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Document Analysis Systems Xiang Bai 2020-08-14 This book constitutes the refereed proceedings of the 14th IAPR International Workshop on Document Analysis Systems, DAS 2020, held in Wuhan, China, in July 2020. The 40 full papers presented in this book were carefully reviewed and selected from 57 submissions. The papers are grouped in the following topical sections: character and text recognition; document image processing; segmentation and layout analysis; word embedding and spotting; text detection; and font design and classification. Due to the Corona pandemic the conference was held as a virtual event .

Database and Expert Systems Applications Mohamed Ibrahim 2003-05-15 The Database and Expert Systems Applications (DEXA) conferences have established themselves as a platform for bringing together researchers and practitioners from various backgrounds and all regions of the world to exchange ideas, experiences and opinions in a friendly and stimulating environment. The papers presented at the conference represent recent developments in the field and important steps towards shaping the future of applied computer science and information systems. DEXA covers a broad field: all aspects of databases, knowledge based systems, knowledge management, web-based systems, information systems, related technologies and their applications. Once again there were a good number of submissions: out of 183 papers that were submitted, the program committee selected 92 to be presented. In the first year of this new millennium DEXA has come back to the United Kingdom, following events in Vienna, Berlin, Valencia, Prague, Athens, London, Zurich, Toulouse, Vienna and Florence. The past decade has seen several revolutionary developments, one of which was the explosion of Internet-related applications in the areas covered by DEXA, developments in which DEXA has played a role and in which DEXA will continue to play a role in its second decade, starting with this conference.

Artificial Neural Networks and Machine Learning – ICANN 2021 Igor Farkaš 2021-09-10 The proceedings set LNCS 12891, LNCS 12892, LNCS 12893, LNCS 12894 and LNCS 12895 constitute the proceedings of the 30th International Conference on Artificial Neural Networks, ICANN 2021, held in Bratislava, Slovakia, in September 2021.* The total of 265 full papers presented in these proceedings was carefully reviewed and selected from 496 submissions, and organized in 5 volumes. In this volume, the papers focus on topics such as representation learning, reservoir computing, semi- and unsupervised learning, spiking neural networks, text understanding, transfers and meta learning, and video processing. *The conference was held online 2021 due to the COVID-19 pandemic.

Document Image Analysis H Bunke 1994-12-20 Interest in the automatic processing and analysis of document images has been rapidly increasing during the past few years. This book addresses the different subfields of document image analysis, including preprocessing and segmentation, form processing, handwriting recognition, line drawing and map processing, and contextual processing. Contents:Preface (H Bunke et al.)A New Parallel Thinning Algorithm (Y Y Zhang & P S P Wang)Background Structure in Document Images (H S Baird)Analysis of Form Images (D Wang & S N Srihari)Model-Based Analysis and Understanding of Check Forms (T M Ha & H Bunke)Document Structures: A Survey (Y Y Tang & C Y Suen)Automatic Input of Logic Diagrams by Recognizing Loop-Symbols and Rectilinear Connections (S H Kim & J H Kim)Syntactic Analysis of Technical Drawing Dimensions (S Collin & D Colnet)Recognition of Elevation Value in Topographic Maps by Multi-Angled Parallelism (H Yamada et al.)Character Recognition by Signature Approximation (N Papamarkos et al.)An Adaptive Modular Neural Network with Application to Unconstrained Character Recognition (L Mui et al.)A Model-Based Split-and-Merge Method for Character String Recognition (H Nishida & S Mori)A Robust Stroke Extraction Method for Handwritten Chinese Characters (H-D Chang & J-F Wang)Handprinted Chinese Character Recognition Using Probability Distribution Feature (T F Li & S S Yu)An Algorithm for Matching OCR-Generated Text Strings (S V Rice et al.) Readership: Computer scientists. keywords:

