Briefly Noted

An Introduction to Natural Language Processing through Prolog

Clive Matthews
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It may seem unusual for the author of a directly competing textbook (Covington 1994) to review this one—but in fact the competition is not head-on. My book introduces Prolog programmers to natural language, whereas this book introduces linguists to Prolog programming. As such, it helps solve the problem that there is no easy way for noncomputational linguists to get started in computing, and I may well use it in a course.

The book covers most of Prolog but only a small and central part of computational linguistics, namely parsing. The first few chapters are a conventional introduction to Prolog except that the examples are chosen to be of interest to linguists (e.g., databases listing what language is spoken where) and little background in formal logic is presumed. Knowledge representation is introduced slowly to keep students from getting lost.

The author demonstrates a sureness of touch derived, no doubt, from classroom experience. Compared to another competitor (Dougherty 1994), Matthews focuses more on Prolog and on parsing in general rather than a specific linguistic theory.

The only section that may go awry in the classroom is that on structured objects (p. 61 ff.), where Prolog terms like `language(uk)` and `queen(england)` are described as involving "functions." Students are likely to think they are functions that return values—that `queen(england)` evaluates to something identifying the Queen of England. It does not; it's just a data structure with queen in the functor position and england in the argument position. I find that I have to emphasize this in the classroom. Still, this is only a small part of an otherwise fine presentation, and it may be that Matthews can steer his students clear of this misunderstanding.

The latter part of the book introduces transition networks, DCGs, and (briefly) left-corner and chart parsing. The presentation is clear but, of course, is not a complete course in computational linguistics. (Neither is my book or Dougherty's.) But it is enough to get students started, and it is probably as much as those without previous programming experience can be expected to absorb in a single course.—*Michael A. Covington, University of Georgia*

References

Covington, Michael A. 1994. *Natural Language Processing for Prolog Programmers*. Prentice-Hall, Englewood Cliffs, NJ.

Dougherty, Ray C. 1994. *Natural Language Computing: An English Generative Grammar in Prolog*. Lawrence Erlbaum Associates, Hillsdale, NJ.

Recent Advances in Natural Language Processing

Ruslan Mitkov and Nicolas Nicolov (editors)
(University of Wolverhampton and University of Edinburgh)

"This volume brings together revised versions of a selection of papers presented at the First International Conference on 'Recent Advances in Natural Language Processing' (RANLP'95) held in Tzigov Chark, Bulgaria, 14-16 September 1995. ... From the 48 papers presented at RANLP'95 we have selected the [32] best for this book, in the hope that they reflect the most significant and promising trends (and successful results) in NLP."— *From the editors' preface*