

Advanced Recommendations With Collaborative Filtering

The book gathers papers addressing state-of-the-art research in all areas of Information and Communication Technologies and their applications in intelligent computing, cloud storage, data mining and software analysis. It presents the outcomes of the third International Conference on Information and Communication Technology for Intelligent Systems, which was held on April 6-7, 2018, in Ahmedabad, India. Divided into two volumes, the book discusses the fundamentals of data analytics and algorithms, making it a valuable resource for researchers' future studies. This second edition of a well-received text, with 20 new chapters, presents a coherent and up-to-date repository of recommender systems' major concepts, theories, methodologies, trends, and challenges. A variety of real-world applications and detailed case studies are included. In addition to whole revision of the existing chapters, this edition includes new topics including: decision making in recommender systems, reciprocal recommender systems, recommender systems in social networks, mobile recommender systems, explanations for recommender systems, music recommender systems, cross-domain recommendations, privacy in recommender systems, and semantic-based recommender systems. This multi-disciplinary handbook involves world-wide experts from diverse fields such as artificial intelligence, human-computer interaction, information retrieval, data mining, mathematical statistics, adaptive user interfaces, decision support systems, psychology, marketing, and consumer behavior. Theoreticians and practitioners from these fields will find this reference to be an invaluable source of ideas, methods and techniques for developing more efficient, cost-effective and accurate recommender systems.

Want to tap the power behind search rankings, product recommendations, social bookmarking, and online matchmaking? This fascinating book demonstrates how you can build Web 2.0 applications that mine the enormous amount of data created by people on the Internet. With the sophisticated algorithms in this book, you can write smart programs to access interesting datasets from online sites, collect data from users of your own applications, and analyze and understand the data you've found it. Programming Collective Intelligence takes you into the world of machine learning and statistics, and explains how to draw conclusions about user experience, marketing, personal tastes, and human behavior in general -- all from information that you and others collect every day. Each algorithm is described clearly and concisely with code that can immediately be used on your web site, blog, Wiki, or specialized application. This book explains: Collaborative filtering techniques that enable online retailers to recommend products or media Methods of clustering to detect similar items in a large dataset Search engine features -- crawlers, indexers, query engines, and PageRank algorithm Optimization algorithms that search millions of possible solutions to a problem and choose the best one Bayesian filtering, used in spam filters for classifying documents based on word types and other features Using decision trees not only to make predictions, but to model decisions are made Predicting numerical values rather than classifications to build price models Support vector machines to match people in online dating sites Non-negative matrix factorization to find the independent features in a dataset Evolving intelligence for problem solving -- how a computer develops its skill by improving its own code the more it plays a game Each chapter includes exercises for extending the algorithms to make them more powerful. Go beyond simple database-backed applications and put the wealth of Internet data to work for you. "Bravo! I cannot think of a better way for a developer to first learn these algorithms and methods, nor can I think of a better way for me (an old AI dog) to reinvigorate my knowledge of the details." -- Dan Russell, Google "This book does a great job of breaking down the complex subject matter of machine-learning algorithms into practical, easy-to-understand examples that can be directly applied to analysis of social interaction across the Web today. If I had this book two years ago, it would have saved precious time going down some fruitless paths." -- Tim Wolters, CTO, Collective Intellect

R and Data Mining introduces researchers, post-graduate students, and analysts to data mining with R, a free software environment for statistical computing and graphics. The book provides practical methods for using R in applications from academia to industry to extract knowledge from vast amounts of data. Readers will find this book a valuable guide to the use of R in tasks such as classification and prediction, clustering, outlier detection, association rules, sequence analysis, mining, social network analysis, sentiment analysis, and more. Data mining techniques are growing in popularity in a broad range of areas, from banking to insurance, retail, telecom, medicine, research, and government. This book focuses on the modeling phase of the data mining process, addressing data exploration and model evaluation. With three in-depth case studies, a quick reference guide, bibliography, and links to a wealth of online resources, R and Data Mining is a valuable, practical guide to a powerful method of analysis. Presents an introduction into using R for data mining applications, covering most popular data mining techniques Provides code examples and so that readers can easily learn the techniques Features case studies in real-world applications so readers apply the techniques in their work

