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Computational Processing of the Portuguese Language  
Intelligent Natural Language Processing: Trends and Applications  
Question Answering for the Curated Web  
Emerging Research in Computing, Information, Communication and Applications  
Innovations in Bio-Inspired Computing and Applications  
Proceedings of the 2013 Workshop Series on Big Data Benchmarking, WBDB.cn,  
Xi'an, China, July16-17, 2013 and WBDB.us, San José, CA, USA, October 9-10, 2013,  
Revised Selected Papers  
Healthcare Data Analytics  
Big Data, Cloud and Applications  
Information Filtering and Retrieval  
Proceedings of MIE 2020  
Explainable AI in Healthcare and Medicine  
Proceedings of the Fourth ICICSE 2016  
13th International Conference, PROPOR 2018, Canela, Brazil, September 24-26,  
2018, Proceedings  
Machine Learning for Cyber Physical Systems  
Advances in Information Retrieval  
40th European Conference on IR Research, ECIR 2018, Grenoble, France, March  
26-29, 2018, Proceedings  
A Comprehensive Guide to Building Real-World NLP Systems  
Proceedings of the 17th World Congress on Medical and Health Informatics  
Advances in Information Retrieval  
Interdisciplinary Approaches to Spatial Optimization Issues  
Natural Language Processing with Python  
ICT4SD 2015 Volume 2  
Selected papers from the International Conference ML4CPS 2015  
Temporal Cognition: Its Development, Neurocognitive Basis, Relationships to Other  
Cognitive Domains, and Uniquely Human Aspects  
Advancing Big Data Benchmarks  
Expert F# 2.0  
Advances in Information Retrieval  
14th International Symposium, SSTD 2015, Hong Kong, China, August 26-28, 2015.  
Proceedings  
Natural Language Processing for the Semantic Web  
Digital Humanities in the Library  
Temporal Information Retrieval  
Semantic Technology  
Computational Linguistics and Intelligent Text Processing  
5th CCF Conference on Natural Language Processing and Chinese Computing, NLPCC

2016, and 24th International Conference on Computer Processing of Oriental Languages, ICCPOL 2016, Kunming, China, December 2-6, 2016, Proceedings Web and Big Data

Explore tools and techniques to analyze and process text with a view to building real-world NLP applications

Natural Language Understanding and Intelligent Applications

14th International Conference, CILing 2013, Samos, Greece, March 24-30, 2013, Proceedings, Part I

Incorporating Applications and Innovations in Intelligent Systems XXI Proceedings of AI-2013, The Thirty-third SGAI International Conference on Innovative Techniques and Applications of Artificial Intelligence

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## **AGUIRRE MATHIAS**

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Computational Processing of the Portuguese Language Springer

Digital health and medical informatics have grown in importance in recent years, and have now become central to the provision of effective healthcare around the world. This book presents the proceedings of the 30th Medical Informatics Europe conference (MIE). This edition of the conference, hosted by the European Federation for Medical Informatics (EFMI) since the 1970s, was due to be held in Geneva, Switzerland in April 2020, but as a result of measures to prevent the spread of the Covid19 pandemic, the conference itself had to be cancelled. Nevertheless, because this collection of papers offers a wealth of knowledge and experience across the full spectrum of digital health and medicine, it was decided to publish the submissions accepted in the review process and confirmed by the Scientific Program Committee for publication, and these are published here as planned. The 232 papers are themed under 6 section headings: biomedical data, tools and methods; supporting care delivery; health and prevention; precision

medicine and public health; human factors and citizen centered digital health; and ethics, legal and societal aspects. A 7th section deals with the Swiss personalized health network, and section 8 includes the 125 posters accepted for the conference. Offering an overview of current trends and developments in digital health and medical informatics, the book provides a valuable information resource for researchers and health practitioners alike.

