

## Social Media E Sentiment Analysis Levoluzione Dei Fenomeni Sociali Attraverso La Rete

The development of business intelligence has enhanced the visualization of data to inform and facilitate business management and strategizing. By implementing effective data-driven techniques, this allows for advance reporting tools to cater to company-specific issues and challenges. The Handbook of Research on Advanced Data Mining Techniques and Applications for Business Intelligence is a key resource on the latest advancements in business applications and the use of mining software solutions to achieve optimal decision-making and risk management results. Highlighting innovative studies on data warehousing, business activity monitoring, and text mining, this publication is an ideal reference source for research scholars, management faculty, and practitioners.

Due miliardi e mezzo di utenti internet, oltre un miliardo di account Facebook, 550 milioni di profili Twitter. Che parlano, discutono, si confrontano sui temi più svariati. Un flusso in continuo divenire di informazioni che dà sostanza ogni giorno al mondo dei Big Data. Ma come si analizza concretamente il "sentiment" della Rete? Quali sono i pregi e i limiti dei diversi metodi esistenti? E a quali domande possiamo dare una risposta? Dopo aver presentato le varie tecniche di analisi testuale applicate ai social media, questo libro discute di come l'informazione presente in Rete sia in grado di aiutarci a meglio comprendere il presente e a fare previsioni sul futuro riguardo a una molteplicità di fenomeni sociali, che spaziano dall'andamento dei mercati finanziari, alla diffusione di malattie, alle rivolte e ai sommovimenti popolari fino ai risultati dei talent show, prima di concentrarsi su due casi specifici: l'andamento della felicità degli italiani giorno per giorno, e i risultati delle campagne elettorali in Francia, Stati Uniti e Italia tra il 2012 e il 2013.

This book is a timely collection of chapters that present the state of the art within the analysis and application of big data. Working within the broader context of big data, this text focuses on the hot topics of social network modelling and analysis such as online dating recommendations, hiring practices, and subscription-type prediction in mobile phone services. Manuscripts are expanded versions of the best papers presented at the IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM'2016), which was held in August 2016. The papers were among the best featured at the meeting and were then improved and extended substantially. Social Network Based Big Data Analysis and Applications will appeal to students and researchers in the field.

Subjective Well-Being and Social Media shows how, by exploiting the unprecedented amount of information provided by the social networking sites, it is possible to build new composite indicators of subjective well-being. These new social media indicators are complementary to official statistics and surveys, whose data are collected at very low temporary and geographical resolution. The book also explains in full details how to solve the problem of selection bias coming from social media data. Mixing textual analysis, machine learning and time series analysis, the book also shows how to extract both the structural and the temporary components of subjective well-being. Cross-country analysis confirms that well-being is a complex phenomenon that is governed by macroeconomic and health factors, ageing, temporary shocks and cultural and psychological aspects. As an example, the last part of the book focuses on the impact of the prolonged stress due to the COVID-19 pandemic on subjective well-being in both Japan and Italy. Through a data science approach, the results show that a consistent and persistent drop occurred throughout 2020 in the overall level of well-being in both countries. The methodology presented in this book: enables social scientists and policy makers to know what people think about the quality of their own life, minimizing the bias induced by the interaction between the researcher and the observed individuals; being language-free, it allows for comparing the well-being perceived in different linguistic and socio-cultural contexts, disentangling differences due to objective events and life conditions from dissimilarities related to social norms or language specificities; provides a solution to the problem of selection bias in social media data through a systematic approach based on time-space small area estimation models. The book comes also with replication R scripts and data. Stefano M. Iacus is full professor of Statistics at the University of Milan, on leave at the Joint Research Centre of the European Commission. Former R-core member (1999-2017) and R Foundation Member. Giuseppe Porro is full professor of Economic Policy at the University of Insubria. An earlier version of this project was awarded the Italian Institute of Statistics-Google prize for "official statistics and big data".

