## Comparative experiments on learning information extrinteractions

Artificial Intelligence in Medicine 33, 139-155 DOI: 10.1016/j.artmed.2004.07.016

**Citation Report** 

#	Article	IF	CITATIONS
1	Collective information extraction with relational Markov networks. , 2004, , .		67
2	Extracting Protein-Protein Interaction Sentences by Applying Rough Set Data Analysis. Lecture Notes in Computer Science, 2004, , 780-785.	1.0	8
3	Integrating Text Chunking with Mixture Hidden Markov Models for Effective Biomedical Information Extraction. Lecture Notes in Computer Science, 2005, , 976-984.	1.0	9
4	High-recall protein entity recognition using a dictionary. Bioinformatics, 2005, 21, i266-i273.	1.8	27
5	Mining knowledge from text using information extraction. SIGKDD Explorations: Newsletter of the Special Interest Group (SIG) on Knowledge Discovery & Data Mining, 2005, 7, 3-10.	3.2	187
6	ProtChew: Automatic Extraction of Protein Names from Biomedical Literature. , 2005, , .		4
7	Semantic Annotation of Biomedical Literature Using Google. Lecture Notes in Computer Science, 2005, , 327-337.	1.0	7
8	Consolidating the set of known human protein-protein interactions in preparation for large-scale mapping of the human interactome. Genome Biology, 2005, 6, r40.	13.9	195
9	The relationship between Precision-Recall and ROC curves. , 2006, , .		3,279
10	Gleaner: Creating ensembles of first-order clauses to improve recall-precision curves. Machine Learning, 2006, 64, 231-261.	3.4	35
11	Argument-predicate distance as a filter for enhancing precision in extracting predications on the genetic etiology of disease. BMC Bioinformatics, 2006, 7, 291.	1.2	27
12	A graph-search framework for associating gene identifiers with documents. BMC Bioinformatics, 2006, 7, 440.	1.2	19
13	Finding the evidence for protein-protein interactions from PubMed abstracts. Bioinformatics, 2006, 22, e220-e226.	1.8	53
14	Corpus Refactoring: a Feasibility Study. Journal of Biomedical Discovery and Collaboration, 2007, 2, 4.	2.0	16
15	Analyzing Protein Interaction Networks. , 0, , 1121-1177.		5
16	Applications of Support Vector Machines in Chemistry. Reviews in Computational Chemistry, 2007, , 291-400.	1.5	261
17	Information Extraction. Foundations and Trends in Databases, 2007, 1, 261-377.	4.1	500
18	Relation extraction and the influence of automatic named-entity recognition. ACM Transactions on Speech and Language Processing, 2007, 5, 1-26.	0.9	29

ITATION REDO

#	Article	IF	CITATIONS
19	A Comparative Study of Methods for Transductive Transfer Learning. , 2007, , .		158
20	Stacked Graphical Models for Efficient Inference in Markov Random Fields. , 2007, , .		41
21	Integrative mining of traditional Chinese medicine literature and MEDLINE for functional gene networks. Artificial Intelligence in Medicine, 2007, 41, 87-104.	3.8	65
22	Kernelâ€based learning for biomedical relation extraction. Journal of the Association for Information Science and Technology, 2008, 59, 756-769.	2.6	43
23	Extraction of semantic biomedical relations from text using conditional random fields. BMC Bioinformatics, 2008, 9, 207.	1.2	164
24	OpenDMAP: An open source, ontology-driven concept analysis engine, with applications to capturing knowledge regarding protein transport, protein interactions and cell-type-specific gene expression. BMC Bioinformatics, 2008, 9, 78.	1.2	112
25	All-paths graph kernel for protein-protein interaction extraction with evaluation of cross-corpus learning. BMC Bioinformatics, 2008, 9, S2.	1.2	193
26	Mining clinical relationships from patient narratives. BMC Bioinformatics, 2008, 9, S3.	1.2	27
27	Comparative analysis of five protein-protein interaction corpora. BMC Bioinformatics, 2008, 9, S6.	1.2	149
28	Extracting interactions between proteins from the literature. Journal of Biomedical Informatics, 2008, 41, 393-407.	2.5	66
29	From Biomedical Literature to Knowledge: Mining Protein-Protein Interactions. Studies in Computational Intelligence, 2008, , 397-421.	0.7	2
30	An open-source framework for large-scale, flexible evaluation of biomedical text mining systems. Journal of Biomedical Discovery and Collaboration, 2008, 3, 1.	2.0	28
31	Kernel approaches for genic interaction extraction. Bioinformatics, 2008, 24, 118-126.	1.8	74
32	The role of syntactic features in protein interaction extraction. , 2008, , .		3
33	Exploitation of ontological resources for scientific literature analysis: Searching genes and related diseases. , 2009, 2009, 7073-8.		3
34	Evaluating contributions of natural language parsers to protein–protein interaction extraction. Bioinformatics, 2009, 25, 394-400.	1.8	131
35	High-performance gene name normalization with GENO. Bioinformatics, 2009, 25, 815-821.	1.8	146
36	A realistic assessment of methods for extracting gene/protein interactions from free text. BMC Bioinformatics, 2009, 10, 233.	1.2	53