Intelligent Problem Solving. Methodologies and Approaches Rasiah Logananthara 2003-07-31 The focus of the papers presented in these proceedings is on employing various methodologies and approaches for solving real-life problems. Although the mechanisms that the human brain employs to solve problems are not yet completely known, we do have good insight into the functional processing performed by the human mind. On the basis of the understanding of these natural processes, scientists in the field of applied intelligence have developed multiple types of artificial processes, and have employed them successfully in solving real-life problems. The types of approaches used to solve problems are dependant on both the nature of the problem and the expected outcome. While knowledge-based systems are useful for solving problems in well-understood domains with relatively stable environments, the approach may fail when the domain knowledge is either not very well understood or changing rapidly. The techniques of data discovery through data mining will help to alleviate some problems faced by knowledge-based approaches to solving problems in such

domains. Research and development in the area of artificial intelligence are influenced by opportunity, needs, and the availability of resources. The rapid advancement of Internet technology and the trend of increasing bandwidths provide an opportunity and a need for intelligent information processing, thus creating an excellent opportunity for agent-based computations and learning. Over 40% of the papers appearing in the conference proceedings focus on the area of machine learning and intelligent agents - clear evidence of growing interest in this area.

Official Gazette of the United States Patent and Trademark Office 1997

An Introduction to Neural Networks Kevin Gurney 2018-10-08 Though mathematical ideas underpin the study of neural networks, the author presents the fundamentals without the full mathematical apparatus. All aspects of the field are tackled, including artificial neurons as models of their real counterparts; the geometry of network action in pattern space; gradient descent methods, including back-propagation; associative memory and Hopfield nets; and self-organization and feature maps. The traditionally difficult topic of adaptive resonance theory is clarified within a hierarchical description of its operation. The book also includes several real-world examples to provide a concrete focus. This should enhance its appeal to those involved in the design, construction and management of networks in commercial environments and who wish to improve their understanding of network simulator packages. As a comprehensive and highly accessible introduction to one of the most important topics in cognitive and computer science, this volume should interest a wide range of readers, both students and professionals, in cognitive science, psychology, computer science and electrical engineering.

VLSI for Neural Networks and Artificial Intelligence Jose G. Delgado-Frias 2013-06-29 Neural network and artificial intelligence algorithrns and computing have increased not only in complexity but also in the number of applications. This in turn has posed a tremendous need for a larger computational power that conventional scalar processors may not be able to deliver efficiently. These processors are oriented towards numeric and data manipulations. Due to the neurocomputing requirements (such as non-programming and learning) and the artificial intelligence requirements (such as symbolic manipulation and knowledge representation) a different set of constraints and demands are imposed on the computer architectures/organizations for these applications. Research and development of new computer architectures and VLSI circuits for neural networks and artificial intelligence have been increased in order to meet the new performance requirements. This book presents novel approaches and trends on VLSI implementations of machines for these applications. Papers have been drawn from a number of research communities; the subjects span analog and digital VLSI design, computer design, computer architectures, neurocomputing and artificial intelligence techniques. This book has been organized into four subject areas that cover the two major categories of this book; the areas are: analog circuits for neural networks, digital implementations of neural networks, neural networks on multiprocessor systems and applications, and VLSI

machines for artificial intelligence. The topics that are covered in each area are briefly introduced below.

User Modeling Anthony Jameson 2014-05-04 User modeling researchers look for ways of enabling interactive software systems to adapt to their users-by constructing, maintaining, and exploiting user models, which are representations of properties of individual users. User modeling has been found to enhance the effectiveness and/or usability of software systems in a wide variety of situations. Techniques for user modeling have been developed and evaluated by researchers in a number of fields, including artificial intelligence, education, psychology, linguistics, human-computer interaction, and information science. The biennial series of International Conferences on User Modeling provides a forum in which academic and industrial researchers from all of these fields can exchange their complementary insights on user modeling issues. The published proceedings of these conferences represent a major source of information about developments in this area.

