Automated Grammatical Error Detection For Language Learners Martin Chodorow

Text, Speech, and DialogueLecture Notes in Real-Time Intelligent SystemsLearner English on ComputerAutomated Grammatical Error Detection for Language LearnersChinese Lexical SemanticsThe Cambridge Handbook of Learner Corpus ResearchFuture-proof CALL: language learning as exploration and encounters – short papers from EUROCALL 2018Computational LinguisticsChildren with Specific Language ImpairmentAutomatic Detection of Verbal DeceptionAutomated Grammatical Error Detection for Language LearnersGrammar for TeachersAutomated Essay ScoringArabic Natural Language ProcessingError Correction in the Foreign Language ClassroomComputer Applications in Second Language AcquisitionTeaching Grammar in Second Language ClassroomsNatural Language Processing with PythonHandbook of Research in Second Language Teaching and LearningLongman Dictionary of Language Teaching and Applied LinguisticsProofreading, Revising & Editing Skills Success in 20 Minutes a DayQuality Estimation for Machine TranslationSentiment Analysis and Opinion MiningTreatment of Error in Second Language Student Writing, Second EditionRegistries for Evaluating Patient OutcomesNatural Language Processing and Chinese ComputingNatural Language Processing and Chinese ComputingLearning and Collaboration TechnologiesA Guide to Patterns and Usage in EnglishNatural Language Annotation for Machine LearningA Grammar of YorubaEncyclopedia of Autism Spectrum DisordersHandbook of Automated Essay EvaluationHandbook of Automated Essay EvaluationLearner EnglishErrors and Intelligence in Computer-Assisted Language LearningData Mining and Learning AnalyticsNew Approaches in Reasoning ResearchComputer Aided VerificationAdvances in Natural Language Processing

Text, Speech, and Dialogue

Intelligent computing refers greatly to artificial intelligence with the aim at making computer to act as a human. This newly developed area of real-time intelligent computing integrates the aspect of dynamic environments with the human intelligence. This book presents a comprehensive practical and easy to read account which describes current state-of-the art in designing and implementing real-time intelligent computing to robotics, alert systems, IoT, remote access control, multi-agent systems, networking, mobile smart systems, crowd sourcing, broadband systems, cloud computing, streaming data and many other applications areas. The solutions discussed in this book will encourage the researchers and IT professional to put the methods into their practice.

Lecture Notes in Real-Time Intelligent Systems

Updated and revised with more examples and expanded discussions, this second edition continues the aim of providing teachers with a solid understanding of the use and function of grammatical structures in American English. The book avoids jargon and presents essential grammatical structures clearly and concisely. Dr. DeCapua approaches grammar from a descriptive rather than a prescriptive standpoint, discussing differences between formal and informal language, and spoken and written English. The text draws examples from a wide variety of authentic materials to illustrate grammatical concepts. The many activities throughout the book engage users in exploring the different elements of grammar and in considering how these elements work together to form meaning. Users are encouraged to tap into their own, often subconscious, knowledge of grammar to consciously apply their knowledge to their own varied teaching settings. The text also emphasizes the importance of understanding grammar from the perspective of English language learners, an approach that allows teachers to better appreciate the difficulties these learners face. Specific areas of difficulties for learners of English are highlighted throughout.

Learner English on Computer

The attempt to spot deception through its correlates in human behavior has a long history. Until recently, these efforts have concentrated on identifying individual "cues" that might occur with deception. However, with the advent of computational means to analyze language and other human behavior, we now have the ability to determine whether there are consistent clusters of differences in behavior that might be associated with a false statement as opposed to a true one. While its focus is on verbal behavior, this book describes a range of behaviors—physiological, gestural as well as verbal—that have been proposed as indicators of deception. An overview of the primary psychological and cognitive theories that have been offered as explanations of deceptive behaviors gives context for the description of specific behaviors. The book also addresses the differences between data collected in a laboratory and "real-world" data with respect to the emotional and cognitive state of the liar. It discusses sources of real-world data and problematic issues in its collection and identifies the primary areas in which applied studies based on real-world data are critical, including police, security, border crossing, customs, and asylum interviews; congressional hearings; financial reporting; legal depositions; human resource evaluation; predatory communications that include Internet scams, identity theft, and fraud; and false product reviews. Having established the background, this book concentrates on computational analyses of deceptive verbal behavior that have enabled the field of deception studies to move from individual cues to overall differences in behavior. The computational work is organized around the features used for classification from ??-gram through syntax to predicate-argument and rhetorical structure. The book concludes with a set of open questions that the computational work has generated.

