crucial source of information for researchers, developers and project managers involved with ASR systems, Speech Recognition is also structured for use by students of digital signal processing, speech recognition and C++ programming techniques.

Book Information

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Customer Reviews

This book is very useful for persons willing to implement a speech recognition system based on hidden Markov models (HMM). The authors provide the source code of a complete system. Each chapter is divided in two parts: theory and implementation. Some implementation issues are of interest only for those who develop code in C. I think this implementation-oriented book is a good complement for a theory-oriented book, as "Fundamentals of Speech Recog." by Rabiner and Juang. I really couldn't understand an appendix about "Econometric", that mainly discusses HREH (?) and just mentions HMM in the very end. The references related to this appendix were mixed with the ones related to speech, with an annoying result.

I appreciated the balance between theory and implementation in the book. Also the content covers the most important topics. It is unfortunate that the book contains numerous typo's and confusing choices of symbols. The errors are often right in the most critical places too. The explanation of the theory of HMM's for example. 0 and 1 are chosen to represent both white and black balls and 2 different urns all in the same diagram. When trying to sort out which is which the reader will be further confused by blatant errors where a 0 should be a 1. I am afraid many new readers will find frustration on the theory sections. The choice of C++ and inclusion of a CD-ROM with full source is a nice touch however. Just be aware that the code is not geared for real-time recognition.

This book is composed of two parts, theory and implementation. if you only read its theoretical part, it is ok with many details missing. it is not clearly written. however, if you study its C++ code, you would get all you want on recognition system. I spent 3-8 hours everyday for 4 months going through its code line by line. The C++ code (30,000 lines in total) is very well written but without comments. Many times, I need to figure out things not written in the book. I once spent 1 week on 200 lines of code. However, After 4 months, I truely understand the system. You will find this book useful only if you really spend time covering its C++ code line by line. If you want theory only, goto read other books. I rate 2 star for its theory and 5 star for its implementation. [website]

For studying the speech recognition subject this is not the right book to buy, It is hard to understand the theory using this book. The c++ code works but there should be more remarks to make it easier to the readers to get along. There is a free toolkit to download from the Internet named HTK that contains full C code and a free book to the same theory so actually it is a waste of money to buy this book !!!

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