Methods and Procedures for the Verification and Validation of Artificial Neural Networks Brian J. Taylor 2006-03-20 Neural networks are members of a class of software that have the potential to enable intelligent computational systems capable of simulating characteristics of biological thinking and learning. Currently no standards exist to verify and validate neural network-based systems. NASA Independent Verification and Validation Facility has contracted the Institute for Scientific Research, Inc. to perform research on this topic and develop a comprehensive guide to performing V&V on adaptive systems, with emphasis on neural networks used in safety-critical or mission-critical applications. Methods and Procedures for the Verification and Validation of Artificial Neural Networks is the culmination of the first steps in that research. This volume introduces some of the more promising methods and techniques used for the verification and validation (V&V) of neural networks and adaptive systems. A comprehensive guide to performing V&V on neural network systems, aligned with the IEEE Standard for Software Verification and Validation, will follow this book.

Proceedings 1999 Symposium on Document Image Understanding Technology David Doermann 1999

Use of an Artificial Neural Network as a Trainable Image Filter Mark R. Watson 1999

Issues in the Use of Neural Networks in Information Retrieval Iuliana F. Iatan 2016-09-28 This book highlights the ability of neural networks (NNs) to be excellent pattern matchers and their importance in information retrieval (IR), which is based on index term matching. The book defines a new NN-based method for learning image similarity and describes how to use fuzzy Gaussian neural networks to predict personality.It introduces the fuzzy Clifford Gaussian network, and two concurrent neural models: (1) concurrent fuzzy nonlinear perceptron modules, and (2) concurrent fuzzy Gaussian neural network

modules.Furthermore, it explains the design of a new model of fuzzy nonlinear perceptron based on alpha level sets and describes a recurrent fuzzy neural network model with a learning algorithm based on the improved particle swarm optimization method.

Mining and Analyzing Social Networks I-Hsien Ting 2010-05-29 Mining social networks has now becoming a very popular research area not only for data mining and web mining but also social network analysis. Data mining is a technique that has the ability to process and analyze large amount of data and by this to discover valuable information from the data. In recent year, due to the growth of social communications and social networking websites, data mining becomes a very important and powerful technique to process and analyze such large amount of data. Thus, this book will focus upon Mining and Analyzing social network. Some chapters in this book are extended from the papers that presented in MSNDS2009 (the First International Workshop on Mining Social Networks for Decision Support) and SNMABA2009 ((The International Workshop on Social Networks Mining and Analysis for Business Applications)). In addition, we also sent invitations to researchers that are famous in this research area to contribute for this book. The chapters of this book are introduced as follows: In chapter 1-Graph Model for Pattern Recognition in Text, Qin Wu et al. present a novel approach that uses a weighted directed multigraph for text pattern recognition. In the proposed methodology, a weighted directed multigraph model has been set up by using the distances between the keywords as the weights of arcs as well a keyword-frequency distance based algorithm has also been introduced. Case studies are also included in this chapter to show the performance is better than traditional means.

Neural Information Processing: Research and Development Jagath Chandana Rajapakse 2004-05-04 This monograph presents a careful collection of recent research and developments in the field of neural information processing. This includes investigations in the functioning and engineering of biological neural networks and applications of artificial neural networks for solving real-world problems. The book is organized in three parts, architectures, learning algorithms and applications, with a variety of different examples and case studies from different fields such as the visual system, object detection, financial time series prediction, the auditory cortex, and robot manipulator control.

Recent Advances in Document Recognition and Understanding Minoru Mori 2011-10-21 In the field of document recognition and understanding, whereas scanned paper documents were previously the only recognition target, various new media such as camera-captured documents, videos, and natural scene images have recently started to attract attention because of the growth of the Internet/WWW and the rapid adoption of low-priced digital cameras/videos. The keys to the breakthrough include character detection from complex backgrounds, discrimination of characters from non-characters, modern or ancient unique font recognition, fast retrieval technique from large-scaled scanned documents, multi-lingual OCR, and unconstrained handwriting recognition. This book aims to

present recent advances, applications, and new ideas that are relevant to document recognition and understanding, from technical topics such as image processing, feature extraction or classification, to new applications like camera-based recognition or character-based natural scene analysis. The goal of this book is to provide a new trend and a reference source for academic research and for professionals working in the document recognition and understanding field