Intelligent Natural Language Processing: Trends and Applications Apress

This book constitutes the joint refereed proceedings of the 5th CCF Conference on Natural Language Processing and Chinese Computing, NLPCC 2016, and the 24th International Conference on Computer Processing of Oriental Languages, ICCPOL 2016, held in Kunming, China, in December 2016. The 48 revised full papers presented together with 41 short papers were carefully reviewed and selected from 216 submissions. The papers cover fundamental research in language computing, multi-lingual access, web mining/text mining, machine learning for NLP, knowledge graph, NLP for social network, as well as applications in language computing.

**Question Answering for the Curated**

**Web Springer**

This book constitutes the refereed proceedings of the 14th International Symposium on Spatial and Temporal Databases, SSTD 2015, held in Hong Kong, China, in August 2015. The 24 revised full papers together with 8 demos presented were carefully reviewed and selected from 64 submissions. The conference program has the scope on following subjects: reachability query and path query, reverse query and indexing, navigation and routing, trajectory analysis, spatio-temporal approaches, privacy and matching, similarity search and pattern, keyword and pattern.

Emerging Research in Computing, Information, Communication and Applications Packt Publishing Ltd

This two-volume set LNCS 11437 and 11438 constitutes the refereed proceedings of the 41st European Conference on IR Research, ECIR 2019, held in Cologne, Germany, in April 2019. The 48 full papers presented together with 2 keynote papers, 44 short papers, 8 demonstration papers, 8 invited CLEF papers, 11 doctoral consortium papers, 4 workshop papers, and 4 tutorials were carefully reviewed and selected from 365 submissions. They were organized in topical sections named: Modeling Relations; Classification and Search; Recommender Systems; Graphs; Query Analytics; Representation; Reproducibility (Systems); Reproducibility (Application); Neural IR; Cross Lingual IR; QA and Conversational Search; Topic Modeling; Metrics; Image IR; Short Papers; Demonstration Papers; CLEF Organizers Lab Track; Doctoral Consortium Papers; Workshops; and Tutorials.

*Innovations in Bio-Inspired Computing and Applications* Springer Nature

This book constitutes the thoroughly refereed joint proceedings of the Third and Fourth Workshop on Big Data Benchmarking. The third WBDB was held in Xi'an, China, in July 2013 and the Fourth WBDB was held in San José, CA, USA, in October, 2013. The 15 papers presented in this book were carefully reviewed and selected from 33 presentations. They focus on big data benchmarks; applications and scenarios; tools, systems and surveys.

**Proceedings of the 2013 Workshop Series on Big Data Benchmarking, WBDB.cn, Xi'an, China, July16-17, 2013 and WBDB.us, San José, CA, USA, October 9-10, 2013, Revised Selected Papers** Little, Brown Books for Young Readers

This two-volume set, LNCS 11641 and 11642, constitutes the thoroughly refereed proceedings of the Third International Joint Conference, APWeb-WAIM 2019, held in Chengdu, China, in August 2019. The 42 full papers presented together with 17 short papers, and 6 demonstration papers were carefully reviewed and selected from 180 submissions. The papers are organized around the following topics: Big Data Analytics; Data and Information Quality; Data Mining and Application; Graph Data and Social Networks; Information Extraction and Retrieval; Knowledge Graph; Machine Learning; Recommender Systems; Storage, Indexing and Physical Database Design; Spatial, Temporal and Multimedia Databases; Text Analysis and Mining; and Demo.

*Healthcare Data Analytics* Springer Nature

This book covers the topic of temporal tagging, the detection of temporal expressions and the normalization of their semantics to some standard

