

Multimedia Information Retrieval And Management Technological Fundamentals And Applications Signals And Communication Technology

As the 21st century begins, we are faced with opportunities and challenges of available technology as well as pressured to create strategic and tactical plans for future technology. Worldwide, IT professionals are sharing and trading concepts and ideas for effective IT management, and this co-operation is what leads to solid IT management practices. This volume is a collection of papers that present IT management perspectives from professionals around the world. The papers seek to offer new ideas, refine old ones, and pose interesting scenarios to help the reader develop company-sensitive management strategies.

Indexing and information retrieval work properly only if language and interpretation are shared by creator and user. This is more complex for non-verbal media. The authors of *Indexing Multimedia and Creative Works* explore these challenges against a background of different theories of language and communication, particularly semiotics, questioning the possibility of ideal multimedia indexing. After surveying traditional approaches to information retrieval (IR) and organization in relation to issues of meaning, particularly Panofsky's 'levels of meaning', Pauline Rafferty and Rob Hilderley weigh up the effectiveness of major IR tools (cataloguing, classification and indexing) and computerised IR, highlighting key questions raised by state-of-the-art computer language processing systems. Introducing the reader to the fundamentals of semiotics, through the thinking of Saussure, Peirce and Sonesson, they make the case for this as the basis for successful multimedia information retrieval. The authors then describe specific multimedia information retrieval tools: namely the Art and Architecture Thesaurus, Iconclass and the Library of Congress Thesaurus of General Materials I and II. A selection of multimedia objects including photographic images, abstract images, music, the spoken word and film are read using analytical and descriptive categories derived from the literature of semiotics. Multimedia information retrieval tools are also used to index the multimedia objects, an exercise which demonstrates the richness of the semiotic approach and the limitations of controlled vocabulary systems. In the final chapter the authors reflect on the issues thrown up by this comparison and explore alternatives such as democratic, user-generated indexing as an alternative. Primarily intended for third-year undergraduate and postgraduate information studies students, the breadth and depth of *Indexing Multimedia and Creative Works* will also make it relevant and fascinating read.

"This book is the Bible for anyone who needs to manage large data collections. It's required reading for our search gurus at Infoseek. The authors have done an outstanding job of incorporating and describing the most significant new research in information retrieval over the past five years into this second edition." Steve Kirsch, Cofounder, Infoseek Corporation "The new edition of Witten, Moffat, and Bell not only has newer and better text search algorithms but much material on image analysis and joint image/text processing. If you care about search engines, you need this book: it is the only one with full details of how they work. The book is both detailed and enjoyable; the authors have combined elegant writing with top-grade programming." Michael Lesk, National Science Foundation "The coverage of compression, file organizations, and indexing techniques for full text and document management systems is unsurpassed. Students, researchers, and practitioners will all benefit from reading this book." Bruce Croft, Director, Center for Intelligent Information Retrieval at the University of Massachusetts In this fully updated second edition of the highly acclaimed *Managing Gigabytes*, authors Witten, Moffat, and Bell continue to provide unparalleled coverage of state-of-the-art techniques for compressing and indexing data. Whatever your field, if you work with large quantities of information, this book is essential reading--an authoritative theoretical resource and a practical guide to meeting the toughest storage and access challenges. It covers the latest developments in compression and indexing and their application on the Web and in digital libraries. It also details dozens of powerful techniques supported by mg, the authors' own system for compressing, storing, and retrieving text, images, and textual images. mg's source code is freely available on the Web.

With the increased use of technology in modern society, high volumes of multimedia information exists. It is important for businesses, organizations, and individuals to understand how to optimize this data and new methods are emerging for more efficient information management and retrieval. *Information Retrieval and Management: Concepts, Methodologies, Tools, and Applications* is an innovative reference source for the latest academic material in the field of information and communication technologies and explores how complex information systems interact with and affect one another. Highlighting a range of topics such as knowledge discovery, semantic web, and information resources management, this multi-volume book is ideally designed for researchers, developers, managers, strategic planners, and advanced-level students.