40 Algorithms Every Programmer Should Know Imran Ahmad 2020-06-12 Learn algorithms for solving classic computer science problems with this concise guide covering everything from fundamental algorithms, such as sorting and searching, to modern algorithms used in machine learning and cryptography Key FeaturesLearn the techniques you need to know to design algorithms for solving complex problemsBecome familiar with neural networks and deep learning techniquesExplore different types of algorithms and choose the right data structures for their optimal implementationBook Description Algorithms have always played an important role in both the science and practice of computing. Beyond traditional computing, the ability to use algorithms to solve real-world problems is an important skill that any developer or programmer must have. This book will help you not only to develop the skills to select and use an algorithm to solve real-world problems but also to understand how it works. You'll start with an introduction to algorithms and discover various algorithm design techniques, before exploring how to implement different types of algorithms, such as searching and sorting, with the help of practical examples. As you advance to a more complex set of algorithms, you'll learn about linear programming, page ranking, and graphs, and even work with machine learning algorithms, understanding the math and logic behind them. Further on, case studies such as weather prediction, tweet clustering, and movie recommendation engines will show you how to apply these algorithms optimally. Finally, you'll become well versed in techniques that enable parallel processing, giving you the ability to use these algorithms for compute-intensive tasks. By the end of this book, you'll have become adept at solving real-world computational problems by using a wide range of algorithms. What you will learnExplore existing data structures and algorithms found in Python librariesImplement graph algorithms for fraud detection using network analysisWork with machine learning algorithms to cluster similar tweets and process Twitter data in real timePredict the weather using supervised learning algorithmsUse neural networks for object detectionCreate a recommendation engine that suggests relevant movies to subscribersImplement foolproof security using symmetric and asymmetric encryption on Google Cloud Platform (GCP)Who this book is for This book is for programmers or developers who want to understand the use of algorithms for problem-solving and writing efficient code. Whether you are a beginner looking to learn the most commonly used algorithms in a clear and concise way or an experienced programmer looking to explore cutting-edge algorithms in data science, machine learning, and cryptography, you'll find this book useful. Although Python programming experience is a must, knowledge of data science will be helpful but not necessary.

Document Analysis Systems Seiichi Uchida 2022 This book constitutes the refereed proceedings of the 15th IAPR International Workshop on Document Analysis Systems, DAS 2022, held in La Rochelle, France, in May 2022. The full papers presented were carefully reviewed and selected from numerous submissions addressing key techniques of document analysis.

Document Analysis Systems VII Horst Bunke 2006-01-20 This book constitutes the refereed proceedings of the 7th International Conference on Document Analysis Systems, DAS 2006, held in Nelson, New Zealand, in February 2006. The 33 revised full papers and 22 poster papers presented were carefully reviewed and selected from 78 submissions. The papers are organized in topical sections on digital libraries, image processing, handwriting, document structure and format, tables, language and script identification, systems and performance evaluation, and retrieval and segmentation.

Information Retrieval David A. Grossman 1998-09-30 Information Retrieval: Algorithms and Heuristics is a comprehensive introduction to the study of information retrieval covering both effectiveness and run-time performance. The focus of the presentation is on algorithms and heuristics used to find documents relevant to the user request and to find them fast. Through multiple examples, the most commonly used algorithms and heuristics needed are tackled. To facilitate understanding and applications, introductions to and discussions of computational linguistics, natural language processing, probability theory and library and computer science are provided. While this text focuses on algorithms and not on commercial product per se, the basic strategies used by many commercial products are described. Techniques that can be used to find information on the Web, as well as in other large information collections, are included. This volume is an invaluable resource for researchers, practitioners, and students working in information retrieval and databases. For instructors, a set of Powerpoint slides, including speaker notes, are available online from the authors.