Advanced Data Mining and Applications

32nd European Conference on IR Research, ECIR 2010, Milton Keynes, UK, March 28-31, 2010 Proceedings

From Marketing to Social Change

14th Asia-Pacific Web Conference, APWeb 2012, Kunming, China, April 11-13, Proceedings Strategic Social Media

Proceedings of IFIPTM 2008: Joint iTrust and PST Conferences on Privacy, Trust Management Security, June 18-20, 2008, Trondheim, Norway

This book constitutes the refereed proceedings of the 32nd annual European Conference on Information Retrieval Research, ECIR 2010, held in Milton Keynes, UK, in March 2010. The 44 revised full papers and 23 poster papers presented together with the keynote lecture, 5 tool demonstrations and the abstracts of 3 invited lectures were carefully reviewed and selected from 202 full research paper submissions and 73 poster/demo submissions. The papers are organized in topical sections on NLP and text mining, Web IR, evaluation, multimedia IR, distributed IR and performance issues, IR theory and formal models, personalization and recommendation, domain-specific IR and CLIR, as well as user issues.

This comprehensive encyclopedia, in A-Z format, provides easy access to relevant information for those seeking entry into any aspect within the broad field of Machine Learning. Most of the entries in this preeminent work include useful literature references.

Track 1 Artificial Intelligence, Software Engineering, Networking and Security Systems Artificial Intelligence Artificial Intelligence in Autonomous Vehicles Augmented Reality, Virtual Reality, Bioinformatics Machine Learning and Deep learning Track 2 Energy, Robotics, Electronics, Sensors and Communications Power System, FACTS and Stability Analysis Circuits, Devices & Systems and Green Electrical Components Smart Grid & Micro Grid, Renewable energy & Sustainability Energy Economics and Energy Storage Systems Electrical Machines, Drives and Traction system Track 3 Industry 4 0 Applications Track 4 Business Informatics

This book presents group recommender systems, which focus on the

determination of recommendations for groups of users. The authors summarize different technologies and applications of group recommender systems. They include an in-depth discussion of state-of-the-art algorithms, an overview of industrial applications, an inclusion of the aspects of decision biases in groups, and corresponding de-biasing approaches. The book includes a discussion of basic group recommendation methods, aspects of human decision making in groups, and related applications. A discussion of open research issues is included to inspire new related research. The book serves as a reference for researchers and practitioners working on group recommendation related topics.

Math for Machine Learning

Building Recommender Systems with Machine Learning and AI: Help People Discover New Products and Content with Deep Learning, Neural Networks, and Mach

Practical Tools and Applications in Medical, Agricultural and Other Industries
The Textbook

Soft Computing for Problem Solving

Advanced Methodologies and Technologies in Network Architecture, Mobile Computing, and Data Analytics

This book is the proceedings of the 3rd World Conference on Soft Computing (WCSC), which was held in San Antonio, TX, USA, on December 16-18, 2013. It presents start-of-the-art theory and applications of soft computing together with an in-depth discussion of current and future challenges in the field, providing readers with a 360 degree view on soft computing. Topics range from fuzzy sets, to fuzzy logic, fuzzy mathematics, neuro-fuzzy systems, fuzzy control, decision making in fuzzy environments, image processing and many more. The book is dedicated to Lotfi A. Zadeh, a renowned specialist in signal analysis and control systems research who proposed the idea of fuzzy sets, in which an element may have a partial membership, in the early 1960s, followed by the idea of fuzzy logic, in which a statement can be true only to a certain degree, with degrees described by numbers in the interval $[0,1]$. The performance of fuzzy systems can often be improved with the help of optimization techniques, e.g. evolutionary computation, and by endowing the corresponding system with the ability to learn, e.g. by combining fuzzy systems with neural networks. The resulting “consortium” of fuzzy, evolutionary, and neural techniques is known as soft computing and is the main focus of this book.

