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Directory of United States Importers ISD LLC

Intelligent systems, or artificial intelligence technologies, are playing an increasing role in areas ranging from medicine to the major manufacturing industries to financial markets. The consequences of flawed artificial intelligence systems are equally wide ranging and can be seen, for example, in the programmed trading-driven stock

market crash of October 19, 1987. Intelligent Systems: Technology and Applications, Six Volume Set connects theory with proven practical applications to provide broad, multidisciplinary coverage in a single resource. In these volumes, international experts present case-study examples of successful practical techniques and solutions for diverse applications ranging from robotic systems to speech and signal processing, database management, and manufacturing.

Intelligent Systems Intelligent and Fuzzy Techniques: Smart and Innovative Solutions

The brain-like architecture of artificial neural networks makes them ideal for tackling problems that are too difficult for conventional architectures, specifically problems that involve pattern recognition or other perceptual tasks. Neuro-Computers: Optimization Based Learning provides an intermediate-level exposition of the exciting world of neuro-computers. It presents the importance of neuro-computing to artificial intelligence, giving historical background and present-day implementation options. The book demonstrates the superiority of the adaptive search strategy over conventional fixed parameter searches performed by backpropagation algorithms. It then explores global optimization strategy and presents genetic algorithms as viable methods to train neuro computers on non-trivial problems. This self-contained volume is delivered in a format that is suitable for graduate students, as well as researchers who want to begin work in neuro-computing or related artificial intelligence applications.

LexisNexis Corporate

Affiliations Apress

Machine learning techniques provide cost-effective alternatives to traditional methods for extracting underlying relationships between information and data and for predicting future events by processing existing information to train models. Efficient Learning Machines explores the major topics of machine learning, including knowledge discovery, classifications, genetic algorithms, neural networking, kernel methods, and biologically-inspired techniques. Mariette Awad and Rahul Khanna ' s synthetic approach weaves together the theoretical exposition, design principles, and practical applications of efficient machine learning. Their experiential emphasis, expressed in their close analysis of sample algorithms throughout the book, aims to equip engineers, students of engineering, and system designers to design and create new and more efficient machine learning systems. Readers of Efficient Learning Machines will learn how to recognize and analyze the problems that machine learning technology can solve for them, how to implement and deploy standard solutions to sample problems, and how to design new systems and solutions. Advances in computing performance, storage, memory, unstructured information retrieval, and cloud computing have coevolved with a new generation of machine learning paradigms and big data analytics, which the authors present in the conceptual context of their traditional precursors. Awad and Khanna explore current developments in the deep learning techniques of deep neural networks, hierarchical temporal memory, and cortical algorithms. Nature

suggests sophisticated learning techniques that deploy simple rules to generate highly intelligent and organized behaviors with adaptive, evolutionary, and distributed properties. The authors examine the most popular biologically-inspired algorithms, together with a sample application to distributed datacenter management. They also discuss machine learning techniques for addressing problems of multi-objective optimization in which solutions in real-world systems are constrained and evaluated based on how well they perform with respect to multiple objectives in aggregate. Two chapters on support vector machines and their extensions focus on recent improvements to the classification and regression techniques at the core of machine learning.

Statement of Disbursements of the House as Compiled by the Chief Administrative Officer from ... Packt Publishing Ltd

For more than 20 years, Network World has been the premier provider of information, intelligence and insight for network and IT executives responsible for the digital nervous systems of large organizations. Readers are responsible for designing, implementing and managing the voice, data and video systems their companies use to support everything from business critical applications to employee collaboration and electronic commerce.

Human Compatible Springer Nature

The Pen & Cape Society, in conjunction with Local Hero Press, is proud to present The Good Fight, an anthology of superhero fiction from some of the best authors working in the

genre. Collected within this volume are stories by Scott Bachmann, Frank Byrns, Marion Harmon, Warren Hately, Drew Hayes, Ian Thomas Healy, Hydrargentium, Michael Ivan Lowell, T. Mike McCurley, Landon Porter, R. J. Ross, Cheyanne Young, and Jim Zoetewey. After enjoying the stories in The Good Fight, please be sure to check out the works of the individual authors, because they're just super!