Research Anthology on Artificial Neural Network Applications Management Association, Information Resources 2021-07-16 Artificial neural networks (ANNs) present many benefits in analyzing complex data in a proficient manner. As an effective and efficient problem-solving method, ANNs are incredibly useful in many different fields. From education to medicine and banking to engineering, artificial neural networks are a growing phenomenon as more realize the plethora of uses and benefits they provide. Due to their complexity, it is vital for researchers to understand ANN capabilities in various fields. The Research Anthology on Artificial Neural Network Applications covers critical topics related to artificial neural networks and their multitude of applications in a number of diverse areas including medicine, finance, operations research, business, social media, security, and more. Covering everything from the applications and uses of artificial neural networks to deep learning and non-linear problems, this book is ideal for computer scientists, IT specialists, data scientists, technologists, business owners, engineers, government agencies, researchers, academicians, and students, as well as anyone

who is interested in learning more about how artificial neural networks can be used across a wide range of fields.

Advanced IT Tools Nobuyoshi Terashima 2013-11-18 TRACK 1: Innovative Applications in the Public Sector The integration of multimedia based applications and the information superhighway fundamentally concerns the creation of a communication technology to support the ac tivities of people. Communication is a profoundly social activity involving interactions among groups or individuals, common standards of exchange, and national infrastruc tures to support telecommunications activities. The contributions of the invited speakers and others in this track begin to explore the social dimension of communication within the context of integrated, information systems for the public sector. Interactions among businesses and households are described by Ralf Strauss through the development within a real community of a "wired city" with information and electronic services provided by the latest telecommunications technologies. A more specific type of interaction between teacher and student forms the basis of education. John Tiffin demonstrates how virtual classrooms can be used to augment the educational process. Carl Loeffler presents yet another perspective on interaction through the integration of A-life and agent technologies to investigate the dynamics of complex behaviors within networked simulation environments. Common standards for communication in the form of electronic documents or CSCW (Computer Supported Cooperative Work), according to Roland Traunmiiller, provide en abling technologies for a paradigm shift in the management of organizations. As pointed out by William Olle, the impact of standardization work on the future of information technology depends critically upon the interoperability of software systems.

Visualizing Document Processing Graziella Tonfoni 2004-01-01 The book aims to encourage multiple perspective reading attitudes, which are meant to trigger and inspire new ways of viewing and engineering information. An innovative linguistic theory as well as a new model for text generation and text understanding are illustrated. The linguistic theory, enhanced by a novel artificial intelligence-based approach, will help readers to acquire information engineering skills and may be implemented in the design of knowledge management systems.

Machine Learning in Document Analysis and Recognition Simone Marinai 2008-01-10 The objective of Document Analysis and Recognition (DAR) is to recognize the text and graphicalcomponents of a document and to extract information. With ?rst papers dating back to the 1960's, DAR is a mature but still gr- ing research?eld with consolidated and known techniques. Optical Character Recognition (OCR) engines are some of the most widely recognized pr- ucts of the research in this ?eld, while broader DAR techniques are nowadays studied and applied to other industrial and o?ce automation systems. In the machine learning community, one of the most widely known - search problems addressed in DAR is recognition of unconstrained handwr- ten characters which has been frequently used in the past as a benchmark for evaluating machine learning

algorithms, especially supervised classi?ers. However, developing a DAR system is a complex engineering task that involves the integration of multiple techniques into an organic framework. A reader may feel that the use of machine learning algorithms is not approp- ate for other DAR tasks than character recognition. On the contrary, such algorithms have been massively used for nearly all the tasks in DAR. With large emphasis being devoted to character recognition and word recognition, other tasks such as pre-processing, layout analysis, character segmentation, and signature veri?cation have also bene?ted much from machine learning algorithms.

Proceedings 2005 Symposium on Document Image Understanding Technology
University of Maryland/UMIACS 2005

Document Analysis and Recognition – ICDAR 2021 Josep Lladós 2021-09-04 This four-volume set of LNCS 12821, LNCS 12822, LNCS 12823 and LNCS 12824, constitutes the refereed proceedings of the 16th International Conference on Document Analysis and Recognition, ICDAR 2021, held in Lausanne, Switzerland in September 2021. The 182 full papers were carefully reviewed and selected from 340 submissions, and are presented with 13 competition reports. The papers are organized into the following topical sections: document analysis for literature search, document summarization and translation, multimedia document analysis, mobile text recognition, document analysis for social good, indexing and retrieval of documents, physical and logical layout analysis, recognition of tables and formulas, and natural language processing (NLP) for document understanding.