This book constitutes the thoroughly refereed post-conference proceedings of the Second International Workshop on Algorithmic Aspects of Cloud Computing, ALGO CLOUD 2016, held in Aarhus, Denmark, in August 2016. The 11 revised full papers presented together with one tutorial paper were carefully reviewed and selected from 30 initial submissions. They deal with the following topics: algorithmic aspects of elasticity and scalability for distributed, large-scale data stores (e.g. NoSQL and columnar databases); search and retrieval algorithms for cloud infrastructures; monitoring and analysis of elasticity for virtualized environments; NoSQL, schemaless data modeling, integration; caching and load-balancing; storage structures and indexing for cloud databases; new algorithmic aspects of parallel and distributed computing for cloud applications; scalable machine learning, analytics and data science; high availability, reliability, failover; transactional models and algorithms for cloud databases; query languages and processing programming models; consistency, replication and partitioning CAP, data structures and algorithms for eventually consistent stores.

These proceedings represent the work of researchers participating in the 5th European Conference on Social Media (ECSM 2018) which is being hosted this year by Limerick Institute of Technology, Ireland on 21-22 June 2018.

This edited volume provides the reader with a fully updated, in-depth treatise on the emerging principles, conceptual underpinnings, algorithms and practice of Computational Intelligence in the realization of concepts and implementation of models of sentiment analysis and ontology-oriented engineering. The volume involves studies devoted to key

issues of sentiment analysis, sentiment models, and ontology engineering. The book is structured into three main parts. The first part offers a comprehensive and prudently structured exposure to the fundamentals of sentiment analysis and natural language processing. The second part consists of studies devoted to the concepts, methodologies, and algorithmic developments elaborating on fuzzy linguistic aggregation to emotion analysis, carrying out interpretability of computational sentiment models, emotion classification, sentiment-oriented information retrieval, a methodology of adaptive dynamics in knowledge acquisition. The third part includes a plethora of applications showing how sentiment analysis and ontologies becomes successfully applied to investment strategies, customer experience management, disaster relief, monitoring in social media, customer review rating prediction, and ontology learning. This book is aimed at a broad audience of researchers and practitioners. Readers involved in intelligent systems, data analysis, Internet engineering, Computational Intelligence, and knowledge-based systems will benefit from the exposure to the subject matter. The book may also serve as a highly useful reference material for graduate students and senior undergraduate students.

Sentiment analysis research has been started long back and recently it is one of the demanding research topics. Research activities on Sentiment Analysis in natural language texts and other media are gaining ground with full swing. But, till date, no concise set of factors has been yet defined that really affects how writers' sentiment i.e., broadly human sentiment is expressed, perceived, recognized, processed, and interpreted in natural languages. The existing reported solutions or the available systems are still far from perfect or fail to meet the satisfaction level of the end users. The reasons may be that there are dozens of conceptual rules that govern sentiment and even there are possibly unlimited clues that can convey these concepts from realization to practical implementation. Therefore, the main aim of this book is to provide a feasible research platform to our ambitious researchers towards developing the practical solutions that will be indeed beneficial for our society, business and future researches as well.

This volume presents a collection of carefully selected contributions in the area of social media analysis. Each chapter opens up a number of research directions that have the potential to be taken on further in this rapidly growing area of research. The chapters are diverse enough to serve a number of directions of research with Sentiment Analysis as the dominant topic in the book. The authors have provided a broad range of research achievements from multimodal sentiment identification to emotion detection in a Chinese microblogging website. The book will be useful to research students, academics and practitioners in the area of social media analysis.