The Security Intelligence Handbook, Third Edition

CRC Press

The aim of Religion and Violence is to engage dialectically key symbols of religiously motivated violence through the insights of Bernard Lonergan. Sociologists and psychologists argue the link between religion and violence, but religion is viewed more as part of the problem and not part of the solution to violence. Bernard Lonergan's insights have helped the author arrive at a number of conclusions regarding the link between religion and violence. He argues that there is a difference between distorted religion and genuine religion, between authenticity and inauthenticity of the subject. Distorted religion has the capacity to shape traditions in ways that justify violence, while genuine religion heals persons, helps them make different moral decisions when confronted with situations of conflict, and aims to explore new ways of understanding themselves as shaping history toward progress.

Switching Power Converters

Springer

This book constitutes the refereed proceedings of the 8th EAI International Conference on Industrial Networks and Intelligent Systems, INISCOM 2022, held in April 2022. Due to COVID-19 pandemic the conference was held virtually. The 19 full papers were selected from 48 submissions and are organized thematically in tracks on Telecommunications Systems and Networks; Information Processing and Data Analysis; Industrial Networks and Intelligent Systems; Security and Privacy.

The Art of Cyber Leadership

Independently Published

This document brings together a set of latest data points and publicly available information relevant for Digital Customer Experience Technology. We are very excited to share this content and believe that readers will benefit from this periodic publication immensely.

Health Informatics and Technological Solutions for Coronavirus (COVID-19)

Macmillan

ChapterSixIs Artificial Intelligent the most effective andaccurate consumer behavioral tool?Is (AI) the best and the most effective and accurate consumer behavioral prediction tool to compare other kinds of consumer behavioral prediction tools? Nowadays, retailing competitions are serious businessmen often find different kinds of methods to attempt to predict consumer changes. The consumer behavioral predictive methods can include as these below methods, instead of (AI) big data gathering tool.Firstly, statistics is the popular mathematic method, it applies auto-regression, liner regression, structural

equation modelling, logistic regression statistic techniques to be used to predict consumer behaviors. Secondly, it is classification method, it sis a support vector machine to assist businessmen to make consumer behavioral prediction, it also includes decision making tress diagram technique. Thirdly, it is rule mining method, it is algorithm, market base analytic etc. business marketing concept analytical tool, it also includes graph mining technique tool. Next, it is psychological prediction model tool, it is psychology prediction model too, it is a kind of psychological method to predict consumer behaviors. Finally, it is the most updated and potential artificial neural network (ANN) machine tool, it gathered big data, then it will carry on analyzing and applies psychological method to conclude the most accurate and reasonable solutions to give recommendation to businesses to predict when and how and why their consumer behaviors will change. So, it is one owned human mind's machine and owned psychological and analytical efforts to replace humans to make any judgement in order to make the most accurate predictive behavioral changes for consumers, instead of the traditional marketing concept and psychological and mathematic methods to predict consumer behavior, (AI) big data gathering tool will be another new tool.What are the advantages of (AI) tool to be used to predict consumer behaviors as well as what are the

different between it and other traditional consumer behavioral predictive tools? I shall explain as below: Firstly, as above all case studies are explained to (AI) questionnaire design method benefit, I believe (AI) big data gathering tool can be applied to help human to analyze and design any the suitable valid questions to enquire any kinds of business consumers in order to gather the most meaning and useful opinions to conclude the most accurate consumer behavioral prediction for every questionnaire. So, future (AI)'s analytical effort and decision making effort most be exceed above human's judgement efforts. So, future (AI) can help human to design the most useful and meaning different kinds of valid questionnaire (survey) questions as well as assist humans to analyze and make accurate decision making and conclusions to give opinions to help businessmen to predict when consumer behaviors will change and how their consumption behaviors will change to influence their businesses in order to help them to make any efficient and effective and accurate solutions to avoid consumer number to be decreased and the most important benefit is that it can give opinions to help businessmen to explain why (what the factors) cause their consumer behaviors change suddenly. It will be human's efforts can not achieve to exceed (AI)'s efforts in the future.Secondly, (AI) can make artificial machine judgement and analytical effort, without human