ARTICLE IF CITATIONS # Construction of an annotated corpus to support biomedical information extraction. BMC 37 1.2 73 Bioinformatics, 2009, 10, 349. Linguistic feature analysis for protein interaction extraction. BMC Bioinformatics, 2009, 10, 374. 1.2 Investigating heterogeneous protein annotations toward cross-corpora utilization. BMC 39 1.2 14 Bioinformatics, 2009, 10, 403. HypertenGene: extracting key hypertension genes from biomedical literature with position and automatically-generated template features. BMC Bioinformatics, 2009, 10, S9. Proteinâ€"protein interaction extraction by leveraging multiple kernels and parsers. International 41 104 1.6 Journal of Medical Informatics, 2009, 78, e39-e46. Two learning approaches for protein name extraction. Journal of Biomedical Informatics, 2009, 42, 2.5 1046-1055. Uncertainty sampling-based active learning for protein–protein interaction extraction from 43 4.4 12 biomedical literature. Expert Systems With Applications, 2009, 36, 10344-10350. Interaction networks: From protein functions to drug discovery. A review. Pathologie Et Biologie, 44 101 2009, 57, 324-333. Learning from Imbalanced Data. IEEE Transactions on Knowledge and Data Engineering, 2009, 21, 45 4.0 5,717 1263-1284. Relationship extraction from biomedical literature using Maximum Entropy based on rich features. 2010,,. Combining syntactic information and domain-specific lexical patterns to extract drug-drug 47 5 interactions from biomedical texts., 2010,,. New Challenges for Biological Text-Mining in the Next Decade. Journal of Computer Science and Technology, 2010, 25, 169-179. Event extraction for systems biology by text mining the literature. Trends in Biotechnology, 2010, 28, 49 4.9 160 381-390. Learning an enriched representation from unlabeled data for protein-protein interaction extraction. 1.2 24 BMC Bioinformatics, 2010, 11, S7. BioPPISVMExtractor: A protein–protein interaction extractor for biomedical literature using SVM 51 2.543 and rich feature sets. Journal of Biomedical Informatics, 2010, 43, 88-96. Measuring prediction capacity of individual verbs for the identification of protein interactions. Journal of Biomedical Informatics, 2010, 43, 200-207. Sentence identification of biological interactions using PATRICIA tree generated patterns and genetic 53 2.1 2 algorithm optimized parameters. Data and Knowledge Engineering, 2010, 69, 137-152. From Experimental Approaches to Computational Techniques: A Review on the Prediction of 54 Protein-Protein Interactions. Advances in Artificial Intelligence, 2010, 2010, 1-15.

#	Article	IF	CITATIONS
55	Evaluation of linguistic features useful in extraction of interactions from PubMed; Application to annotating known, high-throughput and predicted interactions in I2D. Bioinformatics, 2010, 26, 111-119.	1.8	63
56	Multi-class Relationship Extraction from Biomedical Literature Using Maximum Entropy. , 2010, , .		0
57	Ranking SVM for multiple kernels output combination in protein-protein interaction extraction from biomedical literature. , 2010, , .		0
58	Efficient Extraction of Protein-Protein Interactions from Full-Text Articles. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2010, 7, 481-494.	1.9	28
59	A Comprehensive Benchmark of Kernel Methods to Extract Protein–Protein Interactions from Literature. PLoS Computational Biology, 2010, 6, e1000837.	1.5	124
60	Deciphering the Code for Retroviral Integration Target Site Selection. PLoS Computational Biology, 2010, 6, e1001008.	1.5	41
61	Biomarker information extraction tool (BIET) development using natural language processing and machine learning. , 2010, , .		4
62	Extracting Protein Interactions from Text with the Unified AkaneRE Event Extraction System. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2010, 7, 442-453.	1.9	31
63	A Framework for Semisupervised Feature Generation and Its Applications in Biomedical Literature Mining. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2011, 8, 294-307.	1.9	19
64	Protein-Protein Interaction extraction based on ensemble kernel model and active learning strategy. , 2011, , .		2
65	Protein-Protein Interactions Extraction from Biomedical Literatures. , 2011, , .		2
66	Protein interaction detection in sentences via Gaussian Processes: a preliminary evaluation. International Journal of Data Mining and Bioinformatics, 2011, 5, 52.	0.1	7
67	SYNTACTIC SIMPLIFICATION AND SEMANTIC ENRICHMENT-TRIMMING DEPENDENCY GRAPHS FOR EVENT EXTRACTION. Computational Intelligence, 2011, 27, 610-644.	2.1	13
68	Constructing a semantic predication gold standard from the biomedical literature. BMC Bioinformatics, 2011, 12, 486.	1.2	50
69	Protein interaction sentence detection using multiple semantic kernels. Journal of Biomedical Semantics, 2011, 2, 1.	0.9	40
70	Using a shallow linguistic kernel for drug–drug interaction extraction. Journal of Biomedical Informatics, 2011, 44, 789-804.	2.5	106
71	Neighborhood hash graph kernel for protein–protein interaction extraction. Journal of Biomedical Informatics, 2011, 44, 1086-1092.	2.5	26
72	Multiple kernel learning in protein–protein interaction extraction from biomedical literature. Artificial Intelligence in Medicine, 2011, 51, 163-173.	3.8	42