Automated Grammatical Error Detection for Language Learners

The first book of its kind, Learner English on Computer is intended to provide linguists, students of linguistics and modern languages, and ELT professionals with a highly accessible and comprehensive introduction to the new and rapidly-expanding field of corpus-based research into learner language. Edited by the founder and co-ordinator of the International Corpus of Learner English (ICLE), the book contains articles on all aspects of corpus compilation, design and analysis. The book is divided into three main sections; in Part I, the first chapter provides the reader with an overview of the field, explaining links with corpus and applied linguistics, second language acquisition and ELT. The second chapter reviews the software tools which are currently available for analysing learner language and contains useful examples of how they can be used. Part 2 contains eight case studies in which computer learner corpora are analysed for various lexical, discourse and grammatical features. The articles contain a wide range of methodologies with broad general application. The chapters in Part 3 look at how Computer Learner Corpus (CLC) based studies can help improve pedagogical tools: EFL grammars, dictionaries, writing textbooks and electronic tools. Implications for classroom methodology are also discussed. The comprehensive scope of this volume should be invaluable to applied linguists and corpus linguists as well as to would-be learner corpus builders and analysts who wish to discover more about a new, exciting and fast-growing field of research.

Chinese Lexical Semantics

Recent SLA research recognizes the necessity of attention to grammar and demonstrates that form-focused instruction is especially effective when it is incorporated into a meaningful communicative context. Designed specifically for second-language teachers, this text identifies and explores the various options for integrating a focus on grammar and a focus on communication in classroom contexts and offers concrete examples of teaching activities for each option. Each chapter includes a description of the option, its theoretical and empirical background, examples of activities illustrating in a non-technical manner how it can be implemented in the classroom, questions for reflection, and a list of useful resources that teachers can consult for further information.

The Cambridge Handbook of Learner Corpus Research

This comprehensive, interdisciplinary handbook reviews the latest methods and technologies used in automated essay evaluation (AEE) methods and technologies. Highlights include the latest in the evaluation of performance-based writing assessments and recent advances in the teaching of writing, language testing, cognitive psychology, and computational linguistics. This greatly expanded follow-up to Automated Essay Scoring reflects the numerous advances that have taken place in the field since 2003 including automated essay scoring and diagnostic feedback. Each chapter features a common structure including an introduction and a conclusion. Ideas for diagnostic and evaluative feedback are sprinkled throughout the book. Highlights of the book’s coverage include: The latest research on automated essay evaluation. Descriptions of the

major scoring engines including the E-rater®, the Intelligent Essay Assessor, the IntellimetricTM Engine, c-raterTM, and LightSIDE. Applications of the uses of the technology including a large scale system used in West Virginia. A systematic framework for evaluating research and technological results. Descriptions of AEE methods that can be replicated for languages other than English as seen in the example from China. Chapters from key researchers in the field. The book opens with an introduction to AEEs and a review of the "best practices" of teaching writing along with tips on the use of automated analysis in the classroom. Next the book highlights the capabilities and applications of several scoring engines including the E-rater®, the Intelligent Essay Assessor, the IntellimetricTM engine, c-raterTM, and LightSIDE. Here readers will find an actual application of the use of an AEE in West Virginia, psychometric issues related to AEEs such as validity, reliability, and scaling, and the use of automated scoring to detect reader drift, grammatical errors, discourse coherence quality, and the impact of human rating on AEEs. A review of the cognitive foundations underlying methods used in AEE is also provided. The book concludes with a comparison of the various AEE systems and speculation about the future of the field in light of current educational policy. Ideal for educators, professionals, curriculum specialists, and administrators responsible for developing writing programs or distance learning curricula, those who teach using AEE technologies, policy makers, and researchers in education, writing, psychometrics, cognitive psychology, and computational linguistics, this book also serves as a reference for graduate courses on automated essay evaluation taught in education, computer science, language, linguistics, and cognitive psychology.

Future-proof CALL: language learning as exploration and encounters – short papers from EUROCALL 2018

This book provides system developers and researchers in natural language processing and computational linguistics with the necessary background information for working with the Arabic language. The goal is to introduce Arabic linguistic phenomena and review the state-of-the-art in Arabic processing. The book discusses Arabic script, phonology, orthography, morphology, syntax and semantics, with a final chapter on machine translation issues. The chapter sizes correspond more or less to what is linguistically distinctive about Arabic, with morphology getting the lion's share, followed by Arabic script. No previous knowledge of Arabic is needed. This book is designed for computer scientists and linguists alike. The focus of the book is on Modern Standard Arabic; however, notes on practical issues related to Arabic dialects and languages written in the Arabic script are presented in different chapters. Table of Contents: What is "Arabic"? / Arabic Script / Arabic Phonology and Orthography / Arabic Morphology / Computational Morphology Tasks / Arabic Syntax / A Note on Arabic Semantics / A Note on Arabic and Machine Translation

Computational Linguistics

Exploring computer applications in second language acquisition, this book addresses issues such as effective use of software in language teaching, values and limitations of computer-assisted testing.