This book comprehensively covers the topic of recommender systems, which provide personalized recommendations of products or services to users based on their previous searches or purchases. Recommender system methods have been adapted to diverse applications including query log mining, social networking, news recommendations, and computational advertising. This book synthesizes both fundamental and advanced topics of a research area that has now reached maturity. The chapters of this book are organized into three categories: Algorithms and evaluation: These chapters discuss the fundamental algorithms in recommender systems, including collaborative filtering methods, content-based methods, knowledge-based methods, ensemble-based methods, and evaluation. Recommendations in specific domains and contexts: the context of a recommendation can be viewed as important side information that affects the recommendation goals. Different types of context such as temporal data, spatial data, social data, tagging data, and

trustworthiness are explored. Advanced topics and applications: Various robustness aspects of recommender systems, such as shilling systems, attack models, and their defenses are discussed. In addition, recent topics, such as learning to rank, multi-armed bandits, group systems, multi-criteria systems, and active learning systems, are introduced together with applications. Although this book primarily serves as a textbook, it will also appeal to industrial practitioners and researchers due to its focus on applications and references. Numerous examples and exercises have been provided, and a solution manual is available for instructors.

This book explains the math behind machine learning using simple but concrete examples. This book will get you started in machine learning in a smooth and natural way, preparing you for more advanced topics and dispelling the belief that machine learning is complicated, difficult, and intimidating.

Recommender systems provide users (businesses or individuals) with personalized online recommendations of products or information, to address the problem of information overload and improve personalized services. Recent successful applications of recommender systems are providing solutions to transform online services for e-government, e-business, e-commerce, e-shopping, e-library, e-learning, e-tourism, and more. This unique compendium not only describes theoretical research but also reports on new application developments, prototypes, and real-world case studies of recommender systems. The comprehensive volume provides readers with a timely snapshot of how new recommendation methods and algorithms can overcome challenging issues. Furthermore, the monograph systematically presents three dimensions of recommender systems — basic recommender system concepts, advanced recommender system methods, and real-world recommender system applications. By providing state-of-the-art knowledge, this excellent reference text will immensely benefit researchers, managers, and professionals in business, government, and education to understand the concepts, methods, algorithms and application developments in recommender systems.

Programming Collective Intelligence

SocProS 2017, Volume 2

Information and Communication Technology for Intelligent Systems

Select Proceedings of ICICPS 2020

Database Systems for Advanced Applications

Proceedings of ICTIS 2018, Volume 1

This two-volume set LNCS 10827 and LNCS 10828 constitutes the refereed proceedings of the 23rd International Conference on Database Systems for Advanced Applications, DASFAA 2018, held in Gold Coast, QLD, Australia, in May 2018. The 83 full papers, 21 short papers, 6 industry papers, and 8 demo papers were carefully selected from a total of 360 submissions. The papers are organized around the following topics: network embedding; recommendation; graph and network processing; social network analytics; sequence and temporal data processing; trajectory and streaming data; RDF and knowledge graphs; text and data mining; medical data mining; security and privacy; search and information retrieval; query processing and optimizations; data quality and crowdsourcing; learning models; multimedia data processing; and distributed computing.

This book constitutes the proceedings of the 10th International Conference on Advanced Data Mining and Applications, ADMA 2014, held in Guilin, China during December 2014. The 48 regular papers and 10 workshop papers presented in this volume were carefully reviewed and selected from 90 submissions. They deal with

the following topics: data mining, social network and social media, recommend systems, database, dimensionality reduction, advance machine learning techniques, classification, big data and applications, clustering methods, machine learning, and data mining and database.

This book constitutes the refereed proceedings of the 14th Asia-Pacific Conference APWeb 2012 held in Kunming, China, in April 2012. The 39 full papers presented together with 34 short papers, 2 keynote talks, and 5 demo papers were carefully reviewed and selected from 167 initial submissions. The papers cover contemporary topics in the fields of Web management and World Wide Web related research and applications, such as advanced application of databases, cloud computing, content management, data mining and knowledge discovery, distributed and parallel processing, grid computing, internet of things, semantic Web and Web ontology, security, privacy and trust, sensor networks, service-oriented computing, Web community analysis, Web mining and social networks.