Drawing on real-world developments, and including international case studies, this book introduces students to the concept and causes of democratic decay in the modern world. The aim of Sentiment Analysis is to define automatic tools able to extract subjective information from texts in natural language, such as opinions and sentiments, in order to create structured and actionable knowledge to be used by either a decision support system or a decision maker. Sentiment analysis has gained even more value with the advent and growth of social networking. Sentiment Analysis in Social Networks begins with an overview of the latest research trends in the field. It then discusses the sociological and psychological processes underling social network interactions. The book explores both semantic and machine learning models and methods that address context-dependent and dynamic text in online social networks, showing how social network streams pose numerous challenges due to their large-scale, short, noisy, context- dependent and dynamic nature. Further, this volume: Takes an interdisciplinary approach from a number of computing domains, including natural language processing, machine learning, big data, and statistical methodologies Provides insights into opinion spamming, reasoning, and social network analysis Shows how to apply sentiment analysis tools for a particular application and domain, and how to get the best results for understanding the consequences Serves as a one-stop reference for the state-of-the-art in social media analytics Takes an interdisciplinary approach from a number of computing domains, including natural language processing, big data, and statistical methodologies Provides insights into opinion spamming, reasoning, and social network mining Shows how to apply opinion mining tools for a particular application and domain, and how to get the best results for understanding the consequences Serves as a one-stop reference for the state-of-the-art in social media analytics

Social networking venues have increased significantly in popularity in recent years. When utilized properly, these networks can offer many advantages within business contexts. Strategic Uses of Social Media for Improved Customer Retention is a pivotal reference source for the latest scholarly research on the implementation of online social networks in modern businesses and examines how such networks allow for a better understanding of clients and customers. Highlighting theoretical concepts, empirical case studies, and critical analyses, this book is ideally designed for researchers, practitioners, professionals, and upper-level students interested in improving and maintaining customer relationships.

Social Media has transformed the ways in which individuals keep in touch with family and friends. Likewise, businesses have identified the profound opportunities present for customer engagement and understanding through the massive data available on social media channels, in addition to the customer reach of such sites. Social Media Listening and Monitoring for Business Applications explores research-based solutions for businesses of all types interested in an understanding of emerging concepts and technologies for engaging customers online. Providing insight into the currently available social media tools and practices for various business applications, this publication is an essential resource for business professionals, graduate-level students, technology developers, and researchers.

Social media has revolutionized how individuals, communities, and organizations create, share, and consume information. Similarly, social media offers numerous opportunities as well as enormous social and economic ills for individuals, communities, and organizations. Despite the increase in popularity of social networking sites and related digital media, there are limited data and studies on consumption patterns of the new media by different global communities. Analyzing Global Social Media Consumption is an essential

reference book that investigates the current trends, practices, and newly emerging narratives on theoretical and empirical research on all aspects of social media and its global use. Covering topics that include fake news detection, social media addiction, and motivations and impacts of social media use, this book is ideal for big data analysts, media and communications experts, researchers, academicians, and students in media and communications, information systems, and information technology study programs.

Sentiment analysis is a branch of natural language processing concerned with the study of the intensity of the emotions expressed in a piece of text. The automated analysis of the multitude of messages delivered through social media is one of the hottest research fields, both in academy and in industry, due to its extremely high potential applicability in many different domains. This Special Issue describes both technological contributions to the field, mostly based on deep learning techniques, and specific applications in areas like health insurance, gender classification, recommender systems, and cyber aggression detection.

This book constitutes the refereed proceedings of the 33rd Canadian Conference on Artificial Intelligence, Canadian AI 2020, which was planned to take place in Ottawa, ON, Canada. Due to the COVID-19 pandemic, however, it was held virtually during May 13–15, 2020. The 31 regular papers and 24 short papers presented together with 4 Graduate Student Symposium papers were carefully reviewed and selected from a total of 175 submissions. The selected papers cover a wide range of topics, including machine learning, pattern recognition, natural language processing, knowledge representation, cognitive aspects of AI, ethics of AI, and other important aspects of AI research.

"This book explores the key concepts of data mining and utilizing them on online social media platforms, offering valuable insight into data mining approaches for big data and sentiment analysis in online social media and covering many important security and other aspects and current trends"--

In the era of social connectedness, people are becoming increasingly enthusiastic about interacting, sharing, and collaborating through online collaborative media. However, conducting sentiment analysis on these platforms can be challenging, especially for business professionals who are using them to collect vital data. *Sentiment Analysis and Knowledge Discovery in Contemporary Business* is an essential reference source that discusses applications of sentiment analysis as well as data mining, machine learning algorithms, and big data streams in business environments. Featuring research on topics such as knowledge retrieval and knowledge updating, this book is ideally designed for business managers, academicians, business professionals, researchers, graduate-level students, and technology developers seeking current research on data collection and management to drive profit.

