1. Record Nr. UNINA9910298983303321

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Titolo	Language Processing with Perl and Prolog : Theories, Implementation, and Application / / by Pierre M. Nugues
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2014
ISBN	3-642-41464-8
Edizione	[2nd ed. 2014.]
Descrizione fisica	1 online resource (XXV, 662 p. 200 illus., 18 illus. in color.)
Collana	Cognitive Technologies, , 1611-2482
Disciplina	006.35
Soggetti	Natural language processing (Computer science) Computational linguistics Artificial intelligence User interfaces (Computer systems) Natural Language Processing (NLP) Computational Linguistics Artificial Intelligence User Interfaces and Human Computer Interaction
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di contenuto	An Overview of Language Processing -- Corpus Processing Tools -- Encoding and Annotation Scheme -- Topics in Information Theory and Machine Learning -- Counting Words -- Words, Parts of Speech, and Morphology -- Part-of-Speech Tagging Using Rules -- Part-of-Speech Tagging Using Statistical Techniques -- Phrase-Structure Grammars in Prolog -- Partial Parsing -- Syntactic Formalisms -- Constituent Parsing -- Dependency Parsing -- Semantics and Predicate Logic -- Lexical Semantics -- Discourse -- Dialogue -- Appendix A, An Introduction to Prolog Index References.
Sommario/riassunto	The areas of natural language processing and computational linguistics have continued to grow in recent years, driven by the demand to automatically process text and spoken data. With the processing power and techniques now available, research is scaling up from lab prototypes to real-world, proven applications. This book teaches the principles of natural language processing, first covering practical

linguistics issues such as encoding and annotation schemes, defining words, tokens and parts of speech, and morphology, as well as key concepts in machine learning, such as entropy, regression, and classification, which are used throughout the book. It then details the language-processing functions involved, including part-of-speech tagging using rules and stochastic techniques, using Prolog to write phase-structure grammars, syntactic formalisms and parsing techniques, semantics, predicate logic, and lexical semantics, and analysis of discourse and applications in dialogue systems. A key feature of the book is the author's hands-on approach throughout, with sample code in Prolog and Perl, extensive exercises, and a detailed introduction to Prolog. The reader is supported with a companion website that contains teaching slides, programs, and additional material. The second edition is a complete revision of the techniques exposed in the book to reflect advances in the field, the author redesigned or updated all the chapters, added two new ones, and considerably expanded the sections on machine-learning techniques.