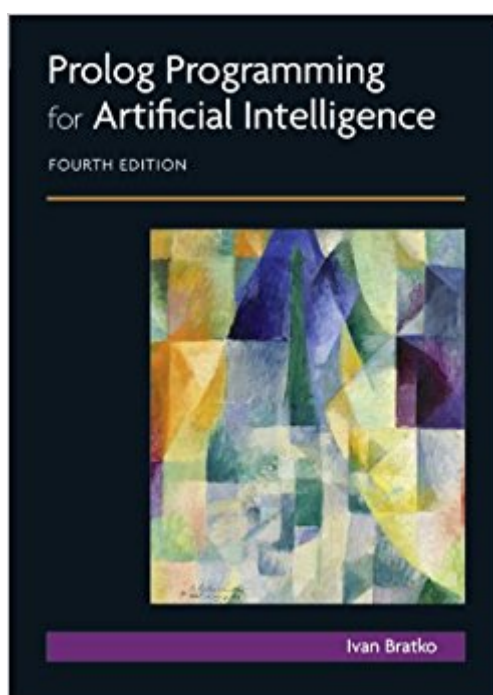


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# Prolog Programming For Artificial Intelligence (4th Edition) (International Computer Science Series)



## Synopsis

This best-selling guide to Prolog and Artificial Intelligence, which has been updated to include key developments in the field, concentrates on the art of using the basic mechanisms of Prolog to solve interesting AI problems. Combined approach to Prolog and AI allows flexibility for learning and teaching. Provides a thorough representation of AI, emphasizing practical techniques and Prolog implementations. Prolog programs for use in projects and research are available for download from the companion website <http://www.pearsoned.co.uk/bratko>

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## Customer Reviews

The fourth edition of this best-selling guide to Prolog and Artificial Intelligence has been updated to include key developments in the field while retaining its lucid approach to these topics. Divided into two parts, the first part of the book introduces the programming language Prolog, while the second part teaches Artificial Intelligence using Prolog as a tool for the implementation of AI techniques. Prolog has its roots in logic; however the main aim of this book is to teach Prolog as a practical programming tool. This text therefore concentrates on the art of using the basic mechanisms of Prolog to solve interesting problems. The fourth edition has been fully revised and extended to provide an even greater range of applications, which further enhance its value as a self-contained guide to Prolog, AI or AI Programming for students and professional programmers alike. Features:

- Combined approach to Prolog and AI allows flexibility for learning and teaching
- Provides a

thorough representation of AI, emphasizing practical techniques and Prolog implementations. Prolog programs in the book are available for download from the book's companion website at [www.pearsoned.co.uk/bratko](http://www.pearsoned.co.uk/bratko). Lecturers visiting the website have access to PowerPoint slides.

New for this edition:

- Coverage of constraint logic programming (CLP) is extended and now introduced earlier in the book, in the Prolog part.
- Most of the existing chapters on AI techniques have been systematically improved and updated.
- Coverage of planning methods is deepened in a new chapter that includes implementations of partial order planning and the GRAPHPLAN approach.
- The treatment of search methods now includes an RTA\* program (real-time A\* search).
- The chapter on meta-programming (now chapter 25) is extended by the addition of sections on abductive reasoning, query-the-user interpreter, and a sketch of CLP interpreter, all implemented as Prolog meta-interpreters.
- Programming examples are refreshed throughout the book, making them more interesting and practical. One such example introduces semantic reasoning with the well-known lexical database WordNet®.

Author: Professor Ivan Bratko leads the AI Lab in the Faculty of Computer and Information Science at the University of Ljubljana. He has taught Prolog worldwide, as well as applied Prolog in medical expert systems, robot programming, qualitative modelling and computer chess research.

Professor Ivan Bratko leads the AI Lab in the Faculty of Computer and Information Science at Ljubljana University. He has taught Prolog world-wide as well as applying Prolog in medical expert systems, robot programming, qualitative modelling and computer chess research.

Sorry, but I studied the famous MIT Prolog book back in the day, and I completed a significant Prolog project at university. I can still barely fight my way through this book. Maybe it's just me, but I suspect the approach is not didactically sound. Worth giving it a chance if this is exactly your area of study, but otherwise I'd look elsewhere. I'm sorry, I so understand the work that goes into authoring a book. Again, maybe it's just me.

Having just read a book on automated reasoning which covered topics in logic, such as unification and resolution, I was very pleased with the prolog programming language, in that it takes concepts from logic, and uses them in ways that can be applied to a number of interesting areas of AI, such as NLP, planning, and expert systems. I thought Bratko succeeded in making this connection with logic, without burdening the reader with notation and concepts that are really not needed for writing or understanding prolog programs. The book also worked for me on the level of providing a good

introduction to the syntax and semantics of the language. The first 200 pages succeed to this end. Finally, the last 13 chapters can be summarized as representing an introduction to AI from a prolog perspective. On the positive side, he shows how to apply prolog to all of the modern, main streams of AI study. However, on the negative, the slant towards prolog in these chapters tends to oversimplify these disciplines. My impression of the language is that it seems good as a prototyping language, since it is declarative in nature, but from my experimentation (using SWI Prolog) I think I could write better implementations using c or java. In closing, Bratko's book represents a very good place to start learning prolog and the world of AI.

A new edition will be out soon, in 2010. This is an excellent book on Prolog \*and\* on AI. For example, chapter 19 is an introduction to inductive learning in first-order logic, an advanced topic rarely found in introductory books. The example program HYPER is a very powerful learner as compared to other "propositional" machine learning methods such as decision trees, neural networks, or support vector machines. I have ported HYPER to Lisp and am still exploring it. Prolog is not a very popular language nowadays, but basic knowledge of it is still essential to learning logic-based AI.

Though I have just started this book, I can tell that it is going to be amazing. I have been trying to find a good introduction to Prolog for some time now, and this is exactly what I had been looking for. Clear presentation, beautiful and complete editing work, easy to understand, and comprehensive. If you do want to use this book for A.I. though, and you either already understand Prolog or would rather work in lisp/python/etc. this book may be a bit much for you, either in terms of redundancy or over-saturation. However, if you can manage to slug through it (it is rather huge at 678 pgs), I think that anyone interested in A.I. or Prolog could find something helpful in this book. Overall, I am excited to work through this book, and I will probably update my review once I have done so.

I teach programming in Prolog and Artificial Intelligence in a Mexican University. This is an essential book for Prolog programming, excellent! A loving fourth edition 2012 from Ivan Bratko.

Professor Bratko has done a tremendous job of putting all the fundamental concepts of Prolog and its applications in various areas of AI. Although this book is focused on Prolog, the concepts that he has discussed are so fundamental that they can be implemented in other languages like Java as well. I recommend this book to everyone who wants to learn Prolog. I would also recommend the

readers to use a Prolog system to work out the examples and exercises as s/he goes through every chapter. A DEC10 Prolog system (like SICStus Prolog) would probably be the best companion for this book.

For a review of both Prolog and AI-based algorithms, this is the book to read! I learend Prolog AND AI from this in one semester, and it was my very last class bfore graduation. WE used Turbo Prolog and if you can find a copy, I'd recommend it.I've read reviews of this book that state Dr. BRatko is talking to peers or himself. I can't udnerstand it., The text was perfectly udnerstandable to me. And re-reading it, it still is. I plan to use the AI half of the book when writing my master's thesis next year.

A little old now and not great for beginners. I'd only recommend this if you have read other books and are looking at the history of prolog development.

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