The study of voting behaviour remains a vibrant sub-discipline of political science. The *Handbook of Electoral Behaviour* is an authoritative and wide ranging survey of this dynamic field, drawing together a team of the world's leading scholars to provide a state-of-the-art review that sets the agenda for future study. Taking an interdisciplinary approach and focusing on a range of countries, the handbook is composed of eight parts. The first five cover the principal theoretical paradigms, establishing the state of the art in their conceptualisation and application, and followed by chapters on their specific challenges and innovative applications in contemporary voting studies. The remaining three parts explore elements of the voting process to understand their different effects on vote outcomes. The SAGE *Handbook of Electoral Behaviour* is an essential benchmark publication for advanced students, researchers and practitioners in the fields of politics, sociology, psychology and research methods.

This book was born from the desire to analyze the role of social recruitment in human resources management. The first chapter analyzes theoretical background of social media communication and focuses on the trend to make use of these instruments in SMEs and public and non-profit sectors. The second chapter explores an analysis of social sphere through three perspectives: a) how it has changed the identity of individuals; b) the relationship between social media and aspects of personality; c) the correlation between social media and cultural dimensions. The third chapter, focuses on the advantages and limitations of social recruitment and examines how employer branding can be used strategically in order to attract potential candidates. The relationship between social network and recruitment has been analyzed through empirical research on public and non-profit sector and SMEs (using Cranet data) in the fourth chapter. The last chapter analyzes the competitive advantage which social recruitment can generate

Social technology is quickly becoming a vital tool in our personal, educational, and professional lives. Its use must be further examined in order to determine the role of social media technology in organizational settings to promote business development and growth. *Social Network Analytics for Contemporary Business Organizations* is a critical scholarly resource that analyzes the application of social media in business applications. Featuring coverage on a broad range of topics, such as business management, dynamic networks, and online interaction, this book is geared towards professionals, researchers, academics, students, managers, and practitioners actively involved in the business industry.

In the digital era, users from around the world are constantly connected over a global network, where they have the ability to connect, share, and collaborate like never before. To make the most of this new environment, researchers and software developers must understand users' needs and expectations. *Social Media and Networking: Concepts, Methodologies, Tools, and Applications* explores the burgeoning global community made possible by Web 2.0 technologies and a universal, interconnected society. With four volumes of chapters related to digital media, online engagement, and virtual environments, this multi-volume reference is an essential source for software developers, web designers, researchers, students, and IT specialists interested in the growing field of digital media and engagement. This four-volume reference includes various chapters covering topics related to Web 2.0, e-governance, social media activism, internet privacy, digital and virtual communities, e-business, customer relationship management, and more.

This book constitutes the refereed proceedings of the 8th International Conference on Internet and Distributed Computing Systems, IDCS 2015, held in Windsor, UK, in September 2015. The 19 revised full and 6 revised short papers presented were carefully reviewed and selected from 42 submissions. The selected contributions covered cutting-edge aspects of Cloud Computing and Internet of Things, sensor networks, parallel and distributed computing, advanced networking, smart cities and smart buildings, Big Data and social networks.

As today's world continues to advance, Artificial Intelligence (AI) is a field that has become a staple of technological development and led to the advancement of numerous professional industries. An application within AI that has gained attention is machine learning. Machine learning uses statistical techniques and algorithms to give computer systems the ability to understand and its popularity has circulated through many trades. Understanding this technology and its countless implementations is pivotal for scientists and researchers across the world. The Handbook of Research on Emerging Trends and Applications of Machine Learning provides a high-level understanding of various machine learning algorithms along with modern tools and techniques using Artificial Intelligence. In addition, this book explores the critical role that machine learning plays in a variety of professional fields including healthcare, business, and computer science. While highlighting topics including image processing, predictive analytics, and smart grid management, this book is ideally designed for developers, data scientists, business analysts, information architects, finance agents, healthcare professionals, researchers, retail traders, professors, and graduate students seeking current research on the benefits, implementations, and trends of machine learning.