#	Article	IF	CITATIONS
73	Enriching a biomedical event corpus with meta-knowledge annotation. BMC Bioinformatics, 2011, 12, 393.	1.2	57
74	PESCADOR, a web-based tool to assist text-mining of biointeractions extracted from PubMed queries. BMC Bioinformatics, 2011, 12, 435.	1.2	44
75	Combining active learning and semi-supervised learning techniques to extract protein interaction sentences. BMC Bioinformatics, 2011, 12, S4.	1.2	19
76	A linguistic rule-based approach to extract drug-drug interactions from pharmacological documents. BMC Bioinformatics, 2011, 12, S1.	1.2	59
77	Ranking support vector machine for multiple kernels output combination in protein–protein interaction extraction from biomedical literature. Proteomics, 2011, 11, 3811-3817.	1.3	3
78	A crime reports analysis system to identify related crimes. Journal of the Association for Information Science and Technology, 2011, 62, 1533-1547.	2.6	7
79	Mixture of logistic models and an ensemble approach for protein-protein interaction extraction. , 2011, , .		6
80	Algorithm for Population of Object Property Assertions Derived from Telecom Contact Centre Product Support Documentation. , 2011, , .		0
81	A study on relation extraction of historical figures based on bibliographic description. , 2011, , .		0
82	Datasets for generic relation extraction. Natural Language Engineering, 2012, 18, 21-59.	2.1	14
83	Automatic indexing of scanned documents: a layout-based approach. Proceedings of SPIE, 2012, , .	0.8	21
84	Tree kernel-based protein–protein interaction extraction from biomedical literature. Journal of Biomedical Informatics, 2012, 45, 535-543.	2.5	50
85	Hash Subgraph Pairwise Kernel for Protein-Protein Interaction Extraction. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2012, 9, 1190-1202.	1.9	17
86	A text-mining system for extracting metabolic reactions from full-text articles. BMC Bioinformatics, 2012, 13, 172.	1.2	32
87	Integrative Mining of Traditional Chinese Medicine Literature and MEDLINE for Functional Gene Networks. , 2012, , 27-52.		0
88	Context-Specific Protein Network Miner – An Online System for Exploring Context-Specific Protein Interaction Networks from the Literature. PLoS ONE, 2012, 7, e34480.	1.1	18
89	A Single Kernel-Based Approach to Extract Drug-Drug Interactions from Biomedical Literature. PLoS ONE, 2012, 7, e48901.	1.1	22
90	BioEve Search: A Novel Framework to Facilitate Interactive Literature Search. Advances in Bioinformatics, 2012, 2012, 1-12.	5.7	1