This volume contains the proceedings of the IFIPTM 2008, the Joint iTrust and PST Conferences on Privacy, Trust Management and Security, held in Trondheim, Norway from June 18 to June 20, 2008. IFIPTM 2008 provides a truly global platform for the reporting of research, development, policy and practice in the interdependent areas of Privacy, Security, and Trust. Following the traditions inherited from the highly successful iTrust and PST conference series, IFIPTM 2008 focuses on trust, privacy and security from multidisciplinary perspectives. The conference is an arena for discussion about relevant problems from both research and practice in the areas of academia, business, and government. IFIPTM 2008 is an open IFIP conference, which only accepts contributed papers, so all papers in these proceedings have passed strict peer review. The program of the conference features both theoretical research papers and reports of real world case studies. IFIPTM 2008 received 62 submissions. The program committee selected 22 papers for presentation and inclusion in the proceedings. In addition, the program and the proceedings include 3 demo descriptions. The highlights of IFIPTM 2008 include invited talks and tutorials by industrial and academic experts in the fields of trust management, privacy and security, including Jon Bing and Michael Steiner.

R and Data Mining

Recommender Systems

Web Technologies and Applications

Advance Trends in Soft Computing

Management of E-commerce and E-government

2021 International Conference on Science and Contemporary Technologies (ICSCT)

E-Commerce and E-Government has become known as the wave of the future for business over the world. Whether large, small, or just starting, E-Commerce and E-Government been the easier and more sufficient way to handle business. This book brings together and expanded versions of eighteen papers selected from the 2003 International Conference on Management of e-Commerce and e-Government. This book presents leading edge research in this new and exciting field. The ICMecG 2003 has initially received a total of 176 submissions from Australia, China, Norway, UK, and USA. Unfortunately, risk of SARS prevented many authors from actually participating in the conference. The Program Committee of ICMecG selected papers through a careful reviewing process. Although some papers remain de-

conceptual and general discussion about e-Commerce management, many papers have quantitative or formal analysis methods in their research. Results presented in these papers provide an important contribution, especially as compared with earlier research based on qualitative methods alone. This book presents cutting edge research in this new and exciting field.

Build Machine Learning models with a sound statistical understanding. About This Book Learn about the statistics behind powerful predictive models with p-value, ANOVA, and F- statistics. Implement statistical computations programmatically for supervised and unsupervised learning through K-means clustering. Master the statistical aspect of Machine Learning with this example-rich guide to R and Python. Who This Book Is For This book is intended for developers with little to no background in statistics, who want to implement Machine Learning in their systems. Some programming knowledge in R or Python will be useful. What You Will Learn Understand the Statistical and Machine Learning fundamentals necessary to build predictive models. Understand the major differences and parallels between the statistical way and the Machine Learning way to solve problems. Learn how to prepare data and feed models by using the appropriate Machine Learning algorithms from the more-than-adequate R and Python packages. Analyze the results and tune the model appropriately to your own predictive goals. Understand the concepts of required statistics for Machine Learning. Introduce yourself to necessary fundamentals required for building supervised & unsupervised deep learning models. Learn about reinforcement learning and its application in the field of artificial intelligence domain. In this book, Complex statistics in Machine Learning worry a lot of developers. Knowing statistics helps you build strong Machine Learning models that are optimized for a given problem statement. This book will teach you all it takes to perform complex statistical computations required for Machine Learning. You will gain information on statistics behind supervised learning, unsupervised learning, reinforcement learning, and more. Understand the real-world examples that discuss the statistical side of Machine Learning and familiarize yourself with it. You will also design programs for performing tasks such as model, parameter fitting, regression, classification, density collection, and more. By the end of the book, you will have mastered the required statistics for Machine Learning and will be able to apply your new skills to an industry problem. Style and approach This practical, step-by-step guide will give you an understanding of the Statistical and Machine Learning fundamentals you'll need to build predictive models.