Multinational organizations have begun to realize that sentiment mining plays an important role for decision making and market strategy. The revolutionary growth of digital marketing not only changes the market game, but also brings forth new opportunities for skilled professionals and expertise. Currently, the technologies are rapidly changing, and artificial intelligence (AI) and machine learning are contributing as game-changing technologies. These are not only trending but are also increasingly popular among data scientists and data analysts. New Opportunities for Sentiment Analysis and Information Processing provides interdisciplinary research in information retrieval and sentiment analysis including studies on extracting sentiments from textual data, sentiment visualization-based dimensionality reduction for multiple features, and deep learning-based multi-domain sentiment extraction. The book also optimizes techniques used for sentiment identification and examines applications of sentiment analysis and emotion detection. Covering such topics as communication networks, natural language processing, and semantic analysis, this book is essential for data scientists, data analysts, IT specialists, scientists, researchers, academicians, and students.

This book covers computationally innovative methods and technologies including data collection and elicitation, data processing, data analysis, data visualizations, and data presentation. It explores how digital humanists have harnessed the hypersociality and social technologies, benefited from the open-source sharing not only of data but of code, and made technological capabilities a critical part of humanities work. Chapters are written by researchers from around the world, bringing perspectives from diverse fields and subject areas. The respective authors describe their work, their research, and their learning. Topics include semantic web for cultural heritage valorization, machine learning for parody detection by classification, psychological text analysis, crowdsourcing imagery coding in natural disasters, and creating inheritable digital codebooks. Designed for researchers and academics, this book is suitable for those interested in methodologies and analytics that can be applied in literature, history, philosophy, linguistics, and related disciplines. Professionals such as librarians, archivists, and historians will also find the content informative and instructive.

Extract valuable data from your social media sites and make better business decisions using R About This Book Explore the social media APIs in R to capture data and tame it Employ the machine learning capabilities of R to gain optimal business value A hands-on guide with real-world examples to help you take advantage of the vast opportunities that come with social media data Who This Book Is For If you have basic knowledge of R in terms of its libraries and are aware of different machine learning techniques, this book is for you. Those with experience in data analysis who are interested in mining social media data will find this book useful. What You Will Learn Access APIs of popular social media sites and extract data Perform sentiment analysis and identify trending topics Measure CTR performance for social media campaigns Implement exploratory data analysis and correlation analysis Build a logistic regression model to detect spam messages Construct clusters of pictures using the K-means algorithm and identify popular personalities and destinations Develop recommendation systems using Collaborative Filtering and the Apriori algorithm In Detail With an increase in the number of users on the web, the content generated has increased substantially, bringing in the need to gain insights into the untapped gold mine that is social media data. For computational statistics, R has an advantage over other languages in providing readily-available data extraction and transformation packages, making it easier to carry out your ETL tasks. Along with this, its data visualization packages help users get a better understanding of the underlying data distributions while its range of "standard" statistical packages simplify analysis of the data. This book will teach you how powerful business cases are solved by applying machine learning techniques on social media data. You will learn about important and recent developments in the field of social media, along with a few advanced topics such as Open Authorization (OAuth). Through practical examples, you will access data from R using APIs of various social media sites such as Twitter, Facebook, Instagram, GitHub, Foursquare, LinkedIn, Blogger, and other networks. We will provide you with detailed explanations on the implementation of various use cases using R programming. With this handy guide, you will be ready to embark on your journey as an independent social media analyst. Style and approach This easy-to-follow guide is packed with hands-on, step-by-step examples that will enable you to convert your real-world social media data into useful, practical information.

