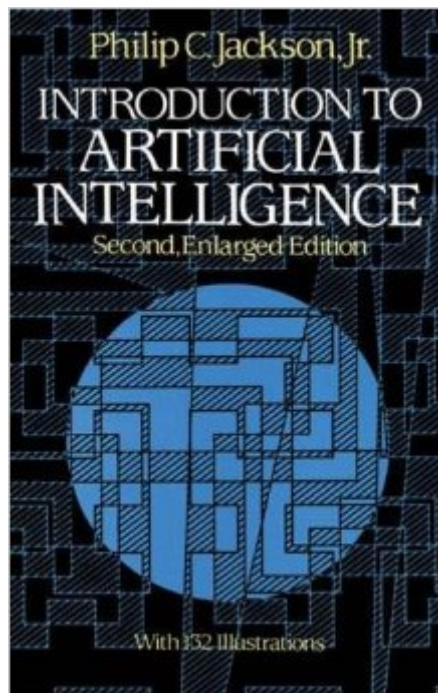# Introduction To Artificial Intelligence: Second, Enlarged Edition (Dover Books On Mathematics)

Synopsis

Can computers think? Can they use reason to develop their own concepts, solve complex problems, play games, understand our languages? This comprehensive survey of artificial intelligence â • the study of how computers can be made to act intelligently â • explores these and other fascinating questions. Introduction to Artificial Intelligence presents an introduction to the science of reasoning processes in computers, and the research approaches and results of the past two decades. You'll find lucid, easy-to-read coverage of problem-solving methods, representation and models, game playing, automated understanding of natural languages, heuristic search theory, robot systems, heuristic scene analysis and specific artificial-intelligence accomplishments. Related subjects are also included: predicate-calculus theorem proving, machine architecture, psychological simulation, automatic programming, novel software techniques, industrial automation and much more.A supplementary section updates the original book with major research from the decade 1974-1984. Abundant illustrations, diagrams and photographs enhance the text, and challenging practice exercises at the end of each chapter test the student's grasp of each subject.The combination of introductory and advanced material makes Introduction to Artificial Intelligence ideal for both the layman and the student of mathematics and computer science. For anyone interested in the nature of thought, it will inspire visions of what computer technology might produce tomorrow.

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Customer Reviews

I actually picked up this book at the discount bin at a local bookstore. I had always been interested

in A.I research, and this deal was irresistable. However, I think this book is worth alot more, and provides more insight into the field than many of the current popular books on the subject. This book basically goes into A.I research and leaves alot of the philosophical issues at a minimum. Basically you can look at this as a real text book about the subject of A.I. By my expirience, it isn't easy to find outside of the popular science market. The topics that this book covers is extensive. The first few chapters go into subjects like Game Theory, and the problem-state models of A.I. He also gives a very extensive overview of the contruction of the human brain and its paralells to finite state machines. What I found particularly interesting was his coverage of many Turning Machines. Later, the author takes you into more rigorous examples dealing with problems of Theorem proving. And definitely one of the most interesting chapters was his coverage of natural languages. I have owned this book for about 2 years, and although I do not read it faithfully everyday, I do find myself reading this book extensively for periods of 2-3 months. The material will demand a great deal of work on the behalf of the reader. As this book deals with many abstract concepts in mathematics that can be confusing to the untrained reader. Admitedly, i had to stop reading this book for a little while and take 4 months to get to a functional level of linear algebra, before I could fully comprehend the tranformation he showed chapter 6. This is a must buy for anyone who wants to get their feet wet in the field of A.I. And with such a small price tag, you really cant lose.

I was searching for a book that will introduce me to artificial intelligence concepts; and although this book seemed old (1985), I bought it because of it's low price. Then when I opened it for the first time I was amazed how great it is. It worths a whole lot more. I soon found out that some concepts are for ever, and no matter how old they will be current in the future.

A great introduction to Turing Machines and basics to other computational theories. Other books, speaking about Turing Machines, are either delves nothing about the technical details or is too mathematical at the start, which makes for bad substitutes for Turing's original writings. Granted there are not much on the German Enigma machines and their encoding and deciphering of messages. This being said about what may enhance the field of artificial intelligence since intelligence may be highly employed in the code breaking of Enigma, it is part of lost history and I doubt that anyone has any files on this aspect to describe something with some originality such as Alan Turing. Nevertheless, this book is both excellently approachable even if one has basic Biology or how computers' working parts represent non-human intelligence can be simulated. I was able to understand most the material in the first couple of chapters upon first reading, but upon second

reading, I was able to find this book very interesting because there were material that I thought that I knew upon first reading, the second time around reveals to me that I don't know them that well to have depth in learning from this highly deserved classic.

I guess this isn't the best book for newbies. I picked this up because I would like to incorporate AI/Machine Learning into my Thesis. My school does not offer Artificial Intelligence on a semester nor yearly basis (it's on rotation, which means I won't be able to take the course until 2017 - after i've already graduated). I will admit that I have not actually finished the entire book, but I think I have covered enough of the material to make an opinion.In my opinion, the book reads like a literature review on AI. This is great for those who want to push their careers in AI development further, because with any science knowing what has been done is important to actually contribute to the totality of your field's knowledge. My primary qualm with this book is that it is almost tedious to read. I have been in my typical reading chair engaged in the first few pages, but after a while, I become somnolent. I think this book is best for a reference and not meant to be read cover to cover (Unless you just truly want to be an erudite computer scientist or artificial intelligence developer).I understand that you have to start somewhere, but I don't think this is the start most people want or need. It's incredibly dull, the contentions are outdated and some have already been explored and implemented in the real world, and, once again, it's boring! An old advisor of mine used to say to me "if it's not pleasurable and beneficial for you to read, then you shouldn't read it." I think this axiom is very true. Reading a book that's dull can completely kill your interest in a topic, just like taking a course with an uninspiring professor can kill your interest (all of this is negated of course, if you are passionate about the subject).

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