Handbook of Character Recognition and Document Image Analysis H Bunke 1997-05-02 Optical character recognition and document image analysis have become very important areas with a fast growing number of researchers in the field. This comprehensive handbook with contributions by eminent experts, presents both the theoretical and practical aspects at an introductory level wherever possible. Contents:Pattern Classification Techniques Based on Function Approximation (U Kressel & J Schürmann)Combination of Multiple Classifier Decisions for Optical Character Recognition (L Lam et al.)Segmentation-Based Cursive Handwriting Recognition (M Shridhar & F Kimura)Handwritten Word Recognition Using Hidden Markov Models (A Kundu)Techniques for Improving OCR Results (A Dengel et al.)Multilingual Document Recognition (A L Spitz)Arabic Character Recognition (A Amin)Interpretation of Engineering Drawings (K Tombre & D Dori)Automatic Reading of Music Notation (D Bainbridge & N Carter)Algorithms for Automatic Signature Verification (G Dimauro et al.)Automatic Reading of Braille Documents (A Antonacopoulos)Information Retrieval and OCR (K Taghva et al.)Benchmarking DIA Systems (T A Nartker et al.)and other papers Readership: Computer scientists and engineers. keywords:

Artificial Neural Networks and Machine Learning – ICANN 2018 Věra Kůrková 2018-09-26 This three-volume set LNCS 11139-11141 constitutes the refereed proceedings of the 27th International Conference on Artificial Neural Networks, ICANN 2018, held in Rhodes, Greece, in October 2018. The papers presented in

these volumes was carefully reviewed and selected from total of 360 submissions. They are related to the following thematic topics: AI and Bioinformatics, Bayesian and Echo State Networks, Brain Inspired Computing, Chaotic Complex Models, Clustering, Mining, Exploratory Analysis, Coding Architectures, Complex Firing Patterns, Convolutional Neural Networks, Deep Learning (DL), DL in Real Time Systems, DL and Big Data Analytics, DL and Big Data, DL and Forensics, DL and Cybersecurity, DL and Social Networks, Evolving Systems – Optimization, Extreme Learning Machines, From Neurons to Neuromorphism, From Sensation to Perception, From Single Neurons to Networks, Fuzzy Modeling, Hierarchical ANN, Inference and Recognition, Information and Optimization, Interacting with The Brain, Machine Learning (ML), ML for Bio Medical systems, ML and Video-Image Processing, ML and Forensics, ML and Cybersecurity, ML and Social Media, ML in Engineering, Movement and Motion Detection, Multilayer Perceptrons and Kernel Networks, Natural Language, Object and Face Recognition, Recurrent Neural Networks and Reservoir Computing, Reinforcement Learning, Reservoir Computing, Self-Organizing Maps, Spiking Dynamics/Spiking ANN, Support Vector Machines, Swarm Intelligence and Decision-Making, Text Mining, Theoretical Neural Computation, Time Series and Forecasting, Training and Learning.

Proceedings 1995 Symposium on Document Image Understanding Technology David Doermann 1995-10

An Introduction to Neural Information Retrieval Bhaskar Mitra 2018-12-23 Efficient Query Processing for Scalable Web Search will be a valuable reference for researchers and developers working on This tutorial provides an accessible, yet comprehensive, overview of the state-of-the-art of Neural Information Retrieval.

OECD Series on Testing and Assessment Guidance Document on the Reporting of Defined Approaches and Individual Information Sources to be Used within Integrated Approaches to Testing and Assessment (IATA) for Skin Sensitisation OECD 2017-07-11 With a view to assisting the evaluation of integrated approaches to testing and assessment (IATA) in regulatory decision-making within OECD Member Countries, this guidance document provides guidance on the reporting of defined approaches to testing and assessment in the area of skin ...