#	Article	IF	Citations
91	Harmonization of gene/protein annotations: towards a gold standard MEDLINE. Bioinformatics, 2012, 28, 1253-1261.	1.8	13
92	A detailed error analysis of 13 kernel methods for protein-protein interaction extraction. BMC Bioinformatics, 2013, 14, 12.	1.2	35
93	A modular framework for biomedical concept recognition. BMC Bioinformatics, 2013, 14, 281.	1.2	53
94	Biomedical named entity extraction: some issues of corpus compatibilities. SpringerPlus, 2013, 2, 601.	1.2	7
95	GMDH-based networks for intelligent intrusion detection. Engineering Applications of Artificial Intelligence, 2013, 26, 1731-1740.	4.3	41
96	A Survey on Region Extractors from Web Documents. IEEE Transactions on Knowledge and Data Engineering, 2013, 25, 1960-1981.	4.0	74
97	Identification of Age-Related Macular Degeneration Related Genes by Applying Shortest Path Algorithm in Protein-Protein Interaction Network. BioMed Research International, 2013, 2013, 1-8.	0.9	19
98	PPInterFinder—a mining tool for extracting causal relations on human proteins from literature. Database: the Journal of Biological Databases and Curation, 2013, 2013, bas052.	1.4	54
99	Semi-supervised Method for Extraction of Protein-Protein Interactions Using Hybrid Model. , 2013, , .		5
101	Approximate Subgraph Matching-Based Literature Mining for Biomedical Events and Relations. PLoS ONE, 2013, 8, e60954.	1.1	37
102	Text Mining. , 2014, , 51-66.		3
103	A Graphic Method for Identification of Novel Glioma Related Genes. BioMed Research International, 2014, 2014, 1-8.	0.9	5
104	Identifying Gastric Cancer Related Genes Using the Shortest Path Algorithm and Protein-Protein Interaction Network. BioMed Research International, 2014, 2014, 1-9.	0.9	8
105	A general instance representation architecture for protein-protein interaction extraction. , 2014, , .		3
106	Evaluation of residue–residue contact prediction in CASP10. Proteins: Structure, Function and Bioinformatics, 2014, 82, 138-153.	1.5	72
107	PPI-IRO: a two-stage method for protein-protein interaction extraction based on interaction relation ontology. International Journal of Data Mining and Bioinformatics, 2014, 10, 98.	0.1	0
108	Biomedical Relation Extraction: From Binary to Complex. Computational and Mathematical Methods in Medicine, 2014, 2014, 1-18.	0.7	63
109	Improving Kernel-based protein-protein interaction extraction by unsupervised word representation. , 2014, , .		0

7

#	Article	IF	CITATIONS
110	Assessment of protein disorder region predictions in CASP10. Proteins: Structure, Function and Bioinformatics, 2014, 82, 127-137.	1.5	140
111	Discovering novel protein–protein interactions by measuring the protein semantic similarity from the biomedical literature. Journal of Bioinformatics and Computational Biology, 2014, 12, 1442008.	0.3	4
112	Improving named entity recognition accuracy for gene and protein in biomedical text literature. International Journal of Data Mining and Bioinformatics, 2014, 10, 239.	0.1	1
113	Chapter 12: Text Mining in Biomedicine and Healthcare. Science, Engineering, and Biology Informatics, 2014, , 325-372.	0.1	3
114	Literature Mining and Ontology based Analysis of Host-Brucella Gene–Gene Interaction Network. Frontiers in Microbiology, 2015, 6, 1386.	1.5	9
115	Sequential pattern mining for discovering gene interactions and their contextual information from biomedical texts. Journal of Biomedical Semantics, 2015, 6, 27.	0.9	11
116	PKDE4J: Entity and relation extraction for public knowledge discovery. Journal of Biomedical Informatics, 2015, 57, 320-332.	2.5	88
117	Deep neural network based protein-protein interaction extraction from biomedical literature. , 2015, , .		1
118	HPIminer: A text mining system for building and visualizing human protein interaction networks and pathways. Journal of Biomedical Informatics, 2015, 54, 121-131.	2.5	18
119	Protein–protein interaction identification using a hybrid model. Artificial Intelligence in Medicine, 2015, 64, 185-193.	3.8	4
120	Tree Kernel-based Protein-Protein Interaction Extraction Considering both Modal Verb Phrases and Appositive Dependency Features. , 2015, , .		3
121	Network Pharmacology for Traditional Chinese Medicine Research: Methodologies and Applications. Chinese Herbal Medicines, 2015, 7, 18-26.	1.2	23
122	Support Vector Machine with Ensemble Tree Kernel for Relation Extraction. Computational Intelligence and Neuroscience, 2016, 2016, 1-9.	1.1	3
123	Multichannel Convolutional Neural Network for Biological Relation Extraction. BioMed Research International, 2016, 2016, 1-10.	0.9	100
124	MEG Connectivity and Power Detections with Minimum Norm Estimates Require Different Regularization Parameters. Computational Intelligence and Neuroscience, 2016, 2016, 1-11.	1.1	24
125	A Shortest Dependency Path Based Convolutional Neural Network for Protein-Protein Relation Extraction. BioMed Research International, 2016, 2016, 1-9.	0.9	44
126	Knowledge-Driven Event Extraction in Russian: Corpus-Based Linguistic Resources. Computational Intelligence and Neuroscience, 2016, 2016, 1-11.	1.1	16
127	BioC-compatible full-text passage detection for protein–protein interactions using extended dependency graph. Database: the Journal of Biological Databases and Curation, 2016, 2016, baw072.	1.4	6