At its very core multimedia information retrieval means the process of searching for and finding multimedia documents; the corresponding research field is concerned with building the best possible multimedia search engines. The intriguing bit here is that the query itself can be a multimedia excerpt: For example, when you walk around in an unknown place and stumble across an interesting landmark, would it not be great if you could just take a picture with your mobile phone and send it to a service that finds a similar picture in a database and tells you more about the building -- and about its significance, for that matter? This book goes further by examining the full matrix of a variety of query modes versus document types. How do you retrieve a music piece by humming? What if you want to find news video clips on forest fires using a still image? The text discusses underlying techniques and common approaches to facilitate multimedia search engines from metadata driven retrieval, via piggy-back text retrieval where automated processes create text surrogates for multimedia, automated image annotation and content-based retrieval. The latter is studied in great depth looking at features and distances, and how to effectively combine them for efficient retrieval, to a point where the readers have the ingredients and recipe in their hands for building their own multimedia search

engines. Supporting users in their resource discovery mission when hunting for multimedia material is not a technological indexing problem alone. We look at interactive ways of engaging with repositories through browsing and relevance feedback, roping in geographical context, and providing visual summaries for videos. The book concludes with an overview of state-of-the-art research projects in the area of multimedia information retrieval, which gives an indication of the research and development trends and, thereby, a glimpse of the future world. Table of Contents: What is Multimedia Information Retrieval? / Basic Multimedia Search Technologies / Content-based Retrieval in Depth / Added Services / Multimedia Information Retrieval Research / Summary

Multimedia technology has the potential to transform end user computing from interactive text and graphics models into something more compatible with the digital and electronic world of the new century. This book aims to help technology professionals gain an understanding and perspective on areas related to multimedia computing and communication, while addressing the major issues and challenges in the design and management of multimedia information systems.

"This book disseminates current information on multimedia retrieval, advancing the field of multimedia databases, and educating the multimedia database community on machine learning techniques for adaptive multimedia retrieval research, design and applications"--Provided by publisher.

Multimedia Information Retrieval and Management Technological Fundamentals and Applications Springer Science & Business Media

"This book highlights original research on new theories, algorithms, technologies, system design, and implementation in multimedia data engineering and management with an emphasis on automatic indexing, tagging, high-order ranking, and rule mining"--Provided by publisher.

The heart of the book lies in the collaboration efforts of eight distinct bioinformatics teams that describe their own unique approaches to data integration and interoperability. Each system receives its own chapter where the lead contributors provide precious insight into the specific problems being addressed by the system, why the particular architecture was chosen, and details on the system's strengths and weaknesses. In closing, the editors provide important criteria for evaluating these systems that bioinformatics professionals will find valuable. * Provides a clear overview of the state-of-the-art in data integration and interoperability in genomics, highlighting a variety of systems and giving insight into the strengths and weaknesses of their different approaches.-

Everything you ever wanted to know about multimedia retrieval and management. This comprehensive book offers a full picture of the cutting-edge technologies necessary for a profound introduction to the field. Leading experts also cover a broad range of practical applications.

This book combines the two important areas of research within computer technology and presents them in comprehensive, easy to understand manner. Ideal for graduates and under-graduates, as well as researchers working in either video data management or information retrieval, it takes an in depth look at many relevant topics within both video data management and information retrieval. In addition to dissecting those issues, it also provides a "big picture" view of each topic.