Children with Specific Language Impairment

It has been estimated that over a billion people are using or learning English as a second or foreign language, and the numbers are growing not only for English but for other languages as well. These language learners provide a burgeoning market for tools that help identify and correct learners' writing errors. Unfortunately, the errors targeted by typical commercial proofreading tools do not include those aspects of a second language that are hardest to learn. This volume describes the types of constructions English language learners find most difficult: constructions containing prepositions, articles, and collocations. It provides an overview of the automated approaches that have been developed to identify and correct these and other classes of learner errors in a number of languages. Error annotation and system evaluation are particularly important topics in grammatical error detection because there are no commonly accepted standards. Chapters in the book describe the options available to researchers, recommend best practices for reporting results, and present annotation and evaluation schemes. The final chapters explore recent innovative work that opens new directions for research. It is the authors' hope that this volume will continue to contribute to the growing interest in grammatical error detection by encouraging researchers to take a closer look at the field and its many challenging problems.

Automatic Detection of Verbal Deception

This landmark volume provides a broad-based, comprehensive, state-of-the-art overview of current knowledge and research into second language teaching and learning. All authors are leading authorities in their areas of expertise. The chapters, all completely new for Volume 2, are organized in eight thematic sections: Social Contexts in Research on Second Language Teaching and Learning Second Language Research Methods Second Language Research and Applied Linguistics Research in Second Language Processes and Development Methods and Instruction in Second Language Teaching Second Language Assessment Ideology, Identity, Culture, and Critical Pedagogy in Second Language Teaching and Learning Language Planning and Policy. Changes in Volume 2: captures new and ongoing developments, research, and trends in the field surveys prominent areas of research that were not covered in Volume 1 includes new authors from Asia, Australia, Europe, and North America to broaden the Handbook’s international scope. Volume 2 is an essential resource for researchers, faculty, teachers, and students in MA-TESL and applied linguistics programs, as well as curriculum and material developers.

Automated Grammatical Error Detection for Language Learners

Reasoning research has long been associated with paper and pencil tasks in which peoples' reasoning skills are judged against established normative conventions. However, there has been a recent revolution in the range of techniques, empirical methods and paradigms used to examine reasoning behaviour. New Approaches in Reasoning Research brings to the fore these new pioneering research methods and empirical findings. Each chapter is written by a world-leading expert in the field and covers a variety of broad empirical techniques and new approaches to reasoning research. Maintaining a high level of integrity and rigor throughout, Editors De Neys and Osman have allowed the experts included here the space to think big about the general issues concerning their work, to point out potential implications and speculate on further developments. Such freedom can only help to stimulate discussion and spark creative thinking. The use of these new methods and paradigms are already generating a new understanding of how we reason, as such this book should appeal to researchers and students of Cognitive Psychology, Social Psychology, and Neuroscience along with Cognitive Scientists, and anyone interested in the latest developments in reasoning, rationality, bias, and thinking.

Grammar for Teachers

Treatment of Error offers a realistic, well-reasoned account of what teachers of multilingual writers need to know about error and how to put what they know to use. As in the first edition, Ferris again persuasively addresses the fundamental error treatment questions that plague novice and expert writing specialists alike: What types of errors should teachers respond to? When should we respond to them? What are the most efficacious ways of responding to them? And ultimately, what role should error treatment play in the teaching of the process of writing? The second edition improves upon the first by exploring changes in the field since 2002, such as the growing diversity in what is called "L2 writers," the blurring boundaries between "native" and "non-native" speakers of English, the influence of genre studies and corpus linguistics on the teaching of writing, and the need the move beyond "error" to "second language development" in terms of approaching students and their texts. It also explores what teacher preparation programs need to do to train teachers to treat student error. The second edition features * an updating of the literature in all chapters * a new chapter on academic language development * a postscript on how to integrate error treatment/language development suggestions in Chapters 4-6 into a writing class syllabus * the addition of discussion/analysis questions at the end of each chapter, plus suggested readings, to make the book more useful in pedagogy or teacher development workshops

Automated Essay Scoring

This book provides the first comprehensive overview of theoretical issues, historical developments and current trends in ICALL (Intelligent Computer-Assisted Language Learning). It assumes a basic familiarity with Second Language Acquisition (SLA) theory and teaching, CALL and linguistics. It is of interest to upper undergraduate and/or graduate students who study

CALL, SLA, language pedagogy, applied linguistics, computational linguistics or artificial intelligence as well as researchers with a background in any of these fields.