#	Article	IF	CITATIONS
128	Filtered circular fingerprints improve either prediction or runtime performance while retaining interpretability. Journal of Cheminformatics, 2016, 8, 60.	2.8	20
129	A general protein-protein interaction extraction architecture based on word representation and feature selection. International Journal of Data Mining and Bioinformatics, 2016, 14, 276.	0.1	9
130	A protein-protein interaction extraction approach based on deep neural network. International Journal of Data Mining and Bioinformatics, 2016, 15, 145.	0.1	39
132	Protein-protein interaction extraction with feature selection by evaluating contribution levels of groups consisting of related features. BMC Bioinformatics, 2016, 17, 246.	1.2	12
133	Establishing a baseline for literature mining human genetic variants and their relationships to disease cohorts. BMC Medical Informatics and Decision Making, 2016, 16, 68.	1.5	13
134	PIPE: a protein–protein interaction passage extraction module for BioCreative challenge. Database: the Journal of Biological Databases and Curation, 2016, 2016, baw101.	1.4	22
135	BioCreative V BioC track overview: collaborative biocurator assistant task for BioGRID. Database: the Journal of Biological Databases and Curation, 2016, 2016, baw121.	1.4	28
136	Mining for novel tumor suppressor genes using a shortest path approach. Journal of Biomolecular Structure and Dynamics, 2016, 34, 664-675.	2.0	24
137	An Unsupervised Graph Based Continuous Word Representation Method for Biomedical Text Mining. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2016, 13, 634-642.	1.9	10
138	Bridging semantics and syntax with graph algorithms—state-of-the-art of extracting biomedical relations. Briefings in Bioinformatics, 2017, 18, 160-178.	3.2	60
139	Natural Language Interface to Relational Database (NLI-RDB) Through Object Relational Mapping (ORM). Advances in Intelligent Systems and Computing, 2017, , 449-464.	0.5	6
140	A hybrid protein-protein interaction triple extraction method for biomedical literature. , 2017, , .		4
141	A Review of Recent Advancement in Integrating Omics Data with Literature Mining towards Biomedical Discoveries. International Journal of Genomics, 2017, 2017, 1-10.	0.8	37
142	Distributed smoothed tree kernel for protein-protein interaction extraction from the biomedical literature. PLoS ONE, 2017, 12, e0187379.	1.1	18
143	Collaborative relation annotation and quality analysis in Markyt environment. Database: the Journal of Biological Databases and Curation, 2017, 2017, .	1.4	1
144	Support Vector Machine Active Learning Algorithms with Query-by-Committee Versus Closest-to-Hyperplane Selection. , 2018, , .		13
145	A multiâ€criteria decisionâ€making approach for geometric matching of areal objects. Transactions in GIS, 2018, 22, 269-287.	1.0	4
146	A hybrid model based on neural networks for biomedical relation extraction. Journal of Biomedical Informatics, 2018, 81, 83-92.	2.5	97

#	Article	IF	CITATIONS
147	Generalizing biomedical relation classification with neural adversarial domain adaptation. Bioinformatics, 2018, 34, 2973-2981.	1.8	30
148	Extraction of protein–protein interactions (PPIs) from the literature by deep convolutional neural neural networks with various feature embeddings. Journal of Information Science, 2018, 44, 60-73.	2.0	37
149	Big Data and Causality. Annals of Data Science, 2018, 5, 133-156.	1.7	34
150	A multi-task learning based approach to biomedical entity relation extraction. , 2018, , .		8
151	An Active Transfer Learning Framework for Protein-Protein Interaction Extraction. IEICE Transactions on Information and Systems, 2018, E101.D, 504-511.	0.4	0
152	Application of Public Knowledge Discovery Tool (PKDE4J) to Represent Biomedical Scientific Knowledge. Frontiers in Research Metrics and Analytics, 2018, 3, .	0.9	7
153	Flow adaptation in serious games for health. , 2018, , .		12
154	Chemical–gene relation extraction using recursive neural network. Database: the Journal of Biological Databases and Curation, 2018, 2018, .	1.4	53
155	New advances in extracting and learning from protein–protein interactions within unstructured biomedical text data. Emerging Topics in Life Sciences, 2019, 3, 357-369.	1.1	1
156	Deep Residual Convolutional Neural Network for Protein-Protein Interaction Extraction. IEEE Access, 2019, 7, 89354-89365.	2.6	26
157	Using distant supervision to augment manually annotated data for relation extraction. PLoS ONE, 2019, 14, e0216913.	1.1	17
158	BioWordVec,Âimproving biomedical word embeddings with subword information and MeSH. Scientific Data, 2019, 6, 52.	2.4	268
159	Best Precision–Recall Confidence Threshold and F-Measure to Determine Quality of Camel Meat by Support Vector Regression Based Electronic Nose. International Journal of Food Engineering, 2019, 15,	0.7	1
160	A two-stage deep learning approach for extracting entities and relationships from medical texts. Journal of Biomedical Informatics, 2019, 99, 103285.	2.5	38
161	Identifying Protein-Protein Interaction Using Tree LSTM and Structured Attention. , 2019, , .		16
162	Augmenting biologging with supervised machine learning to study <i>in situ</i> behavior of the medusa <i>Chrysaora fuscescens</i> . Journal of Experimental Biology, 2019, 222, .	0.8	10
163	Improving neural protein-protein interaction extraction with knowledge selection. Computational Biology and Chemistry, 2019, 83, 107146.	1.1	4
164	Feature assisted stacked attentive shortest dependency path based Bi-LSTM model for protein–protein interaction. Knowledge-Based Systems, 2019, 166, 18-29.	4.0	52