This third edition handbook describes in detail the classical methods as well as extensive novel approaches that were more recently introduced within this field. It consists of five parts: general recommendation techniques, special recommendation techniques, value and impact of recommender systems, human computer interaction, and applications. The first part presents the most popular and fundamental techniques currently used for building recommender systems such as collaborative filtering, semantic-based methods, recommender systems based on user feedback, neural networks and context-aware methods. The second part of this handbook introduces more advanced recommendation techniques, such as session-based recommender systems, adversarial machine learning for recommender systems, group recommendation techniques, reciprocal recommenders systems, natural language techniques for recommender systems and cross-domain approaches to recommender systems. The third part covers a new perspective to the evaluation of recommender systems with papers on methods for evaluating recommender systems, their value and impact, the multi-stakeholder perspective of recommender systems, the analysis of the fairness, novelty and diversity in recommender systems.

systems. The fourth part contains a few chapters on the human computer dimension of recommender systems, with research on the role of explanation, the user personality and how to effectively support individual and group decision with recommender systems. The last part focusses on application in several important areas, such as, food, music, fashion and movie recommendation. This informative third edition handbook provides a comprehensive, yet concise and convenient reference source to recommender systems for researchers and graduate level students focused on computer science and data science. Professionals working in data analytics that are using recommendation and personalization techniques will also find this handbook a useful tool.

Internet usage has become a normal and essential aspect of everyday life. Due to the massive amount of information available on the web, it has become obligatory to find ways to filter through and categorize the overload of data while removing redundant material. Collaborative Filtering Using Data Mining and Analysis evaluates the latest patterns and trending topics in the utilization of data mining tools and filtering practices. Featuring emergent research on optimization techniques in the areas of opinion mining, text mining, and sentiment analysis as well as their various applications, this book is an essential reference source for researchers and engineers interested in collaborative filtering.

Collaborative Filtering Using Data Mining and Analysis

Open Doors to Data Science and Artificial Intelligence

Encyclopedia of Information Science and Technology, Fourth Edition

Innovative Methodologies and Applications for Managing Customer Relationships

26th International Conference, DASFAA 2021, Taipei, Taiwan, April 11-14, 2021, Proceedings, Part III

Collaborative Filtering Recommender Systems

Collaborative Filtering Recommender Systems discusses a wide variety of the recommender choices available and their implications, providing both practitioners and researchers with an introduction to the important issues underlying recommenders and current best practices for addressing these issues.

This two-volume book presents outcomes of the 7th International Conference on Soft Computing for Problem Solving, SocProS 2017. This conference is a joint technical collaboration between the Soft Computing Research Society, Liverpool Hope University (UK), the Indian Institute of Technology Roorkee, the South Asian University New Delhi and the National Institute of Technology Silchar, and brings together researchers, engineers and practitioners to discuss thought-provoking developments and challenges in order to select potential future directions. The book presents the latest advances and innovations in the interdisciplinary areas of soft computing, including original research papers in the areas including, but not limited to, algorithms (artificial immune systems, artificial neural networks, genetic algorithms, genetic

programming, and particle swarm optimization) and applications (control systems, data mining and clustering, finance, weather forecasting, game theory, business and forecasting applications). It is a valuable resource for both young and experienced researchers dealing with complex and intricate real-world problems for which finding a solution by traditional methods is a difficult task.

Now in its second edition, this book focuses on practical algorithms for mining data from even the largest datasets. This proceedings book presents the latest research in the fields of information theory, communication system, computer science and signal processing, as well as other related technologies. Collecting selected papers from the 3rd Conference on Signal and Information Processing, Networking and Computers (ICSINC), held in Chongqing, China on September 13-15, 2017, it is of interest to professionals from academia and industry alike.

An Introduction

Examples and Case Studies

Recommender System with Machine Learning and Artificial Intelligence

Personalization Techniques and Recommender Systems

Group Recommender Systems

BDCPS 2020, 28-29 December 2020, Shanghai, China

While the definition of database marketing hasn't changed, its meaning has become more vivid, versatile and exciting than ever before. Advanced Database Marketing provides a state-of-the-art guide to the methods and applications that define this new era in database marketing, including advances in areas such as text mining, recommendation systems, internet marketing, and dynamic customer management. An impressive list of contributors including many of the thought-leaders in database marketing from across the world bring together chapters that combine the best academic research and business applications. The result is a definitive guide and reference for marketing and brand analysts, masters students, teachers and researchers in marketing analytics. The proliferation of marketing platforms and channels and the complexity of customer interactions create an urgent need for a multidisciplinary and analytical toolkit. Advanced Database Marketing is a resource to enable marketers to achieve insights and increased financial performance; to provide them with the capability to implement and evaluate approaches to marketing that will meet, in equal measure, the changing needs of customers and the businesses that serve them.

