

Book reviews

Simply logical—intelligent reasoning by example by Peter Flach, John Wiley, Chichester, 1994, pp 240, £19.95, ISBN 0471 94152 2.

This book is neatly divided into three sections, each comprising three chapters. It is not clear whether this was by chance or design; the partitioning is quite natural since each section is self-contained.

The whole of the first section is an introductory text on computational logic, some of its theoretical bases and its realization in the Prolog programming language. The middle section looks at some specific AI representation and reasoning techniques, namely searching through directed graphs, from a logic programming perspective. The final section deals with two contemporary issues in logic programming research; and interpretation of natural language; and reasoning with incomplete information. The subject matter of most chapters is covered at some pace, with hardly a moment for the reader to pause and catch breath.

For a practitioner who had forgotten the theoretical basis of logic programming, chapter 2 was an excellent reminder, if somewhat daunting. However, the techniques introduced in the middle section and the research areas of the final section will interest only an elite collection of practitioners.

The Prolog programming techniques advocated in chapter 3 of the introductory section are rather trivial. Worse still, several of the following Prolog programs are badly constructed with many inefficiencies. This book is definitely not for the commercial/industrial Prolog practitioner.

For the informed researcher, much of the material in the first two sections is well known and understood. The research material of most interest appears in the final section, especially the discussions of abduction and induction of logical explanations.

For a mere 40 pages of contemporary material, though, the book is quite expensive. Far better, and probably more fruitful, to search out the original research papers upon which those final chapters are based.

The feeling throughout this book is that it was written from a set of course notes. As such, it is primarily for undergraduate or masters students taking a broad range of courses in logic programming and AI.

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Text generation—using discourse strategies and focus constraints to generate natural language text by Kathleen R. McKeown, Cambridge University Press, 1992, pp 246, £13.95, ISBN 0-521-43802-0.

Text generation, or text production, is not the study of what academics do to justify their existence, but rather an area of language engineering that has been waiting to happen for quite some time. Text production is usually motivated by the goal of generating responses to a query system, often some expert system, in the form of several interconnected sentences. It is the other side of the coin to text interpretation, which is currently enjoying a great deal of attention, and although some aspects of the production and interpretation processes are shared, they are different enough to have quite distinct lineages in the literature.

A frequent scenario for a text production system would be that the user has made a query (possibly related to earlier queries), and some processing has resulted in a solution being found—