#	Article	IF	CITATIONS
165	PPICurator: A Tool for Extracting Comprehensive Protein–Protein Interaction Information. Proteomics, 2019, 19, e1800291.	1.3	11
166	PPaxe: easy extraction of protein occurrence and interactions from the scientific literature. Bioinformatics, 2019, 35, 2523-2524.	1.8	2
167	Protein-Protein Interaction Identification Using a Similarity-Constrained Graph Model. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2019, 16, 607-616.	1.9	2
168	A span-graph neural model for overlapping entity relation extraction in biomedical texts. Bioinformatics, 2021, 37, 1581-1589.	1.8	20
169	Relation Extraction from Biomedical and Clinical Text: Unified Multitask Learning Framework. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2020, PP, 1-1.	1.9	19
170	Identification of most influential co-occurring gene suites for gastrointestinal cancer using biomedical literature mining and graph-based influence maximization. BMC Medical Informatics and Decision Making, 2020, 20, 208.	1.5	2
171	Named Entity Recognition and Relation Detection for Biomedical Information Extraction. Frontiers in Cell and Developmental Biology, 2020, 8, 673.	1.8	78
172	Broad-coverage biomedical relation extraction with SemRep. BMC Bioinformatics, 2020, 21, 188.	1.2	54
173	Data stream classification: a review. Iran Journal of Computer Science, 2020, 3, 239-260.	1.8	13
174	Constructing knowledge graphs and their biomedical applications. Computational and Structural Biotechnology Journal, 2020, 18, 1414-1428.	1.9	132
175	Biomedical named entity recognition and linking datasets: survey and our recent development. Briefings in Bioinformatics, 2020, 21, 2219-2238.	3.2	25
176	A Multi-View Deep Neural Network Model for Chemical-Disease Relation Extraction From Imbalanced Datasets. IEEE Journal of Biomedical and Health Informatics, 2020, 24, 3315-3325.	3.9	17
177	A Hybrid Deep Learning Model for Protein–Protein Interactions Extraction from Biomedical Literature. Applied Sciences (Switzerland), 2020, 10, 2690.	1.3	11
178	Recent advances in biomedical literature mining. Briefings in Bioinformatics, 2021, 22, .	3.2	59
179	Chinese medical relation extraction based on multi-hop self-attention mechanism. International Journal of Machine Learning and Cybernetics, 2021, 12, 355-363.	2.3	13
180	Distantly supervised biomedical relation extraction using piecewise attentive convolutional neural network and reinforcement learning. Journal of the American Medical Informatics Association: JAMIA, 2021, 28, 2571-2581.	2.2	8
181	BioPREP: Deep learning-based predicate classification with SemMedDB. Journal of Biomedical Informatics, 2021, 122, 103888.	2.5	5
182	Improving BERT Model Using Contrastive Learning for Biomedical Relation Extraction. , 2021, , .		11