Arabic Natural Language Processing

This book constitutes the thoroughly refereed post-workshop proceedings of the 20th Chinese Lexical Semantics Workshop, CLSW 2019, held in Chiayi, Taiwan, in June 2019. The 39 full papers and 46 short papers included in this volume were carefully reviewed and selected from 254 submissions. They are organized in the following topical sections: lexical semantics; applications of natural language processing; lexical resources; corpus linguistics.

Error Correction in the Foreign Language Classroom

This two volume set of LNAI 11108 and LNAI 11109 constitutes the refereed proceedings of the 7th CCF Conference on Natural Language Processing and Chinese Computing, NLPCC 2018, held in Hohhot, China, in August 2018. The 55 full papers and 31 short papers presented were carefully reviewed and selected from 308 submissions. The papers of the first volume are organized in the following topics: conversational Bot/QA/IR; knowledge graph/IE; machine learning for NLP; machine translation; and NLP applications. The papers of the second volume are organized as follows: NLP for social network; NLP fundamentals; text mining; and short papers.

Computer Applications in Second Language Acquisition

This new volume is the first to focus entirely on automated essay scoring and evaluation. It is intended to provide a comprehensive overview of the evolution and state-of-the-art of automated essay scoring and evaluation technology across several disciplines, including education, testing and measurement, cognitive science, computer science, and computational linguistics. The development of this technology has led to many questions and concerns. Automated Essay Scoring attempts to address some of these questions including: *How can automated scoring and evaluation supplement classroom instruction? *How does the technology actually work? *Can it improve students' writing? *How reliable is the technology? *How can these computing methods be used to develop evaluation tools? *What are the state-of the-art essay evaluation technologies and automated scoring systems? Divided into four parts, the first part reviews the teaching of writing and how computers can contribute to it. Part II analyzes actual automated essay scorers including e-raterTM, Intellimetric, and the Intelligent Essay Assessor. The third part analyzes related psychometric issues, and the final part reviews innovations in the field. This book is ideal for researchers and advanced students interested in automated essay scoring from the fields of testing and measurement, education, cognitive science, language, and computational linguistics.

Teaching Grammar in Second Language Classrooms

This book constitutes the proceedings of the 22nd International Conference on Text, Speech, and Dialogue, TSD 2019, held in Ljubljana, Slovenia, in September 2019. The 33 full papers presented in this volume were carefully reviewed and selected from 73 submissions. They were organized in topical sections named text and speech. The book also contains one invited talk in full paper length.

Natural Language Processing with Python

"Learner English is a well-established and successful reference book for teachers of British English. This new edition builds on the success of the original book. It has been rewritten and extended to provide information on the typical problems and error-patterns of a wide range of learners of English from particular language backgrounds. It compares the relevant features of the students' own language with English, helping teachers to predict and understand the problems that students have. The new book has twenty-two chapters dealing with learners who speak Dutch-Flemish, Scandinavian languages (except Finnish), German, French, Italian, Spanish, Catalan, Portuguese, Greek, Russian, Polish, Farsi, Arabic, Turkish, South Asian languages (with a separate chapter on Dravidian languages), West African languages, Swahili, Malay/Indonesian, Japanese, Chinese, Korean and Thai. An audio cassette and audio CD are available separately. These contain authentic examples of the various accents described in the book." http://www.loc.gov/catdir/description/cam021/00046785.html.

Handbook of Research in Second Language Teaching and Learning

This comprehensive, interdisciplinary handbook reviews the latest methods and technologies used in automated essay evaluation (AEE) methods and technologies. Highlights include the latest in the evaluation of performance-based writing assessments and recent advances in the teaching of writing, language testing, cognitive psychology, and computational linguistics. This greatly expanded follow-up to Automated Essay Scoring reflects the numerous advances that have taken place in the field since 2003 including automated essay scoring and diagnostic feedback. Each chapter features a common structure including an introduction and a conclusion. Ideas for diagnostic and evaluative feedback are sprinkled throughout the book. Highlights of the book’s coverage include: The latest research on automated essay evaluation. Descriptions of the major scoring engines including the E-rater®, the Intelligent Essay Assessor, the IntellimetricTM Engine, c-raterTM, and LightSIDE. Applications of the uses of the technology including a large scale system used in West Virginia. A systematic framework for evaluating research and technological results. Descriptions of AEE methods that can be replicated for languages other than English as seen in the example from China. Chapters from key researchers in the field. The book opens with an introduction to AEEs and a review of the "best practices" of teaching writing along with tips on the use of