Artificial Neural Networks and Machine Learning – ICANN 2017 Alessandra Lintas 2017-10-24 The two volume set, LNCS 10613 and 10614, constitutes the proceedings of then 26th International Conference on Artificial Neural Networks, ICANN 2017, held in Alghero, Italy, in September 2017. The 128 full papers included in this volume were carefully reviewed and selected from 270 submissions. They were organized in topical sections named: From Perception to Action; From Neurons to Networks; Brain Imaging; Recurrent Neural Networks; Neuromorphic Hardware; Brain Topology and Dynamics; Neural Networks Meet Natural and Environmental Sciences; Convolutional Neural Networks; Games and Strategy; Representation and Classification; Clustering; Learning from Data

Streams and Time Series; Image Processing and Medical Applications; Advances in Machine Learning. There are 63 short paper abstracts that are included in the back matter of the volume.

Deep Learning in Natural Language Processing Li Deng 2018-05-23 In recent years, deep learning has fundamentally changed the landscapes of a number of areas in artificial intelligence, including speech, vision, natural language, robotics, and game playing. In particular, the striking success of deep learning in a wide variety of natural language processing (NLP) applications has served as a benchmark for the advances in one of the most important tasks in artificial intelligence. This book reviews the state of the art of deep learning research and its successful applications to major NLP tasks, including speech recognition and understanding, dialogue systems, lexical analysis, parsing, knowledge graphs, machine translation, question answering, sentiment analysis, social computing, and natural language generation from images. Outlining and analyzing various research frontiers of NLP in the deep learning era, it features self-contained, comprehensive chapters written by leading researchers in the field. A glossary of technical terms and commonly used acronyms in the intersection of deep learning and NLP is also provided. The book appeals to advanced undergraduate and graduate students, post-doctoral researchers, lecturers and industrial researchers, as well as anyone interested in deep learning and natural language processing.

Artificial Neural Network and Its Applications in Quality Process Control, Document Recognition and Biomedical Imaging Mohammed Jahirul Islam 2010

Guidance for the Verification and Validation of Neural Networks Laura L. Pullum 2007-03-09 This book provides guidance on the verification and validation of neural networks/adaptive systems. Considering every process, activity, and task in the lifecycle, it supplies methods and techniques that will help the developer or V&V practitioner be confident that they are supplying an adaptive/neural network system that will perform as intended. Additionally, it is structured to be used as a cross—reference to the IEEE 1012 standard.

Automatic Indexing and Abstracting of Document Texts Marie-Francine Moens 2006-04-11 Automatic Indexing and Abstracting of Document Texts summarizes the latest techniques of automatic indexing and abstracting, and the results of their application. It also places the techniques in the context of the study of text, manual indexing and abstracting, and the use of the indexing descriptions and abstracts in systems that select documents or information from large collections. Important sections of the book consider the development of new techniques for indexing and abstracting. The techniques involve the following: using text grammars, learning of the themes of the texts including the identification of representative sentences or paragraphs by means of adequate cluster algorithms, and learning of classification patterns of texts. In addition, the book is an attempt to illuminate new avenues for future research. Automatic Indexing and Abstracting of Document Texts is an excellent reference for researchers and professionals working in the field of content management

and information retrieval.

Artificial Neural Networks Chi Leung Patrick Hui 2011-04-11 This book covers 27 articles in the applications of artificial neural networks (ANN) in various disciplines which includes business, chemical technology, computing, engineering, environmental science, science and nanotechnology. They modeled the ANN with verification in different areas. They demonstrated that the ANN is very useful model and the ANN could be applied in problem solving and machine learning. This book is suitable for all professionals and scientists in understanding how ANN is applied in various areas.

Artificial Neural Networks - ICANN 2007 Joaquim Marques de Sá 2007-09-14 This book is the second of a two-volume set that constitutes the refereed proceedings of the 17th International Conference on Artificial Neural Networks, ICANN 2007. It features contributions related to computational neuroscience, neurocognitive studies, applications in biomedicine and bioinformatics, pattern recognition, self-organization, text mining and internet applications, signal and times series processing, vision and image processing, robotics, control, and more.

Neural Network Design Martin T. Hagan 2003

Official Gazette of the United States Patent and Trademark Office United States. Patent and Trademark Office 2000