This proceedings is focused on the emerging concept of Collaborative Innovation Networks (COINs). COINs are at the core of collaborative knowledge networks, distributed communities taking advantage of the wide connectivity and the support of communication technologies, spanning beyond the organizational perimeter of companies on a global scale. The book presents the refereed conference papers from the 7th International Conference on COINs, October 8-9, 2019, in Warsaw, Poland. It includes papers for both application areas of COINs, (1) optimizing organizational creativity and performance, and (2) discovering and predicting new trends by identifying COINs on the Web through online social media analysis. Papers at COINs19 combine a wide range of interdisciplinary fields such as social network analysis, group dynamics, design and visualization, information systems and the psychology and sociality of collaboration, and intercultural analysis through the lens of online social media. They will cover most recent advances in areas from leadership and collaboration, trend prediction and data mining, to social competence and Internet communication.

Sentiment Analysis in Social Networks Morgan Kaufmann

In today's society, the utilization of social media platforms has become an abundant forum for individuals to post, share, tag, and, in some cases, overshare information about their daily lives. As significant amounts of data flood these venues, it has become necessary to find ways to collect and evaluate this information. Social Media Data Extraction and Content Analysis explores various social networking platforms and the technologies being utilized to gather and analyze information being posted to these venues. Highlighting emergent research, analytical techniques, and best practices in data extraction in

global electronic culture, this publication is an essential reference source for researchers, academics, and professionals.

Communication technologies, including the internet, social media, and countless online applications create the infrastructure and interface through which many of our interactions take place today. This form of networked communication creates new questions about how we establish relationships, engage in public, build a sense of identity, and delimit the private domain. The ubiquitous adoption of new technologies has also produced, as a byproduct, new ways of observing the world: many of our interactions now leave a digital trail that, if followed, can help us unravel the rhythms of social life and the complexity of the world we inhabit--and thus help us reconstruct the logic of social order and change. The analysis of digital data requires partnerships across disciplinary boundaries that--although on the rise--are still uncommon. Social scientists and computer scientists have never been closer in their goals of trying to understand communication dynamics, but there are not many venues where they can engage in an open exchange of methods and theoretical insights. This handbook brings together scholars across the social and technological sciences to lay the foundations of communication research in the networked age, and to provide a canon of how research should be conducted in the digital era. The contributors highlight the main theories currently guiding their research in digital communication, and discuss state-of-the-art methodological tools, including automated text analysis, the analysis of networks, and the use of natural experiments in virtual environments. Following a general introduction, the handbook covers network and information flow, communication and organizational dynamics, interactions and social capital, mobility and space, political communication and behavior, and the ethics of digital research.

Social Network Analysis and Mining Encyclopedia (ESNAM) is the first major reference work to integrate fundamental concepts and research directions in the areas of social networks and applications to data mining. The second edition of ESNAM is a truly outstanding reference appealing to researchers, practitioners, instructors and students (both undergraduate and graduate), as well as the general public. This updated reference integrates all basic concepts and research efforts under one umbrella. Coverage has been expanded to include new emerging topics such as crowdsourcing, opinion mining, and sentiment analysis. Revised content of existing material keeps the encyclopedia current. The second edition is intended for college students as well as public and academic libraries. It is anticipated to continue to stimulate more awareness of social network applications and research efforts. The advent of electronic communication, and in particular on-line communities, have created social networks of hitherto unimaginable sizes. Reflecting the interdisciplinary nature of this unique field, the essential contributions of diverse disciplines, from computer science, mathematics, and statistics to sociology and behavioral science, are described among the 300 authoritative yet highly readable entries. Students will find a world of information and insight behind the familiar façade of the social networks in which they participate. Researchers and practitioners will benefit from a comprehensive perspective on the methodologies for analysis of constructed networks, and the data mining and machine learning techniques that have proved attractive for sophisticated knowledge discovery in complex applications. Also addressed is the application of social network methodologies to other domains, such as web networks and biological networks.

This book constitutes revised selected papers from the Second International Workshop on Brain-Inspired Computing, BrainComp 2015, held in Cetraro, Italy, in July 2015. The 14 papers presented in this volume were carefully reviewed and selected for inclusion in this book. They deal with brain structure and function; computational models and brain-inspired computing methods with practical applications; high performance computing; and visualization for brain simulations.