The book presents a collection of peer-reviewed articles from the International Conference on Innovations in Cyber Physical Systems (ICICPS 2020). The conference provided opportunities for the

presentation of new research results and discussion about them. It was also an opportunity to generation of new ideas in all CPS aspects, including theory, tools, applications, systems, test-beds and field deployments. The range of topics explored is wide, and covers security, control, optimization, machine learning, game theory, mechanism design, mobile and cloud computing, model-based design, verification, data mining/analytics, signal processing, and human-in-the-loop shared or supervisory control. This book will be useful to researchers, students, industrialist, developers, and practitioners alike.

The scope of the conference includes Data Mining and Advanced Computing

The three-volume set LNCS 12681–12683 constitutes the proceedings of the 26th International Conference on Database Systems for Advanced Applications, DASFAA 2021, held in Taipei, Taiwan, in April 2021. The total of 156 papers presented in this three-volume set was carefully reviewed and selected from 490 submissions. The topic areas for the selected papers include information retrieval, search and recommendation techniques; RDF, knowledge graphs, semantic web, and knowledge management; and spatial, temporal, sequence, and streaming data management, while the dominant keywords are network, recommendation, graph, learning, and model. These topic areas and keywords shed the light on the direction where the research in DASFAA is moving towards. Due to the Corona pandemic this event was held virtually.

Advances in Knowledge Discovery and Data Mining

Proceedings of the 3rd International Conference on Signal and Information Processing, Networking and Computers (ICSINC)

Innovations in Cyber Physical Systems

Advances in Information Retrieval

10th International Conference, ADMA 2014, Guilin, China, December 19–21, 2014, Proceedings

Trust Management II

The present book is based on the research papers presented in the International Conference on Soft Computing for Problem Solving (SocProS 2012), held at JK Lakshmipat University, Jaipur, India. This book provides the latest developments in the area of soft computing and covers a variety of topics, including mathematical modeling, image processing, optimization, swarm intelligence, evolutionary algorithms, fuzzy logic, neural networks, forecasting, data mining, etc. The objective of the book is to familiarize the reader with the latest scientific developments that are taking place in various fields and the latest sophisticated problem solving tools that are being developed to deal with the complex and intricate problems that are otherwise difficult to solve by the usual and traditional methods. The book is directed to the researchers and scientists engaged in various fields of Science and Technology.

This book gathers a selection of peer-reviewed papers presented at the second Big Data Analytics for Cyber-Physical System in Smart City (BDCPS 2020) conference, held in Shanghai, China, on 28–29 December

2020. The contributions, prepared by an international team of scientists and engineers, cover the latest advances made in the field of machine learning, and big data analytics methods and approaches for the data-driven co-design of communication, computing, and control for smart cities. Given its scope, it offers a valuable resource for all researchers and professionals interested in big data, smart cities, and cyber-physical systems.

Learn how to build recommender systems from one of Amazon's pioneers in the field. Frank Kane spent over nine years at Amazon, where he managed and led the development of many of Amazon's personalized product recommendation technologies. You've seen automated recommendations everywhere - on Netflix's home page, on YouTube, and on Amazon as these machine learning algorithms learn about your unique interests, and show the best products or content for you as an individual. These technologies have become central to the largest, most prestigious tech employers out there, and by understanding how they work, you'll become very valuable to them. This book is adapted from Frank's popular online course published by Sundog Education, so you can expect lots of visual aids from its slides and a conversational, accessible tone throughout the book. The graphics and scripts from over 300 slides are included, and you'll have access to all of the source code associated with it as well. We'll cover tried and true recommendation algorithms based on neighborhood-based collaborative filtering, and work our way up to more modern techniques including matrix factorization and even deep learning with artificial neural networks. Along the way, you'll learn from Frank's extensive industry experience to understand the real-world challenges you'll encounter when applying these algorithms at large scale and with real-world data. This book is very hands-on; you'll develop your own framework for evaluating and combining many different recommendation algorithms together, and you'll even build your own neural networks using Tensorflow to generate recommendations from real-world movie ratings from real people. We'll cover: -Building a recommendation engine-Evaluating recommender systems-Content-based filtering using item attributes-Neighborhood-based collaborative filtering with user-based, item-based, and KNN CF-Model-based methods including matrix factorization and SVD-Applying deep learning, AI, and artificial neural networks to recommendations-Session-based recommendations with recursive neural networks-Scaling to massive data sets with Apache Spark machine learning, Amazon DSSTNE deep learning, and AWS SageMaker with factorization machines-Real-world challenges and solutions with recommender systems-Case studies from YouTube and Netflix-Building hybrid, ensemble recommenders This comprehensive book takes you all the way from the early days of collaborative filtering, to bleeding-edge applications of deep neural networks and modern machine learning techniques for recommending the best items to every individual user. The coding exercises for this book use the Python programming language. We include an intro to Python if you're new to it, but you'll need some prior programming experience in order to use this book successfully. We also include a