automated analysis in the classroom. Next the book highlights the capabilities and applications of several scoring engines including the E-rater®, the Intelligent Essay Assessor, the IntellimetricTM engine, c-raterTM, and LightSIDE. Here readers will find an actual application of the use of an AEE in West Virginia, psychometric issues related to AEEs such as validity, reliability, and scaling, and the use of automated scoring to detect reader drift, grammatical errors, discourse coherence quality, and the impact of human rating on AEEs. A review of the cognitive foundations underlying methods used in AEE is also provided. The book concludes with a comparison of the various AEE systems and speculation about the future of the field in light of current educational policy. Ideal for educators, professionals, curriculum specialists, and administrators responsible for developing writing programs or distance learning curricula, those who teach using AEE technologies, policy makers, and researchers in education, writing, psychometrics, cognitive psychology, and computational linguistics, this book also serves as a reference for graduate courses on automated essay evaluation taught in education, computer science, language, linguistics, and cognitive psychology.

Longman Dictionary of Language Teaching and Applied Linguistics

The LNCS volume 9192 constitutes the refereed proceedings of the Second International Conference on Learning and Collaboration Technologies, LCT 2015, held as part of the 17th International Conference on Human-Computer Interaction, HCII 2015, in Los Angeles, CA, USA in August 2015, jointly with 15 other thematically similar conferences. The total of 1462 papers and 246 posters presented at the HCII 2015 conferences were carefully reviewed and selected from 4843 submissions. These papers address addressing the following major topics: technology-enhanced learning, adaptive and personalised learning and assessment, virtual worlds and virtual agents for learning, collaboration and Learning Serious Games and ICT in education.

Proofreading, Revising & Editing Skills Success in 20 Minutes a Day

This book constitutes the refereed proceedings of the 16th International Conference of the Pacific Association for Computational Linguistics, PACLING 2019, held in Hanoi, Vietnam, in October 2019. The 28 full papers and 14 short papers presented were carefully reviewed and selected from 70 submissions. The papers are organized in topical sections on text summarization; relation and word embedding; machine translation; text classification; web analyzing; question and answering, dialog analyzing; speech and emotion analyzing; parsing and segmentation; information extraction; and grammar error and plagiarism detection.

Quality Estimation for Machine Translation

The two-volume set LNCS 9779 and LNCS 9780 constitutes the refereed proceedings of the 28th International Conference on Computer Aided Verification, CAV 2016, held in Toronto, ON, USA, in July 2016. The total of 46 full and 12 short papers presented in the proceedings was carefully reviewed and selected from 195 submissions. The papers were organized in topical sections named: probabilistic systems; synthesis; constraint solving; model checking; program analysis; timed and hybrid systems; verification in practice; concurrency; and automata and games.

Sentiment Analysis and Opinion Mining

This User's Guide is intended to support the design, implementation, analysis, interpretation, and quality evaluation of registries created to increase understanding of patient outcomes. For the purposes of this guide, a patient registry is an organized system that uses observational study methods to collect uniform data (clinical and other) to evaluate specified outcomes for a population defined by a particular disease, condition, or exposure, and that serves one or more predetermined scientific, clinical, or policy purposes. A registry database is a file (or files) derived from the registry. Although registries can serve many purposes, this guide focuses on registries created for one or more of the following purposes: to describe the natural history of disease, to determine clinical effectiveness or cost-effectiveness of health care products and services, to measure or monitor safety and harm, and/or to measure quality of care. Registries are classified according to how their populations are defined. For example, product registries include patients who have been exposed to biopharmaceutical products or medical devices. Health services registries consist of patients who have had a common procedure, clinical encounter, or hospitalization. Disease or condition registries are defined by patients having the same diagnosis, such as cystic fibrosis or heart failure. The User's Guide was created by researchers affiliated with AHRQ's Effective Health Care Program, particularly those who participated in AHRQ's DEcIDE (Developing Evidence to Inform Decisions About Effectiveness) program. Chapters were subject to multiple internal and external independent reviews.