format. It places a special focus on the challenges and opportunities of domain-sensitive temporal tagging. After providing background knowledge on the concept of time, the book continues with a comprehensive survey of current research on temporal tagging. The authors provide an overview of existing techniques and tools, and highlight key issues that need to be addressed. This book is a valuable resource for researchers and application developers who need to become familiar with the topic and want to know the recent trends, current tools and techniques, as well as different application domains in which temporal information is of utmost importance. Due to the prevalence of temporal expressions in diverse types of documents and the importance of temporal information in any information space, temporal tagging is an important task in natural language processing (NLP), and applications of several domains can benefit from the output of temporal taggers to provide more meaningful and useful results. In recent years, temporal tagging has been an active field in NLP and computational linguistics. Several approaches to temporal tagging have been proposed, annotation standards have been developed, gold standard data sets have been created, and research competitions have been organized. Furthermore, some temporal taggers have also been made publicly available so that temporal tagging output is not just exploited in research, but is finding its way into real world applications. In addition, this book particularly focuses on domain-specific temporal tagging of documents. This is a crucial aspect as different types of documents (e.g., news articles, narratives, and colloquial texts) result in diverse challenges for temporal taggers

and should be processed in a domain-sensitive manner.

Big Data, Cloud and Applications  
Springer

This book focuses on new research challenges in intelligent information filtering and retrieval. It collects invited chapters and extended research contributions from DART 2014 (the 8th International Workshop on Information Filtering and Retrieval), held in Pisa (Italy), on December 10, 2014, and co-hosted with the XIII AI\*IA Symposium on Artificial Intelligence. The main focus of DART was to discuss and compare suitable novel solutions based on intelligent techniques and applied to real-world contexts. The chapters of this book present a comprehensive review of related works and the current state of the art. The contributions from both practitioners and researchers have been carefully reviewed by experts in the area, who also gave useful suggestions to improve the quality of the book.

Information Filtering and Retrieval Logos Verlag Berlin GmbH

This book constitutes the thoroughly refereed proceedings of the Third International Conference on Big Data, Cloud and Applications, BDCA 2018, held in Kenitra, Morocco, in April 2018. The 45 revised full papers presented in this book were carefully selected from 99 submissions with a thorough double-blind review process. They focus on the following topics: big data, cloud computing, machine learning, deep learning, data analysis, neural networks, information system and social media, image processing and applications, and natural language processing.

Proceedings of MIE 2020 Springer Nature  
This book highlights recent research on bio-inspired computing and its various innovative applications in Information

and Communication Technologies. It presents 50 high-quality papers from the 9th International Conference on Innovations in Bio-Inspired Computing and Applications (IBICA 2018) and 7th World Congress on Information and Communication Technologies (WICT 2018), which was held at Toc H Institute of Science and Technology (TIST) on December 17–19, 2018. IBICA-WICT 2018 was a premier conference and brought together researchers, engineers and practitioners whose work involved bio-inspired computing, computational intelligence and their applications in information security, real-world contexts etc. Including contributions by authors from 22 countries, the book offers a valuable reference guide for all researchers, students and practitioners in the fields of Computer Science and Engineering.

#### Explainable AI in Healthcare and Medicine Springer

Humans manifest an acute awareness of the passage of time and capacity for mental time travel, i.e., the ability to mentally place oneself in the past or future, as well as in counterfactual or hypothetical situations. The ability to perceive, estimate, and keep track of time involves multiple forms of representation (temporal concepts and frames of reference) and sensory modalities. Temporal cognition plays a critical role in various forms of memory (e.g., autobiographical memory, episodic memory, prospective memory), future-oriented thinking (foresight, planning), self-concepts, and autonoetic consciousness. This Research Topic addresses the myriad ways that temporal cognition impacts human behavior, how it develops, its clinical relevance, and the extent to which aspects of temporal cognition are

uniquely human. Papers in this Research Topic focus on the following: 1) Low-level perceptual mechanisms that track durations, intervals, and other temporal features of stimuli. 2) Inter-relatedness of temporal reasoning and language development. 3) Temporal cognition in children with autism. 4) Cross-domain mappings between space and time across visual and auditory modalities. 5) Assessing mental time travel as a uniquely human capacity. 6) Implications of individual differences in temporal processing for health and well-being. *Proceedings of the Fourth ICICSE 2016* Springer