Foreword by Karen Spärck Jones Intelligent multimedia information retrieval lies at the intersection of artificial intelligence, information retrieval, human-computer interaction, and multimedia computing. Its systems enable users to create, process, summarize, present, interact with, and organize information within and across different media such as text, speech, graphics, imagery, and video. These systems go beyond traditional hypermedia and hypertext environments to analyze and generate media, and support intelligent interaction with or via multiple media. The chapters of this volume, which grew out of the 1995 International Joint Conference on Artificial Intelligence Workshop on Intelligent Multimedia Information Retrieval, span a broad range of topics. The book is organized into seven sections: Content-Based Retrieval of Imagery, Content-Based Retrieval of Graphics and Audio, Content-Based Retrieval of Video, Speech and Language Processing for Video Retrieval, Architectures and Tools, Intelligent Hypermedia Retrieval, and Empirical Evaluations. Contributors Robert Adams, Phillipe Aigrain, Jonathan Ashley, Thom Blum, Shih-Fu Chang, Mei C. Chuah, W. Bruce Croft, Byron Dom, Ann Doubleday, Florence Dubois, Josef Fink, Myron Flickner, Jonathan Foote, Brian Frew, Monika Gorkani, Morgan Green, James Griffioen, Jon Alte Gulla, Jim Hafner, Qian Hang, Matt Hare, Alexander G. Hauptman, Stacie Hibino, Helmut Horacek, David House, Takafumi Inoue, Philippe Joly, Gareth Jones, Karen Spärck Jones, Douglas Keislaer, Stephen Kerpedjiev, Alfred Kobsa, Denis Lee, Véronique Longueville, Chien Yong Low, R. Manmatha, Inderjeet Mani, Mark T. Maybury, Bernard Merialdo, Adrian Müller, Wayne Niblac, Andreas Nill, Alex Pentland, Dragutin Petkovic, Steven F. Roth, Neil C. Rowe, Elke A. Rundensteiner, Harpreet Sawhney, John R. Smith, Stephen W. Smoliar, David Steele, Adelheit Stein, Oliviero Stock, Carlo Strapparava, Alistair Sutcliffe, Atshushi Takeshita, Kazuo Tanaka, Ulrich Thiel, Michele Ryan, Julita Vassileva, James Wheaton, Michael J. Witbrock, Erling Wold, JianHua Wu, Peter Yanker, Rajendra Yavatkar, Steven J. Young, Massimo Zancanaro, HongJiang Zhang

This book contributes to illustrating the methodological and technological issues of data management in Pervasive Systems by using the DataBenc project as the running case study for a variety of research contributions: sensor data management, user-originated data operation and reasoning, multimedia data management, data analytics and reasoning for event detection and decision making, context modelling and control, automatic data and service tailoring for personalization and recommendation. The book is organized into the following main parts: i) multimedia information management; ii) sensor data streams and storage; iii) social networks as information sources; iv) context awareness and personalization. The case study is used throughout the book as a reference example.

"Foundations of Large-Scale Multimedia Information Management and Retrieval: Mathematics of Perception" covers knowledge representation and semantic analysis of multimedia data and scalability in signal extraction, data mining, and indexing. The book is divided into two parts: Part I - Knowledge Representation and Semantic Analysis

focuses on the key components of mathematics of perception as it applies to data management and retrieval. These include feature selection/reduction, knowledge representation, semantic analysis, distance function formulation for measuring similarity, and multimodal fusion. Part II - Scalability Issues presents indexing and distributed methods for scaling up these components for high-dimensional data and Web-scale datasets. The book presents some real-world applications and remarks on future research and development directions. The book is designed for researchers, graduate students, and practitioners in the fields of Computer Vision, Machine Learning, Large-scale Data Mining, Database, and Multimedia Information Retrieval. Dr. Edward Y. Chang was a professor at the Department of Electrical & Computer Engineering, University of California at Santa Barbara, before he joined Google as a research director in 2006. Dr. Chang received his M.S. degree in Computer Science and Ph.D degree in Electrical Engineering, both from Stanford University.

In the last few years we have observed an explosive growth of multimedia computing, communication and applications. This revolution is transforming the way people live, work, and interact with each other, and is impacting the way business, government services, education, entertainment and healthcare are operating. Yet, several issues related to modeling, specification, analysis and design of distributed multimedia database systems and multimedia information retrieval are still challenging to both researchers and practitioners. *Distributed Multimedia Databases: Techniques and Applications* points out these challenges and provides valuable suggestions toward the necessary solutions, by focusing on multimedia database techniques.