ARTICLE IF CITATIONS # gProt: Annotating Protein Interactions Using Google and Gene Ontology. Lecture Notes in Computer 184 1.0 2 Šcience, 2005, , 1195-1203. Extracting Protein-Protein Interactions in Biomedical Literature Using an Existing Syntactic Parser. 1.0 Lecture Notes in Computer Science, 2006, , 78-90. 186 BioNLP Shared Task., 2013, , 138-141. 3 Mobile Speech and the Armed Services: Making a Case for Adding Siri-like Features to VAMTA (Voice-Activated Medical Tracking Application)., 2013, , 319-332. Corpus-Based Correlational Study of Terms and Quality in Business English Writing. Lecture Notes in 188 1.0 3 Computer Science, 2017, , 349-358. Learning Ensembles of First-Order Clauses for Recall-Precision Curves: A Case Study in Biomedical 189 1.0 Information Extraction. Lecture Notes in Computer Science, 2004, , 98-115. 190 Learning Relations from Biomedical Corpora Using Dependency Trees., 2006,, 61-80. 18 DEEPER: A Full Parsing Based Approach to Protein Relation Extraction. Lecture Notes in Computer 1.0 Science, 2008, , 36-47 Information Extraction as Link Prediction: Using Curated Citation Networks to Improve Gene 192 1.0 14 Detection. Lecture Notes in Computer Science, 2009, 5682, 541-550. Extraction of Genic Interactions with the Recursive Logical Theory of an Ontology. Lecture Notes in 1.0 Computer Science, 2010, , 549-563. Relation Extraction for Protein-protein Interactions Affected by Mutations., 2018,,. 196 4 An analysis on the entity annotations in biological corpora. F1000Research, 2014, 3, 96. 0.8 Prediction of Protein-Protein Interaction Sites by Random Forest Algorithm with mRMR and IFS. PLoS 198 1.1 92 ONE, 2012, 7, e43927. Integrating Semantic Information into Multiple Kernels for Protein-Protein Interaction Extraction from Biomedical Literatures. PLoS ONE, 2014, 9, e91898. 199 1.1 14 An Unsupervised Text Mining Method for Relation Extraction from Biomedical Literature. PLoS ONE, 200 1.1 63 2014, 9, e102039. Using Local Alignments for Relation Recognition. Journal of Artificial Intelligence Research, 0, 38, 1-48 An extended dependency graph for relation extraction in biomedical texts., 2015, , . 202 16 Deep learning for extracting protein-protein interactions from biomedical literature., 2017, , .

#	Article	IF	CITATIONS
204	Biomedical Event Extraction using Abstract Meaning Representation. , 2017, , .		36
205	Computational Prediction of Protein–Protein Interaction Networks: Algorithms and Resources. Current Genomics, 2013, 14, 397-414.	0.7	119
206	Multi-way relation classification. , 2005, , .		39
207	Analysis of link grammar on biomedical dependency corpus targeted at protein-protein interactions. , 2004, , .		14
208	A graph kernel for protein-protein interaction extraction. , 2008, , .		44
209	Using automated feature optimisation to create an adaptable relation extraction system. , 2008, , .		3
210	Static relations. , 2009, , .		7
211	Identifying interaction sentences from biological literature using automatically extracted patterns. , 2009, , .		3
212	Using biomedical literature mining to consolidate the set of known human protein-protein interactions. , 2005, , .		7
213	IntEx. , 2005, , .		21
214	A rich feature vector for protein-protein interaction extraction from multiple corpora. , 2009, , .		53
216	Information Extraction. , 2008, , 1-33.		23
217	Diversity in the Interactions of Isoforms Linked to Clustered Transcripts: A Systematic Literature Analysis. Journal of Proteomics and Bioinformatics, 2011, 4, .	0.4	2
218	Statistical Relational Learning for Natural Language Information Extraction. , 2007, , 535-552.		5
219	Memorization vs. Generalization : Quantifying Data Leakage in NLP Performance Evaluation. , 2021, , .		12
221	Protein-protein interaction relation extraction based on multigranularity semantic fusion. Journal of Biomedical Informatics, 2021, 123, 103931.	2.5	8
222	KXtractor: An Effective Biomedical Information Extraction Technique Based on Mixture Hidden Markov Models. Lecture Notes in Computer Science, 2005, , 68-81.	1.0	2
223	Collaborative Curation of Data from Bio-medical Texts and Abstracts and Its integration. Lecture Notes in Computer Science, 2005, , 309-312.	1.0	5