misleading or unfair or unreasonable judgement. So, it can make more fair and reasonable and accurate conclusion to give opinions to predict when, how and why consumer behaviors will change suddenly to the kind of business in customer model building process and evaluating the results of customer relationship management -related investment more accurate.

Official Gazette of the United States Patent and Trademark Office Stylus Publishing, LLC

Work is getting whipsawed. Teams are geographically distributed, digital strategies are shattering organizational hierarchies, competition is multi-directional, and digital natives are overturning long-time company norms. Modern work needs new masters to rise up and lead.Done Right pulls from over thirty original interviews with experienced leaders across a variety of industries to show how tomorrow

Done Right CRC Press

With the great progress in information and communications technologies in the past few decades, intelligent transportation systems (ITS) have accumulated vast amounts of data regarding the movement iof people and goods from one location to another. Besides the traditional fixed sensors and GPS devices, new emerging data sources and approaches such as social media and crowdsourcing can be used to extract travel-related data, especially given the wide popularity of mobile devices such as smartphones and tablets, along with their associated apps. To take advantage of all these data and to address the associated challenges, big data techniques, and a new emerging field called data science, are currently receiving more and more

attention. Data science employs techniques and theories from many fields such as statistics, machine learning, data mining, analytical models and computer programming to solve the data analysis task. It is therefore timely and important to explore how data science may be best employed for transportation data analysis. In this doctoral study, an integrative approach is proposed for data science applications in ITS. The proposed approach constitutes to an integration of multiple steps in the data analysis process, or integration of different models to build a more powerful one. The integrative approach is applied and tested on two case studies: border crossing delay prediction and traffic accident data analysis. For the first case study, a two-step border crossing delay prediction model is proposed, consisting of a short-term traffic volume prediction model and a multi-server queueing model. As such, this can be seen as an integration of data-driven models and analytical models. For the first step, the short-term traffic volume prediction model, an integration of data "width" decreasing (i.e., data grouping) step and model development step is applied. For model development, a model combination step of a Seasonal Autoregressive Integrated Moving Average Model (SARIMA) and Support Vector Regression (SVR) is applied to realize better performance than when using each single model. In addition, the spinning network (SPN) forecasting paradigm is enhanced for border crossing traffic prediction through the utilization of a dynamic time warping (DTW) similarity metric. The DTW-SPN is shown to yield several advantages such as computational efficiency and

accuracy as demonstrated by a promising Mean Absolute Percent Error (MAPE) compared to SARIMA and SVR. This dissertation also proposes the introduction of a data diagnosis step before short-term traffic prediction. In order to develop a methodology for model selection guidance, the author calculated the statistical measures of nonlinearity and complexity for multiple datasets and correlated those to the performances of multiple models SARIMA, SVR and k nearest neighbor (k-NN). Based on this, useful insights are revealed pertaining to parameter setting and model selection based on the data diagnosis results. For the second step, namely the queueing model development, heuristic solutions are presented for two types of queueing models M/E_K/n and BMAP/PH/n. These models take the predicted traffic volume as input, and use it to calculate future waiting time. The analytical results are compared to the results from a VISSIM model simulation results, and shown to be comparable. . Finally, an android smartphone app, which utilizes the two-step border prediction model methodology described above, is developed to collect, share and predict waiting time at the three Niagara Frontier border crossings. For the second case study involving traffic accident data analysis, first an integration of a data "depth" decreasing step and a model development step is once again applied. To do this, the modularity-optimizing community detection algorithm is used to cluster the dataset, and for each cluster, the association rule algorithm is applied to yield insight into traffic accident hotspots and incident clearance time. The results show that more meaningful association rules