Biomedical Information Technology, Second Edition, contains practical, integrated clinical applications for disease detection, diagnosis, surgery, therapy and biomedical knowledge discovery, including the latest advances in the field, such as biomedical sensors, machine intelligence, artificial intelligence, deep learning in medical imaging, neural networks, natural language processing, large-scale histopathological image analysis, virtual, augmented and mixed reality, neural interfaces, and data analytics and behavioral informatics in modern medicine. The enormous growth in the field of biotechnology necessitates the utilization of information technology for the management, flow and organization of data. All biomedical professionals can benefit from a greater understanding of how data can be efficiently managed and utilized through data compression, modeling, processing, registration, visualization, communication and large-scale biological computing. Presents the world's most recognized authorities who give their "best practices" Provides professionals with the most up-to-date and mission critical tools to evaluate the latest advances in the field Gives new staff the technological fundamentals and updates experienced professionals with the latest practical integrated clinical applications

In order to be effective for their users, information retrieval (IR) systems should be adapted to the specific needs of particular environments. The huge and growing array of types of information retrieval systems in use today is on display in *Understanding Information Retrieval Systems: Management, Types, and Standards*, which addresses over 20 types of IR systems. These various system types, in turn, present both technical and management challenges, which are also addressed in this volume. In order to be interoperable in a networked environment, IR systems must be able to use various types of technical standards, a number of which are described in this book—often by their original developers. The book covers the full context of operational IR systems, addressing not only the systems themselves but also human user search behaviors, user-centered design, and management and policy issues. In addition to theory and practice of IR system design, the book covers Web standards and protocols, the Semantic Web, XML information retrieval, Web social mining, search engine optimization, specialized museum and library online access, records compliance and risk management, information storage technology, geographic information systems, and data transmission protocols. Emphasis is given to information systems that operate on relatively unstructured data, such as text, images, and music. The book is organized into four parts: Part I supplies a broad-level introduction to information systems and information retrieval systems Part II examines key management issues and elaborates on the decision process around likely information system solutions Part III illustrates the range of information retrieval systems in use today discussing the technical, operational, and administrative issues for each type Part IV discusses the most important organizational and technical standards needed for successful information retrieval This volume brings together authoritative articles on the different types of information systems and how to manage real-world demands such as digital asset management, network management, digital content licensing, data quality, and information system failures. It explains how to design systems to address human characteristics and considers key policy and ethical issues such as piracy and preservation. Focusing on web-based systems, the chapters in this book provide an excellent starting point for developing and managing your own IR systems.

Multimedia Information Systems brings together in one place important contributions and up-to-date research results in this fast moving area. *Multimedia Information Systems* serves as an excellent reference, providing insight into some of the most challenging research issues in the field.

Novel processing and searching tools for the management of new multimedia documents have developed. *Multimedia Information Retrieval (MIR)* is an organic system made up of Text Retrieval (TR); Visual Retrieval (VR); Video Retrieval (VDR); and Audio Retrieval (AR) systems. So that each type of digital document may be analysed and searched by the elements of language appropriate to its nature, search criteria must be extended. Such an approach is known as the Content Based Information Retrieval (CBIR), and is the core of MIR. This novel content-based concept of information handling needs to be integrated with more traditional semantics. *Multimedia Information Retrieval* focuses on the tools of processing and searching applicable to the content-based management of new multimedia documents. Translated from Italian by Giles Smith, the book is divided into two parts. Part one discusses MIR and related theories, and puts forward new methodologies; part two reviews various experimental and operating MIR systems, and presents technical and practical conclusions. Gives a complete, organic picture of MIR and CBIR Proposes a novel conceptualisation around the ideas of Information Retrieval (IR) and digital document management in the context of Library and Information Science (LIS) Relevant for both library and information science and information technology specialists