Sentiment analysis is the computational study of people's opinions, sentiments, emotions, moods, and attitudes. This fascinating problem offers numerous research challenges, but promises insight useful to anyone interested in opinion analysis and social media analysis. This comprehensive introduction to the topic takes a natural-language-processing point of view to help readers understand the underlying structure of the problem and the language constructs commonly used to express opinions, sentiments, and emotions. The book covers core areas of sentiment analysis and also includes related topics such as debate analysis, intention mining, and fake-opinion detection. It will be a valuable resource for researchers and practitioners in natural language processing, computer science, management sciences, and the social sciences. In addition to traditional computational methods, this second edition includes recent deep learning methods to analyze and summarize sentiments and opinions, and also new material on emotion and mood analysis techniques, emotion-enhanced dialogues, and multimodal emotion analysis.

This book constitutes revised selected papers from the 17th Workshop on e-Business, WeB 2018, which took place in Santa Clara, CA, USA, in December 2018. The purpose of WeB is to provide an open forum for e-Business researchers and practitioners world-wide, to share topical research findings, explore novel ideas, discuss success stories and lessons learned, map out major challenges, and collectively chart future directions for e-Business. The WeB 2018 theme was "The Ecosystem of e-Business: Technologies, Stakeholders, and Connections." There was a total of 47 submissions and 41 papers were presented at the conference. Of these, 19 revised papers are presented in this volume. These contributions are organized in the following topical sections: social, policy, and privacy issues; e-market; FinTech; and artificial intelligence.

Because of the increased access to high-speed Internet and smart phones, many patients have started to use mobile applications to manage various health needs. These devices and mobile apps are now increasingly used and integrated with telemedicine and telehealth via the medical Internet of Things (IoT). Big Data Management and the Internet of Things for Improved Health Systems is a critical scholarly resource that examines the digital transformation of healthcare. Featuring coverage on a broad range of topics, such as brain computer interface, data reduction techniques, and risk factors, this book is geared towards academicians, practitioners, researchers, and students seeking research on health and well-being data.

This double volumes LNCS 11229-11230 constitutes the refereed proceedings of the Confederated International Conferences: Cooperative Information Systems, CoopIS 2018, Ontologies, Databases, and Applications of Semantics, ODBASE 2018, and Cloud and Trusted Computing, C&TC, held as part of OTM 2018 in October 2018 in Valletta, Malta. The 64 full papers presented together with 22 short papers were carefully reviewed and selected from 173 submissions. The OTM program every year covers data and Web semantics, distributed objects, Web services, databases, informationsystems, enterprise workflow and collaboration, ubiquity, interoperability, mobility, grid and high-performance computing.

This book presents the latest research on hierarchical deep learning for multi-modal sentiment analysis. Further, it analyses sentiments in Twitter blogs from both textual and visual content using hierarchical deep learning networks: hierarchical gated feedback recurrent neural networks (HGFRNNs). Several studies on deep learning have been conducted to date, but most of the current methods focus on either only textual content, or only visual content. In contrast, the proposed sentiment analysis model can be applied to any social blog dataset, making the book highly beneficial for postgraduate students and researchers in deep learning and sentiment analysis. The mathematical abstraction of the sentiment analysis model is presented in a very lucid manner. The complete sentiments are analysed by combining text and visual prediction results. The book's novelty lies in its development of innovative hierarchical recurrent neural networks for analysing sentiments; stacking of multiple recurrent layers by controlling the signal flow from upper recurrent layers to lower layers through a global gating unit; evaluation of HGFRNNs with different types of recurrent units; and adaptive assignment of HGFRNN layers to different timescales. Considering the need to leverage large-scale social multimedia content for sentiment analysis, both state-of-the-art visual and textual sentiment analysis techniques are used for joint visual-textual sentiment analysis. The proposed method yields promising results from Twitter datasets that include both texts and images, which support the theoretical hypothesis.

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

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