can be derived when the data is clustered compared to when using the whole dataset directly. Secondly, an integration of a data "width" decreasing step (variable selection) and model development step is applied for real-time traffic accident risk prediction. For this, a novel variable selection method based on the Frequent Pattern tree (FP tree) algorithm is proposed and tested, before applying Bayesian networks and the k-NN algorithms. The experiment shows the models based on variables selected by FP tree always performed better than those using variables selected by the random forecast method. Lastly, an integration of the data mining model, M5P tree, and the hazard-based duration model (HBDM) statistical method is applied to traffic accident duration prediction. The M5P-HBDM method is shown to be capable of identifying more meaningful factors that impact the traffic accident duration, and to have a better prediction performance, than either M5P or HBDM. The two case studies considered in this dissertation serve to illustrate the advantages of an integrative data science approach to analyzing transportation data. With this approach, invaluable insight is gained that can help solve transportation problems and guide public policy.

GIS World John Wiley & Sons

Intelligent and Fuzzy Techniques: Smart and Innovative SolutionsSpringer Nature

Data Science Application in Intelligent Transportation Systems Springer Nature

InfoWorld is targeted to Senior IT professionals. Content is segmented into Channels and Topic Centers. InfoWorld also celebrates people, companies, and

projects.

InfoWorld CRC Press

An examination of all of the multidisciplinary aspects of medium- and high-power converter systems, including basic power electronics, digital control and hardware, sensors, analog preprocessing of signals, protection devices and fault management, and pulse-width-modulation (PWM) algorithms, Switching Power Converters: Medium and High Power, Second Edition discusses the actual use of industrial technology and its related subassemblies and components, covering facets of implementation otherwise overlooked by theoretical textbooks. The updated Second Edition contains many new figures, as well as new and/or improved chapters on: Thermal management and reliability Intelligent power modules AC/DC and DC/AC current source converters Multilevel converters Use of IPM within a "network of switches" concept Power semiconductors Matrix converters Practical aspects in building power converters Providing the latest research and development information, along with numerous examples of successful home appliance, aviation, naval, automotive electronics, industrial motor drive, and grid interface for renewable energy products, this edition highlights advancements in packaging technologies, tackles the advent of hybrid circuits able to incorporate control and power stages within the same package, and examines design for reliability from the system level perspective.

Natural Language Processing: Concepts, Methodologies, Tools, and Applications Springer Nature As technology continues to become more sophisticated, a computer's ability to understand, interpret, and manipulate natural language is also accelerating. Persistent research in the field of natural language processing enables an understanding of the world around us, in addition to opportunities for manmade computing to mirror natural language processes that have existed for centuries. Natural Language Processing: Concepts, Methodologies, Tools, and Applications is a vital reference source on the latest concepts, processes, and techniques for communication between computers and humans. Highlighting a range of topics such as machine learning, computational linguistics, and semantic analysis, this multi-volume book is ideally designed for computer engineers, computer and software developers, IT professionals, academicians, researchers, and upper-level students seeking current research on the latest trends in the field of natural language processing.

Stormwater Springer Nature Originating from models of biological neural systems, artificial neural networks (ANN) are the cornerstones of artificial intelligence research. Catalyzed by the upsurge in computational power and availability, and made widely accessible with the co-evolution of software, algorithms, and methodologies, artificial neural networks have had a profound impact in the elucidation of complex biological, chemical, and