Keeping Found Things Found: The Study and Practice of Personal Information Management is the first comprehensive book on new 'favorite child' of R&D at Microsoft and elsewhere, personal information management (PIM). It provides a comprehensive overview of PIM as both a study and a practice of the activities people do, and need to be doing, so that information can work for them in their daily lives. It explores what good and better PIM looks like, and how to measure improvements. It presents key questions to consider when evaluating any new PIM informational tools or systems. This book is designed for R&D professionals in HCI, data mining and data management, information retrieval, and related areas, plus developers of tools and software that include PIM solutions. Focuses exclusively on one of the most interesting and challenging problems in today's world Explores what good and better PIM looks like, and how to measure improvements Presents key questions to consider when evaluating any new PIM informational tools or systems

Multimedia represents information in novel and varied formats. One of the most prevalent examples of continuous media is video. Extracting underlying data from these videos can be an arduous task. From

video indexing, surveillance, and mining, complex computational applications are required to process this data. Intelligent Analysis of Multimedia Information is a pivotal reference source for the latest scholarly research on the implementation of innovative techniques to a broad spectrum of multimedia applications by presenting emerging methods in continuous media processing and manipulation. This book offers a fresh perspective for students and researchers of information technology, media professionals, and programmers.

Due to increasing globalization and the explosion of media available on the Internet, computer techniques to organize, classify, and find desired media are becoming more and more relevant. One such technique to extract semantic information from multimedia data sources is Multimedia Information Retrieval (MMIR or MIR). MIR is a broad area covering both structural issues and intelligent content analysis and retrieval. These aspects must be integrated into a seamless whole, which involves expertise from a wide variety of fields. This book presents recent applications of MIR for content-based image retrieval, bioinformation analysis and processing, forensic multimedia retrieval techniques, and audio and music classification.

Based on more than 10 years of teaching experience, Blanken and his coeditors have assembled all the topics that should be covered in advanced undergraduate or graduate courses on multimedia retrieval and multimedia databases. The single chapters of this textbook explain the general architecture of multimedia information retrieval systems and cover various metadata languages such as Dublin Core, RDF, or MPEG. The authors emphasize high-level features and show how these are used in mathematical models to support the retrieval process. For each chapter, there's detail on further reading, and additional exercises and teaching material is available online.

An information retrieval (IR) system is designed to analyse, process and store sources of information and retrieve those that match a particular user's requirements. A bewildering range of techniques is now available to the information professional attempting to successfully retrieve information. It is recognized that today's information professionals need to concentrate their efforts on learning the techniques of computerized IR. However, it is this book's contention that it also benefits them to learn the theory, techniques and tools that constitute the traditional approaches to the organization and processing of information. In fact much of this knowledge may still be applicable in the storage and retrieval of electronic information in digital library environments. The fully revised third edition of this highly regarded textbook has been thoroughly updated to incorporate major changes in this rapidly expanding field since the second edition in 2004, and a complete new chapter on citation indexing has been added. Unique in its scope, the book covers the whole spectrum of information storage and retrieval, including: users of IR and IR options; database technology; bibliographic formats; cataloguing and metadata; subject analysis and representation; automatic indexing and file organization; vocabulary control; abstracts and indexing; searching and retrieval; user-centred models of IR and user interfaces; evaluation of IR systems and evaluation experiments; online and CD-ROM IR; multimedia IR; hypertext and mark-up languages; web IR; intelligent IR; natural language processing and its applications in IR; citation analysis and IR; IR in digital libraries; and trends in IR research. Illustrated with many examples and comprehensively referenced for an international audience, this is an indispensable textbook for students of library and information studies. It is also an invaluable aid for information practitioners wishing to brush up on their skills and keep up to date with the latest techniques.

"This book is aimed at researchers and practitioners involved in designing and managing complex multimedia information systems"--Provided by publisher.

This compilation of original papers on information retrieval presents an overview, covering both general theory and specific methods, of the development and current status of information retrieval systems. Each chapter contains several papers carefully chosen to represent substantive research work that has been carried out in that area, each is preceded by an introductory overview and followed by supported references for further reading.

