

1. Record Nr.	UNINA9910806225103321
Titolo	Biomedical natural language processing / / Kevin Bretonnel Cohen, University of Colorado ; Dina Demner-Fushman, Lister Hill National Center for Biomedical Communication
Pubbl/distr/stampa	Amsterdam : , : J. Benjamins Publishing Company, , [2014] ©2014
ISBN	1-4619-5776-1 90-272-7106-2
Descrizione fisica	1 online resource (172 p.)
Collana	Natural Language Processing, , 1567-8202 ; ; volume 11
Altri autori (Persone)	CohenKevin Bretonnel Demner-FushmanDina
Disciplina	006.3/5
Soggetti	Computational linguistics - Statistical methods Natural language processing (Computer science) Biometry Medical statistics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	""Biomedical Natural Language Processing""; ""Editorial page ""; ""Title page ""; ""LCC data ""; ""Acknowledgments""; ""Table of contents""; ""List of figures""; ""1. Introduction to natural language processing""; ""1.1. Some definitions ""; ""1.1.1 Computational linguistics ""; ""1.1.2 Natural language processing ""; ""1.1.3 Text mining ""; ""1.1.4 Usage of these definitions in practice ""; ""1.2 Levels of document and linguistic structure and their relationship toA natural language processin""; ""1.2.1 Document structure ""; ""1.2.2 Sentences ""; ""1.2.3 Tokens "" ""1.2.4 Stems and lemmata """"1.2.5 Part of speech ""; ""1.2.6 Syntactic structure ""; ""1.2.7 Semantics ""; ""2. Historical background""; ""2.1 Early work in the medical domain ""; ""2.2 The emergence of the biological domain ""; ""2.3 Clinical text mining ""; ""2.4 Types of users of biomedical NLP systems ""; ""2.5 Resources and tools ""; ""US National Library of Medicine ""; ""MEDLINE database ""; ""Medical Subject Headings ""; ""PubMed ""; ""GENIA ""; ""PubMed Central International ""; ""2.6 Legal and ethical issues ""; ""2.7 Is biomedical natural language

processing effective? ""

""3. Named entity recognition""""3.1 Overview ""; ""3.2 The crucial role of named entity recognition in BioNLP tasks ""; ""3.3 Why gene names are the way they are ""; ""3.4 An example of a rule-based gene NER system: KeX/PROPER ""; ""3.5 An example of a statistical disease NER system ""; ""3.6 Evaluation ""; ""4. Relation extraction""; ""4.1

Introduction ""; ""4.1.1 Protein-protein interactions as an information extraction target ""; ""4.2 Binarity of most biomedical information extraction systems ""; ""4.3 Beyond simple binary relations ""; ""4.4 Rule-based systems ""

""4.4.1 Co-occurrence """"4.4.2 Example rule-based systems ""; ""4.4.3 Machine learning systems ""; ""4.5 Relations in clinical narrative ""; ""4.5.1 MedLEE ""; ""4.6 SemRep ""; ""4.6.1 NegEX ""; ""4.7 Evaluation ""; ""5. Information retrieval/document classification""; ""5.1 Background ""; ""5.1.1 Growth in the biomedical literature ""; ""5.1.2

PubMed/MEDLINE ""; ""5.2 Issues ""; ""5.3 A knowledge-based system that disambiguates gene names ""; ""5.4 A phrase-based search engine, with term and concept expansion andA probabilistic relevance rankin""; ""5.5 Full text ""

""5.6 Image and figure search """"5.7 Captions ""; ""5.7.1 Evaluation ""; ""6. Concept normalization"; ""6.1 Gene normalization ""; ""6.1.1 The BioCreative definition of the gene normalization task ""; ""6.2 Building a successful gene normalization system ""; ""6.2.1 Coordination and ranges ""; ""6.2.2 An example system ""; ""6.3 Normalization and extraction of clinically pertinent terms ""; ""6.3.1 MetaMap UMLS mapping tools ""; ""7. Ontologies and computational lexical semantics""; ""7.1 Unified Medical Language System (UMLS) ""; ""7.1.1 The Gene Ontology ""

""7.2 Recognizing ontology terms in text ""