#	Article	IF	CITATIONS
224	GeneTUC, GENIA and Google: Natural Language Understanding in Molecular Biology Literature. Lecture Notes in Computer Science, 2006, , 68-82.	1.0	0
225	Learning to Learn Biological Relations from a Small Training Set. Lecture Notes in Computer Science, 2009, , 418-429.	1.0	0
226	Integrated NLP evaluation system for pluggable evaluation metrics with extensive interoperable toolkit. , 2009, , .		3
227	Semi-supervised Prediction of Protein Interaction Sentences Exploiting Semantically Encoded Metrics. Lecture Notes in Computer Science, 2009, , 270-281.	1.0	0
228	Classification of Protein Interaction Sentences via Gaussian Processes. Lecture Notes in Computer Science, 2009, , 282-292.	1.0	1
231	Extracting Higher Order Relations From Biomedical Text. , 2014, , .		3
232	Decision Making from Confidence Measurement on the Reward Growth using Supervised Learning - A Study Intended for Large-scale Video Games. , 2016, , .		1
233	Feature Derivation for Exploitation of Distant Annotation via Pattern Induction against Dependency Parses. , 2016, , .		4
234	Mining Biomedical Entity from Literature Based on CRF. , 2016, , .		0
235	An Experimental Study on the Relation Extraction from Biomedical Abstracts using Machine Learning. Journal of the Korean Society for Library and Information Science, 2016, 50, 309-336.	0.0	1
236	A Study on the Semiautomatic Construction of Domain - Specific Relation Extraction Datasets from Biomedical Abstracts - Mainly Focusing on a Genic Interaction Dataset in Alzheimer's Disease Domain Han-guk Doseogwan·jeongbo Hakoeji, 2016, 47, 289-307.	0.0	0
237	Software Fault Prediction Process. SpringerBriefs in Computer Science, 2018, , 7-22.	0.2	0
238	Learning Relational Representations by Analogy using Hierarchical. , 2019, , .		4
239	Biomedical Relation Classification by single and multiple source domain adaptation. , 2019, , .		0
240	BioRelEx 1.0: Biological Relation Extraction Benchmark. , 2019, , .		9
244	Using a Large Margin Context-Aware Convolutional Neural Network to Automatically Extract Disease-Disease Association from Literature: Comparative Analytic Study. JMIR Medical Informatics, 2019, 7, e14502.	1.3	4
245	Investigation of BERT Model on Biomedical Relation Extraction Based on Revised Fine-tuning Mechanism. , 2020, , .		10
246	New Methods for Confusion Detection in Course Forums: Student, Teacher, and Machine. IEEE Transactions on Learning Technologies, 2021, 14, 665-679.	2.2	3

#	Article	IF	CITATIONS
247	BioSimplify: an open source sentence simplification engine to improve recall in automatic biomedical information extraction. AMIA Annual Symposium proceedings, 2010, 2010, 351-5.	0.2	9
248	Large-scale protein-protein post-translational modification extraction with distant supervision and confidence calibrated BioBERT. BMC Bioinformatics, 2022, 23, 4.	1.2	4
249	AMMU: A survey of transformer-based biomedical pretrained language models. Journal of Biomedical Informatics, 2022, 126, 103982.	2.5	84
250	Incorporation of gene ontology in identification of protein interactions from biomedical corpus: a multi-modal approach. Annals of Operations Research, 0, , 1.	2.6	0
251	Investigation of improving the pre-training and fine-tuning of BERT model for biomedical relation extraction. BMC Bioinformatics, 2022, 23, 120.	1.2	11
252	VCSEL: Prioritizing SNP-set by penalized variance component selection. Annals of Applied Statistics, 2021, 15, 1652-1672.	0.5	2
253	TL-BERT: A Novel Biomedical Relation Extraction Approach. , 2021, , .		0
256	PlantÂphenotype relationship corpus for biomedical relationships between plants and phenotypes. Scientific Data, 2022, 9, .	2.4	4
258	Diffusion Alignment Coefficient (DAC): A Novel Similarity Metric for Protein-Protein Interaction Network. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2023, 20, 894-903.	1.9	0
259	Extracting Biomolecular Interactions Using Semantic Parsing of Biomedical Text. Proceedings of the AAAI Conference on Artificial Intelligence, 2016, 30, .	3.6	8
260	BioRED: a rich biomedical relation extraction dataset. Briefings in Bioinformatics, 2022, 23, .	3.2	27
261	Semi-supervised Protein-Protein Interactions Extraction Method Based on Label Propagation and Sentence Embedding. Lecture Notes in Computer Science, 2022, , 113-121.	1.0	0
262	BertSRC: transformer-based semantic relation classification. BMC Medical Informatics and Decision Making, 2022, 22, .	1.5	5
263	Expanding a database-derived biomedical knowledge graph via multi-relation extraction from biomedical abstracts. BioData Mining, 2022, 15, .	2.2	3
264	Domain Adaptation: Challenges, Methods, Datasets, and Applications. IEEE Access, 2023, 11, 6973-7020.	2.6	12
265	Semi-Supervised Protein-Protein Interactions Extraction Method Based on Knowledge Distillation and Virtual Adversarial Training. , 2022, , .		1
266	Extracting Protein-Protein Interactions (PPIs) from Biomedical Literature using Attention-based Relational Context Information. , 2022, , .		2