This book brings together scientists, researchers, practitioners, and students from academia and industry to present recent and ongoing research activities concerning the latest advances, techniques, and applications of natural language processing systems, and to promote the exchange of new ideas and lessons learned. Taken together, the chapters of this book provide a collection of high-quality research works that address broad challenges in both theoretical and applied aspects of intelligent natural language processing. The book presents the state-of-the-art in research on natural language processing, computational linguistics, applied Arabic linguistics and related areas. New trends in natural language processing systems are rapidly emerging – and finding application in various domains including education, travel and tourism, and healthcare, among others. Many issues encountered during the development of these applications can be resolved by incorporating language technology solutions. The topics covered by the book include: Character and Speech Recognition; Morphological, Syntactic, and Semantic Processing;

Information Extraction; Information Retrieval and Question Answering; Text Classification and Text Mining; Text Summarization; Sentiment Analysis; Machine Translation Building and Evaluating Linguistic Resources; and Intelligent Language Tutoring Systems.

**13th International Conference, PROPOR 2018, Canela, Brazil, September 24-26, 2018, Proceedings** Springer

This book highlights the latest advances in the application of artificial intelligence and data science in health care and medicine. Featuring selected papers from the 2020 Health Intelligence Workshop, held as part of the Association for the Advancement of Artificial Intelligence (AAAI) Annual Conference, it offers an overview of the issues, challenges, and opportunities in the field, along with the latest research findings. Discussing a wide range of practical applications, it makes the emerging topics of digital health and explainable AI in health care and medicine accessible to a broad readership. The availability of explainable and interpretable models is a first step toward building a culture of transparency and accountability in health care. As such, this book provides information for scientists, researchers, students, industry professionals, public health agencies, and NGOs interested in the theory and practice of computational models of public and personalized health intelligence.

Machine Learning for Cyber Physical Systems IOS Press

This two-volume set, consisting of LNCS 7816 and LNCS 7817, constitutes the thoroughly refereed proceedings of the 13th International Conference on Computer Linguistics and Intelligent Processing, CICLING 2013, held on

Samos, Greece, in March 2013. The total of 91 contributions presented was carefully reviewed and selected for inclusion in the proceedings. The papers are organized in topical sections named: general techniques; lexical resources; morphology and tokenization; syntax and named entity recognition; word sense disambiguation and coreference resolution; semantics and discourse; sentiment, polarity, subjectivity, and opinion; machine translation and multilingualism; text mining, information extraction, and information retrieval; text summarization; stylometry and text simplification; and applications.

Advances in Information Retrieval Springer

Combining and integrating cross-institutional data remains a challenge for both researchers and those involved in patient care. Patient-generated data can contribute precious information to healthcare professionals by enabling monitoring under normal life conditions and also helping patients play a more active role in their own care. This book presents the proceedings of MEDINFO 2019, the 17th World Congress on Medical and Health Informatics, held in Lyon, France, from 25 to 30 August 2019. The theme of this year's conference was 'Health and Wellbeing: E-Networks for All', stressing the increasing importance of networks in healthcare on the one hand, and the patient-centered perspective on the other. Over 1100 manuscripts were submitted to the conference and, after a thorough review process by at least three reviewers and assessment by a scientific program committee member, 285 papers and 296 posters were accepted, together with 47 podium abstracts, 7 demonstrations, 45 panels, 21 workshops and 9 tutorials. All

accepted paper and poster contributions are included in these proceedings. The papers are grouped under four thematic tracks: interpreting health and biomedical data, supporting care delivery, enabling precision medicine and public health, and the human element in medical informatics. The posters are divided into the same four groups. The book presents an overview of state-of-the-art informatics projects from multiple regions of the world; it will be of interest to anyone working in the field of medical informatics.