environmental processes. Artificial Neural Networks in Biological and Environmental Analysis provides an in-depth and timely perspective on the fundamental, technological, and applied aspects of computational neural networks. Presenting the basic principles of neural networks together with applications in the field, the book stimulates communication and partnership among scientists in fields as diverse as biology, chemistry, mathematics, medicine, and environmental science. This interdisciplinary discourse is essential not only for the success of independent and collaborative research and teaching programs, but also for the continued interest in the use of neural network tools in scientific inquiry. The book covers: A brief history of computational neural network models in relation to brain function Neural network operations, including neuron connectivity and layer arrangement Basic building blocks of model design, selection, and application from a statistical perspective Neurofuzzy systems, neuro-genetic systems, and neuro-fuzzy-genetic systems Function of neural networks in the study of complex natural processes Scientists deal with very complicated systems, much of the inner workings of which are frequently unknown to researchers. Using only simple, linear mathematical methods, information that is needed to truly understand natural systems may be lost. The development of new algorithms to model such processes is needed, and ANNs can play a major role. Balancing basic principles and diverse applications, this text introduces newcomers to the field and reviews recent developments of interest to active neural network practitioners.

Intelligent Automatic Generation Control CRC Press

Through a series of recent breakthroughs, deep learning has boosted the entire field of machine learning. Now, even programmers who know close to nothing about this

technology can use simple, efficient tools to implement programs capable of learning from data. This practical book shows you how. By using concrete examples, minimal theory, and two production-ready Python frameworks—Scikit-Learn and TensorFlow—author Aurélien Géron helps you gain an intuitive understanding of the concepts and tools for building intelligent systems. You'll learn a range of techniques, starting with simple linear regression and progressing to deep neural networks. With exercises in each chapter to help you apply what you've learned, all you need is programming experience to get started. Explore the machine learning landscape, particularly neural nets Use Scikit-Learn to track an example machine-learning project end-to-end Explore several training models, including support vector machines, decision trees, random forests, and ensemble methods Use the TensorFlow library to build and train neural nets Dive into neural net architectures, including convolutional nets, recurrent nets, and deep reinforcement learning Learn techniques for training and scaling deep neural nets

Advanced Control Systems - Theory and Applications Elsevier

So-called Intent-Based Networking (IBN) is founded on well-known SDN (Software-Defined Networking) and represents one of the most important emerging network infrastructure opportunities. The IBN is the beginning of a new era in the history of networking, where the network itself translates business intentions into appropriate network configurations for all devices. This minimizes manual effort, provides an additional layer of

network monitoring, and provides the ability to perform network analytics and take full advantage of machine learning. The centralized, software-defined solution provides process automation and proactive problem solving as well as centralized management of the network infrastructure. With software-based network management, many operations can be performed automatically using intelligent control algorithms (artificial intelligence and machine learning). As a result, network operation costs, application response times and energy consumption are reduced, network reliability and performance are improved, network security and flexibility are enhanced. This will be a benefit for existing networks as well as evolved LTE-based mobile networks, emerging Internet of Things (IoT), Cloud systems, and soon for the future 5G/6G networks. The future networks will reach a whole new level of self-awareness, self-configuration, self-optimization, self-recovery and self-protection. This volume consists of 28 chapters, based on recent research on IBN.The volume is a collection of the most important research for the future intent-based networking deployment provided by different groups of researchers from Ukraine, Germany, Slovak Republic, Switzerland, South Korea, China, Czech Republic, Poland, Brazil, Belarus and Israel. The authors of the chapters from this collection present in depth extended research results in their scientific fields.The presented contents are highly interesting while still being rather practically oriented and straightforward to understand. Herewith we would like to wish all our readers a lot of inspiration by studying of the volume!

Efficient Learning Machines
Local Hero Press, LLC
This text provides information on the design of machinery. It presents vector mathematical and matrix solution methods for analysis of both kinetic and dynamic analysis topics, and emphasizes the use of computer-aided engineering as an approach to the design and analysis of engineering problems. The author aims to convey the art of the design process in order to prepare students to successfully tackle genuine engineering problems encountered in practice. The book also emphasizes the synthesis and design aspects of the subject with analytical synthesis of linkages covered and cam design is given a thorough and practical treatment.

Future Intent-Based Networking
CRC Press
A list of U.S. importers and the products they import. The main company listing is geographic by state while products are listed by Harmonized Commodity Codes. There are also alphabetical company and product indexes.