Business intelligence has always been considered an essential ingredient for success. However, it is not until recently that the technology has enabled organizations to generate and deploy intelligence for global competition. These technologies can be leveraged to create the intelligent enterprises of the 21st century that will not only provide excellent and customized services to their customers, but will also create business efficiency for building relationships with suppliers and other business partners on a long term basis. Creating such intelligent enterprises requires the understanding and integration of diverse enterprise components into cohesive intelligent systems. Anticipating that future enterprises need to become intelligent, Intelligent Enterprises of the 21st Century brings together the experiences and knowledge from many parts of the world to provide a compendium of high quality theoretical and applied concepts, methodologies, and techniques that help diffuse knowledge and skills required to create and manage intelligent enterprises of the 21st century for gaining sustainable competitive advantage in a global environment. This book is a comprehensive compilation of the state of the art vision and thought processes needed to design and manage globally competitive business organizations.

Multimedia Database Management Systems presents the issues and the techniques used in building multimedia database management systems. Chapter 1 provides an overview of multimedia databases and underlines the new requirements for these applications. Chapter 2 discusses the techniques used for storing and retrieving multimedia objects. Chapter 3 presents the techniques used for generating metadata for various media objects. Chapter 4 examines the mechanisms used for storing the index information needed for accessing different media objects. Chapter 5 analyzes the approaches for modeling media objects, both their temporal and spatial characteristics. Object-oriented approach, with some additional features, has been widely used to model multimedia information. The book discusses two systems that use object-oriented models: OVID (Object Video Information Database) and Jasmine. The models for representing temporal and spatial requirements of media objects are then studied. The book also describes authoring techniques used for specifying temporal and spatial characteristics of multimedia databases. Chapter 6 explains different types of multimedia queries, the methodologies for processing them and the language features for describing them. The features offered by query languages such as SQL/MM (Structured Query Language for Multimedia), PICQUERY+, and Video SQL are also studied. Chapter 7 deals with the communication requirements for multimedia databases. A client accessing multimedia data over computer networks needs to identify a schedule for retrieving various media objects composing the database. The book identifies possible ways for generating a retrieval schedule. Chapter 8 ties together the techniques discussed in the previous chapters by providing a simple architecture of a distributed multimedia database management system. Multimedia Database Management Systems can be used as a text for graduate students and researchers working in the area of multimedia databases. In addition, the book serves as essential reading material for computer professionals who are in (or moving to) the area of multimedia databases.

Multimedia data require specialised management techniques because the representations of colour, time, semantic concepts, and other underlying information can be drastically different from one another. This textbook on multimedia data management techniques gives a unified perspective on retrieval efficiency and effectiveness. It provides a comprehensive treatment, from basic

to advanced concepts, that will be useful to readers of different levels, from advanced undergraduate and graduate students to researchers and to professionals. After introducing models for multimedia data (images, video, audio, text, and web) and for their features, such as colour, texture, shape, and time, the book presents data structures and algorithms that help store, index, cluster, classify, and access common data representations. The authors also introduce techniques, such as relevance feedback and collaborative filtering, for bridging the 'semantic gap' and present the applications of these to emerging topics, including web and social networking.

Class-tested and coherent, this textbook teaches classical and web information retrieval, including web search and the related areas of text classification and text clustering from basic concepts. It gives an up-to-date treatment of all aspects of the design and implementation of systems for gathering, indexing, and searching documents; methods for evaluating systems; and an introduction to the use of machine learning methods on text collections. All the important ideas are explained using examples and figures, making it perfect for introductory courses in information retrieval for advanced undergraduates and graduate students in computer science. Based on feedback from extensive classroom experience, the book has been carefully structured in order to make teaching more natural and effective. Slides and additional exercises (with solutions for lecturers) are also available through the book's supporting website to help course instructors prepare their lectures.