Treatment of Error in Second Language Student Writing, Second Edition

It has been estimated that over a billion people are using or learning English as a second or foreign language, and the numbers are growing not only for English but for other languages as well. These language learners provide a burgeoning market for tools that help identify and correct learners' writing errors. Unfortunately, the errors targeted by typical commercial proofreading tools do not include those aspects of a second language that are hardest to learn. This volume describes the types of constructions English language learners find most difficult -- constructions containing prepositions, articles, and collocations. It provides an overview of the automated approaches that have been developed to identify and correct these and other classes of learner errors in a number of languages. Error annotation and system evaluation are particularly important topics in grammatical error detection because there are no commonly accepted standards. Chapters

in the book describe the options available to researchers, recommend best practices for reporting results, and present annotation and evaluation schemes. The final chapters explore recent innovative work that opens new directions for research. It is the authors' hope that this volume will contribute to the growing interest in grammatical error detection by encouraging researchers to take a closer look at the field and its many challenging problems. Table of Contents: Introduction / History of Automated Grammatical Error Detection / Special Problems of Language Learners / Language Learner Data / Evaluating Error Detection Systems / Article and Preposition Errors / Collocation Errors / Different Approaches for Different Errors / Annotating Learner Errors / New Directions / Conclusion

Registries for Evaluating Patient Outcomes

The book aims to dispel some of the myths surrounding the place of oral and written error correction in language education by providing an exhaustive and up-to-date account of issues involved in this area, taking the stance that the provision of corrective feedback constitutes an integral part of form-focused instruction. This account places an equal emphasis on the relevant theoretical claims, the most recent research findings and everyday pedagogical concerns, particularly as they apply to the teaching of additional languages in the foreign language setting. The book will be of relevance and significance not only to specialists in the field of second language acquisition, but also to graduate and doctoral students carrying out research in the area of form-focused instruction and error correction. Many parts of the volume will also be of considerable interest and utility to teachers of foreign languages at different educational levels.

Natural Language Processing and Chinese Computing

Create your own natural language training corpus for machine learning. Whether you’re working with English, Chinese, or any other natural language, this hands-on book guides you through a proven annotation development cycle—the process of adding metadata to your training corpus to help ML algorithms work more efficiently. You don’t need any programming or linguistics experience to get started. Using detailed examples at every step, you’ll learn how the MATTER Annotation Development Process helps you Model, Annotate, Train, Test, Evaluate, and Revise your training corpus. You also get a complete walkthrough of a real-world annotation project. Define a clear annotation goal before collecting your dataset (corpus) Learn tools for analyzing the linguistic content of your corpus Build a model and specification for your annotation project Examine the different annotation formats, from basic XML to the Linguistic Annotation Framework Create a gold standard corpus that can be used to train and test ML algorithms Select the ML algorithms that will process your annotated data Evaluate the test results and revise your annotation task Learn how to use lightweight software for annotating texts and adjudicating the annotations This book is a perfect companion to O’Reilly’s Natural Language Processing with Python.

Natural Language Processing and Chinese Computing

This comprehensive guide will prepare candidates for the test in all 50 states. It includes four complete practice exams, a real estate refresher course and complete math review, as well as a real estate terms glossary with over 900 terms, and expert test-prep tips.

Learning and Collaboration Technologies

Many applications within natural language processing involve performing text-to-text transformations, i.e., given a text in natural language as input, systems are required to produce a version of this text (e.g., a translation), also in natural language, as output. Automatically evaluating the output of such systems is an important component in developing text-to-text applications. Two approaches have been proposed for this problem: (i) to compare the system outputs against one or more reference outputs using string matching-based evaluation metrics and (ii) to build models based on human feedback to predict the quality of system outputs without reference texts. Despite their popularity, reference-based evaluation metrics are faced with the challenge that multiple good (and bad) quality outputs can be produced by text-to-text approaches for the same input. This variation is very hard to capture, even with multiple reference texts. In addition, reference-based metrics cannot be used in production (e.g., online machine translation systems), when systems are expected to produce outputs for any unseen input. In this book, we focus on the second set of metrics, so-called Quality Estimation (QE) metrics, where the goal is to provide an estimate on how good or reliable the texts produced by an application are without access to gold-standard outputs. QE enables different types of evaluation that can target different types of users and applications. Machine learning techniques are used to build QE models with various types of quality labels and explicit features or learnt representations, which can then predict the quality of unseen system outputs. This book describes the topic of QE for text-to-text applications, covering quality labels, features, algorithms, evaluation, uses, and state-of-the-art approaches. It focuses on machine translation as application, since this represents most of the QE work done to date. It also briefly describes QE for several other applications, including text simplification, text summarization, grammatical error correction, and natural language generation.