40th European Conference on IR Research, ECIR 2018, Grenoble, France, March 26-29, 2018, Proceedings

Springer

Time Expression and Named Entity Recognition Springer Nature

**A Comprehensive Guide to Building Real-World NLP Systems** Springer

This book introduces core natural language processing (NLP) technologies to non-experts in an easily accessible way, as a series of building blocks that lead the user to understand key technologies, why they are required, and how to integrate them into Semantic Web applications. Natural language processing and Semantic Web technologies have different, but complementary roles in data management. Combining these two technologies enables structured and unstructured data to merge seamlessly. Semantic Web technologies aim to convert unstructured data to meaningful representations, which benefit enormously from the use of NLP technologies, thereby enabling applications such as connecting text to Linked Open Data, connecting texts to each other, semantic searching, information visualization, and modeling of user behavior in online networks. The

first half of this book describes the basic NLP processing tools: tokenization, part-of-speech tagging, and morphological analysis, in addition to the main tools required for an information extraction system (named entity recognition and relation extraction) which build on these components. The second half of the book explains how Semantic Web and NLP technologies can enhance each other, for example via semantic annotation, ontology linking, and population. These chapters also discuss sentiment analysis, a key component in making sense of textual data, and the difficulties of performing NLP on social media, as well as some proposed solutions. The book finishes by investigating some applications of these tools, focusing on semantic search and visualization, modeling user behavior, and an outlook on the future.

**Proceedings of the 17th World Congress on Medical and Health Informatics** Springer

Question answering (QA) systems on the Web try to provide crisp answers to information needs posed in natural language, replacing the traditional ranked list of documents. QA, posing a multitude of research challenges, has emerged as one of the most actively investigated topics in information retrieval, natural language processing, and the artificial intelligence communities today. The flip side of such diverse and active interest is that publications are highly fragmented across several venues in the above communities, making it very difficult for new entrants to the field to get a good overview of the topic. Through this book, we make an attempt towards mitigating the above problem by providing an overview of the state-of-the-art in question answering. We cover the twin

paradigms of curated Web sources used in QA tasks – trusted text collections like Wikipedia, and objective information distilled into large-scale knowledge bases. We discuss distinct methodologies that have been applied to solve the QA problem in both these paradigms, using instantiations of recent systems for illustration. We begin with an overview of the problem setup and evaluation, cover notable sub-topics like open-domain, multi-hop, and conversational QA in depth, and conclude with key insights and emerging topics. We believe that this resource is a valuable contribution towards a unified view on QA, helping graduate students and researchers planning to work on this topic in the near future.

### **Advances in Information Retrieval**

Frontiers Media SA

This handbook offers a thorough treatment of the science of linguistic annotation. Leaders in the field guide the reader through the process of modeling, creating an annotation language, building a corpus and evaluating it for correctness. Essential reading for both computer scientists and linguistic researchers. Linguistic annotation is an increasingly important activity in the field of computational linguistics because of its critical role in the development of language models for natural language processing applications. Part one of this book covers all phases of the linguistic annotation process, from annotation scheme design and choice of representation format through both the manual and automatic annotation process, evaluation, and iterative improvement of annotation accuracy. The second part of the book includes case studies of annotation

projects across the spectrum of linguistic annotation types, including morpho-syntactic tagging, syntactic analyses, a range of semantic analyses (semantic roles, named entities, sentiment and opinion), time and event and spatial analyses, and discourse level analyses including discourse structure, co-reference, etc. Each case study addresses the various phases and processes discussed in the chapters of part one.

### **Interdisciplinary Approaches to Spatial Optimization Issues** Morgan & Claypool Publishers

The papers in this volume are the refereed papers presented at AI-2013, the Thirty-third SGAI International Conference on Innovative Techniques and Applications of Artificial Intelligence, held in Cambridge in December 2013 in both the technical and the application streams. They present new and innovative developments and applications, divided into technical stream sections on Knowledge Discovery and Data Mining I, Knowledge Discovery and Data Mining II, Intelligent Agents, Representation and Reasoning, and Machine Learning and Constraint Programming, followed by application stream sections on Medical Applications, Applications in Education and Information Science, and AI Applications. The volume also includes the text of short papers presented as posters at the conference. This is the thirtieth volume in the Research and Development in Intelligent Systems series, which also incorporates the twenty-first volume in the Applications and Innovations in Intelligent Systems series. These series are essential reading for those who wish to keep up to date with developments in this important field.