short introduction to deep learning, Tensorflow, and Keras if you are new to the field of artificial intelligence, but you'll need to be able to understand new computer algorithms. Dive in, and learn about one of the most interesting and lucrative applications of machine learning and deep learning there is!

The phenomenal growth of the Internet has resulted in huge amounts of online information, a situation that is overwhelming to the end users. To overcome this problem, personalization technologies have been extensively employed. The book is the first of its kind, representing research efforts in the diversity of personalization and recommendation techniques. These include user modeling, content, collaborative, hybrid and knowledge-based recommender systems. It presents theoretic research in the context of various applications from mobile information access, marketing and sales and web services, to library and personalized TV recommendation systems. This volume will serve as a basis to researchers who wish to learn more in the field of recommender systems, and also to those intending to deploy advanced personalization techniques in their systems. Sample Chapter(s). Personalization-Privacy Tradeoffs in Adaptive Information Access (865 KB). Contents: User Modeling and Profiling:

Personalization-Privacy Tradeoffs in Adaptive Information Access (B Smyth); A Deep Evaluation of Two Cognitive User Models for Personalized Search (F Gasparetti & A Micarelli); Unobtrusive User Modeling for Adaptive Hypermedia (H J Holz et al.); User Modelling Sharing for Adaptive e-Learning and Intelligent Help (K Kabassi et al.); Collaborative Filtering: Experimental Analysis of Multiattribute Utility Collaborative Filtering on a Synthetic Data Set (N Manouselis & C Costopoulou); Efficient Collaborative Filtering in Content-Addressable Spaces (S Berkovsky et al.); Identifying and Analyzing User Model Information from Collaborative Filtering Datasets (J Griffith et al.); Content-Based Systems, Hybrid Systems and Machine Learning Methods: Personalization Strategies and Semantic Reasoning: Working in Tandem in Advanced Recommender Systems (Y Blanco-Fernandez et al.); Content Classification and Recommendation Techniques for Viewing Electronic Programming Guide on a Portable Device (J Zhu et al.); User Acceptance of Knowledge-Based Recommenders (A Felfernig et al.); Using Restricted Random Walks for Library Recommendations and Knowledge Space Exploration (M Franke & A Geyer-Schulz); An Experimental Study of Feature Selection Methods for Text Classification (G Uchyigit & K Clark). Readership: Researchers and graduate students in machine learning and databases/information science.

23rd International Conference, DASFAA 2018, Gold Coast, QLD, Australia, May 21-24, 2018, Proceedings, Part I

Proceedings of the Second International Conference on Soft Computing for Problem Solving (SocProS 2012), December 28-30, 2012

14th International Conference, ADMA 2018, Nanjing, China, November 16-18, 2018, Proceedings

Mining of Massive Datasets

Recommender Systems: Advanced Developments

Big Data Analytics for Cyber-Physical System in Smart City

From cloud computing to data analytics, society stores vast supplies of information through wireless networks and mobile computing. As organizations are becoming increasingly more wireless, ensuring the security and seamless function of electronic gadgets while creating a strong network is imperative. *Advanced Methodologies and Technologies in Network Architecture, Mobile Computing, and Data Analytics* highlights the challenges associated with creating a strong network architecture in a perpetually online society. Readers will learn various methods in building a seamless mobile computing option and the most effective means of analyzing big data. This book is an important resource for information technology professionals, software developers, data analysts, graduate-level students, researchers, computer engineers, and IT specialists seeking modern information on emerging methods in data mining, information technology, and wireless networks.