A Guide to Patterns and Usage in English

The 26th EUROCALL conference was organised by the University of Jyväskylä (JYU) Language Campus and specifically the Language Centre. The theme of this year’s conference was ‘Future-proof CALL: language learning as exploration and encounters’, which reflects an attempt to envision language teaching and learning futures in a changing world. What brought researchers together this year are shared concerns in relation to the sustainability of language learning and

teaching in technology-rich contexts that are marked by ever-increasing complexity. The collection of short papers in this volume is a very thorough view into the conference proper exhibiting the complexity and novelty of the field of CALL. There are exciting new openings and a more profound exploration of theoretical underpinnings of the contemporary issues in teaching and learning, cross-cultural communication, mobile learning and the like.

Natural Language Annotation for Machine Learning

This book constitutes the refereed proceedings of the 9th International Conference on Advances in Natural Language Processing, PolTAL 2014, Warsaw, Poland, in September 2014. The 27 revised full papers and 20 revised short papers presented were carefully reviewed and selected from 83 submissions. The papers are organized in topical sections on morphology, named entity recognition, term extraction; lexical semantics; sentence level syntax, semantics, and machine translation; discourse, coreference resolution, automatic summarization, and question answering; text classification, information extraction and information retrieval; and speech processing, language modelling, and spell- and grammar-checking.

A Grammar of Yoruba

This book offers a highly accessible introduction to natural language processing, the field that supports a variety of language technologies, from predictive text and email filtering to automatic summarization and translation. With it, you'll learn how to write Python programs that work with large collections of unstructured text. You'll access richly annotated datasets using a comprehensive range of linguistic data structures, and you'll understand the main algorithms for analyzing the content and structure of written communication. Packed with examples and exercises, Natural Language Processing with Python will help you: Extract information from unstructured text, either to guess the topic or identify "named entities" Analyze linguistic structure in text, including parsing and semantic analysis Access popular linguistic databases, including WordNet and treebanks Integrate techniques drawn from fields as diverse as linguistics and artificial intelligence This book will help you gain practical skills in natural language processing using the Python programming language and the Natural Language Toolkit (NLTK) open source library. If you're interested in developing web applications, analyzing multilingual news sources, or documenting endangered languages -- or if you're simply curious to have a programmer's perspective on how human language works -- you'll find Natural Language Processing with Python both fascinating and immensely useful.

Encyclopedia of Autism Spectrum Disorders

Handbook of Automated Essay Evaluation

This two-volume set of LNAI 11838 and LNAI 11839 constitutes the refereed proceedings of the 8th CCF Conference on Natural Language Processing and Chinese Computing, NLPCC 2019, held in Dunhuang, China, in October 2019. The 85 full papers and 56 short papers presented were carefully reviewed and selected from 492 submissions. They are organized in the following topical sections: Conversational Bot/QA/IR; Knowledge graph/IE; Machine Learning for NLP; Machine Translation; NLP Applications; NLP for Social Network; NLP Fundamentals; Text Mining; Short Papers; Explainable AI Workshop; Student Workshop: Evaluation Workshop.

Handbook of Automated Essay Evaluation

Addresses the impacts of data mining on education and reviews applications in educational research teaching, and learning This book discusses the insights, challenges, issues, expectations, and practical implementation of data mining (DM) within educational mandates. Initial series of chapters offer a general overview of DM, Learning Analytics (LA), and data collection models in the context of educational research, while also defining and discussing data mining's four guiding principles—prediction, clustering, rule association, and outlier detection. The next series of chapters showcase the pedagogical applications of Educational Data Mining (EDM) and feature case studies drawn from Business, Humanities, Health Sciences, Linguistics, and Physical Sciences education that serve to highlight the successes and some of the limitations of data mining research applications in educational settings. The remaining chapters focus exclusively on EDM's emerging role in helping to advance educational research—from identifying at-risk students and closing socioeconomic gaps in achievement to aiding in teacher evaluation and facilitating peer conferencing. This book features contributions from international experts in a variety of fields. Includes case studies where data mining techniques have been effectively applied to advance teaching and learning Addresses applications of data mining in educational research, including: social networking and education; policy and legislation in the classroom; and identification of at-risk students Explores Massive Open Online Courses (MOOCs) to study the effectiveness of online networks in promoting learning and understanding the communication patterns among users and students Features supplementary resources including a primer on foundational aspects of educational mining and learning analytics Data Mining and Learning Analytics: Applications in Educational Research is written for both scientists in EDM and educators interested in using and integrating DM and LA to improve education and advance educational research.