"This book offers the latest research on retrieval and storage methods for digital library systems, a burgeoning field of data sourcing"--Provided by publisher.

the idea of retrieval and user the notion that connects both is hidden: semantics.

This book is an essential reference to cutting-edge issues and future directions in information retrieval. Information retrieval (IR) can be defined as the process of representing, managing, searching, retrieving, and presenting information. Good IR involves understanding information needs and interests, developing an effective search technique, system, presentation, distribution and delivery. The increased use of the Web and wider availability of information in this environment led to the development of Web search engines. This change has brought fresh challenges to a wider variety of users' needs, tasks, and types of information. Today, search engines are seen in enterprises, on laptops, in individual websites, in library catalogues, and elsewhere. Information Retrieval: Searching in the 21st Century focuses on core concepts, and current trends in the field. This book focuses on: Information Retrieval Models User-centred Evaluation of Information Retrieval Systems Multimedia Resource Discovery Image Users' Needs and Searching Behaviour Web Information Retrieval Mobile Search Context and Information Retrieval Text Categorisation and Genre in Information Retrieval Semantic Search The Role of Natural Language Processing in Information Retrieval: Search for Meaning and Structure Cross-language Information Retrieval Performance Issues in Parallel Computing for Information Retrieval This book is an invaluable reference for graduate students on IR courses or courses in related disciplines (e.g. computer science, information science, human-computer interaction, and knowledge management), academic and industrial researchers, and industrial personnel tracking information search technology developments to understand the business implications. Intermediate-advanced level undergraduate students on IR or related courses will also find this text insightful. Chapters are supplemented with exercises to stimulate further thinking.

As consumer costs for multimedia devices such as digital cameras and Web phones have decreased and diversity in the market has skyrocketed, the amount of digital information has grown considerably. Intelligent Multimedia Databases and Information Retrieval: Advancing Applications and Technologies details the latest information retrieval technologies and applications, the research surrounding the field, and the methodologies and design related to multimedia databases. Together with academic researchers and developers from both information retrieval and artificial intelligence fields, this book details issues and semantics of data retrieval with contributions from around the globe. As the information and data from multimedia databases continues to expand, the research and documentation surrounding it should keep pace as best as possible, and this book provides an excellent resource for the latest developments.

The wealth of information accessible on the Internet has grown exponentially since its advent. This mass of content must be systemically sifted to glean pertinent data, and the utilization of the collective intelligence of other users, or social information retrieval, is an innovative, emerging technique. Social Information Retrieval Systems: Emerging Technologies & Applications for Searching the Web Effectively provides relevant content in the areas of information retrieval systems, services, and research; covering topics such as social tagging, collaborative querying, social network analysis, subjective relevance judgments, and collaborative filtering. Answering the increasing demand for authoritative resources on Internet technologies, this Premier Reference Source will make an indispensable addition to any library collection.

The advent of increasingly large consumer collections of audio (e.g., iTunes), imagery (e.g., Flickr), and video (e.g., YouTube) is driving a need not only for multimedia retrieval but also information extraction from and across media. Furthermore, industrial and government collections fuel requirements for stock media access, media preservation, broadcast news retrieval, identity management, and video surveillance. While significant advances have been made in language processing for information extraction from unstructured multilingual text and extraction of objects from imagery and video, these advances have been explored in largely independent research communities who have addressed extracting information from single media (e.g., text, imagery, audio). And yet users need to search for concepts across individual media, author multimedia artifacts, and perform multimedia analysis in many domains. This collection is intended to serve several purposes, including reporting the current state of the art, stimulating novel research, and encouraging cross-fertilization of distinct research disciplines. The collection and integration of a common base of intellectual material will provide an invaluable service from which to teach a future generation of cross disciplinary media scientists and engineers.

"This book presents state-of-the-art advancements and developments in the field, and also brings a selection of techniques and algorithms about semantic-based visual

information retrieval. It covers many critical issues, such as: multi-level representation and description, scene understanding, semantic modeling, image and video annotation, human-computer interaction, and more"--Provided by publisher.

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