Strategic Social Media is the first textbook to go beyond the marketing plans and how-to guides, and provide an overview of the theories, action plans, and case studies necessary for teaching students and readers about utilizing social media to meet marketing goals. Explores the best marketing practices for reaching business goals, while also providing strategies that students/readers can apply to any past, present or future social media platform Provides comprehensive treatment of social media in five distinct sections: landscape, messages, marketing and business models, social change, and the future Emphasizes social responsibility and ethics, and how this relates to capitalizing on market share Highlights marketing strategies grounded in research that explains how practitioners can influence audience behaviour Each chapter introduces theory, practice, action plans, and case studies to teach students the power and positive possibilities that social media hold

This book constitutes the refereed proceedings of the 14th International Conference on Advanced Data Mining and Applications, ADMA 2018, held in Nanjing, China in November 2018. The 23 full and 22 short papers presented in this volume were carefully reviewed and selected from 104 submissions. The papers were organized in topical sections named: Data Mining Foundations; Big Data; Text and Multimedia Mining; Miscellaneous Topics.

This book is a multi-disciplinary effort that involves world-wide experts from diverse fields, such as artificial intelligence, human computer interaction, information technology, data mining, statistics, adaptive user interfaces, decision support systems, marketing, and consumer behavior. It comprehensively covers the topic of recommender systems, which provide personalized recommendations of items or services to the new users based on their past behavior. Recommender system methods have been adapted to diverse applications including social networking, movie recommendation, query log mining, news recommendations, and computational advertising. This book synthesizes both fundamental and advanced topics of a research area that has now reached maturity. Recommendations in agricultural or healthcare domains and contexts, the context of a recommendation can be viewed as important side information that affects the recommendation goals. Different types of context such as temporal data, spatial data, social data, tagging data, and trustworthiness are explored. This book illustrates how this technology can support the user in decision-making, planning and purchasing processes in agricultural & healthcare sectors.

Building Smart Web 2.0 Applications

Trust Networks for Recommender Systems

Advanced Database Marketing

Encyclopedia of Machine Learning

2016 International Conference on Data Mining and Advanced Computing (SAPIENCE)

Proceedings of WCSC 2013, December 16-18, San Antonio, Texas, USA

In recent years, our world has experienced a profound shift and progression in available computing and knowledge sharing

innovations. These emerging advancements have developed at a rapid pace, disseminating into and affecting numerous aspects of contemporary society. This has created a pivotal need for an innovative compendium encompassing the latest trends, concepts, and issues surrounding this relevant discipline area. During the past 15 years, the Encyclopedia of Information Science and Technology has become recognized as one of the landmark sources of the latest knowledge and discoveries in this discipline. The Encyclopedia of Information Science and Technology, Fourth Edition is a 10-volume set which includes 705 original and previously unpublished research articles covering a full range of perspectives, applications, and techniques contributed by thousands of experts and researchers from around the globe. This authoritative encyclopedia is an all-encompassing, well-established reference source that is ideally designed to disseminate the most forward-thinking and diverse research findings. With critical perspectives on the impact of information science management and new technologies in modern settings, including but not limited to computer science, education, healthcare, government, engineering, business, and natural and physical sciences, it is a pivotal and relevant source of knowledge that will benefit every professional within the field of information science and technology and is an invaluable addition to every academic and corporate library.

This book describes research performed in the context of trust/distrust propagation and aggregation, and their use in recommender systems. This is a hot research topic with important implications for various application areas. The main innovative contributions of the work are: -new bilattice-based model for trust and distrust, allowing for ignorance and inconsistency -proposals for various propagation and aggregation operators, including the analysis of mathematical properties -Evaluation of these operators on real data, including a discussion on the data sets and their characteristics. -A novel approach for identifying controversial items in a recommender system -An analysis on the utility of including distrust in recommender systems -Various approaches for trust based recommendations (a.o. base on collaborative filtering), an in depth experimental analysis, and proposal for a hybrid approach -Analysis of various user types in recommender systems to optimize bootstrapping of cold start users.

***Signal and Information Processing, Networking and Computers
Recommender Systems Handbook
Statistics for Machine Learning***