Learner English

Errors and Intelligence in Computer-Assisted Language Learning

This best-selling dictionary is now in its 4th edition. Specifically written for students of language teaching and applied linguistics, it has become an indispensible resource for those engaged in courses in TEFL, TESOL, applied linguistics and introductory courses in general linguistics. Fully revised, this new edition includes over 350 new entries. Previous definitions have been revised or replaced in order to make this the most up-to-date and comprehensive dictionary available. Providing straightforward and accessible explanations of difficult terms and ideas in applied linguistics, this dictionary offers: Nearly 3000 detailed entries, from subject areas such as teaching methodology, curriculum development, sociolinguistics, syntax and phonetics. Clear and accurate definitions which assume no prior knowledge of the subject matter helpful diagrams and tables cross references throughout, linking related subject areas for ease of reference, and helping to broaden students' knowledge The Dictionary of Language Teaching and Applied Linguistics is the definitive resource for students.

Data Mining and Learning Analytics

The landmark reference in the field, completely updated: a comprehensive treatment of a disorder that is more prevalent than autism.

New Approaches in Reasoning Research

Yoruba, a major West African language spoken by over twelve million people, has had so much scholarly attention before the release of this 1966 work, but no extensive descriptive grammar had ever been published. Dr Ayo Bamgbose therefore made a major contribution to the study of language. This descriptive grammar derives from a large body of written and spoken texts in Standard Yoruba. In order to avoid the faulta of traditional grammars, this study has been deliberately based on a structural theory, using Halliday's Scale and Category model. Dr Bamgbose's study of Yoruba was the first full-length exemplification of this theory to be published, and will continue to be of interest to general linguists as well as to specialists in West African languages and Yoruba scholars.

Computer Aided Verification

The origins of learner corpus research go back to the late 1980s when large electronic collections of written or spoken data started to be collected from foreign/second language learners, with a view to advancing our understanding of the mechanisms of second language acquisition and developing tailor-made pedagogical tools. Engaging with the interdisciplinary nature of this fast-growing field, The Cambridge Handbook of Learner Corpus Research explores the

diverse and extensive applications of learner corpora, with 27 chapters written by internationally renowned experts. This comprehensive work is a vital resource for students, teachers and researchers, offering fresh perspectives and a unique overview of the field. With representative studies in each chapter which provide an essential guide on how to conduct learner corpus research in a wide range of areas, this work is a cutting-edge account of learner corpus collection, annotation, methodology, theory, analysis and applications.

Advances in Natural Language Processing

Sentiment analysis and opinion mining is the field of study that analyzes people's opinions, sentiments, evaluations, attitudes, and emotions from written language. It is one of the most active research areas in natural language processing and is also widely studied in data mining, Web mining, and text mining. In fact, this research has spread outside of computer science to the management sciences and social sciences due to its importance to business and society as a whole. The growing importance of sentiment analysis coincides with the growth of social media such as reviews, forum discussions, blogs, micro-blogs, Twitter, and social networks. For the first time in human history, we now have a huge volume of opinionated data recorded in digital form for analysis.Sentiment analysis systems are being applied in almost every business and social domain because opinions are central to almost all human activities and are key influencers of our behaviors. Our beliefs and perceptions of reality, and the choices we make, are largely conditioned on how others see and evaluate the world. For this reason, when we need to make a decision we often seek out the opinions of others. This is true not only for individuals but also for organizations.This book is a comprehensive introductory and survey text. It covers all important topics and the latest developments in the field with over 400 references. It is suitable for students, researchers and practitioners who are interested in social media analysis in general and sentiment analysis in particular. Lecturers can readily use it in class for courses on natural language processing, social media analysis, text mining, and data mining. Lecture slides are also available online.Table of Contents: Preface / Sentiment Analysis: A Fascinating Problem / The Problem of Sentiment Analysis / Document Sentiment Classification / Sentence Subjectivity and Sentiment Classification / Aspect-Based Sentiment Analysis / Sentiment Lexicon Generation / Opinion Summarization / Analysis of Comparative Opinions / Opinion Search and Retrieval / Opinion Spam Detection / Quality of Reviews / Concluding Remarks / Bibliography / Author Biography

ROMANCE ACTION & ADVENTURE MYSTERY & THRILLER BIOGRAPHIES & HISTORY CHILDREN'S YOUNG ADULT FANTASY HISTORICAL FICTION HORROR LITERARY FICTION NON-FICTION SCIENCE FICTION