

Exploring Big Historical Data The Historians Macroscope

"The definitive reference on literacy research methods, this book serves as a key resource for researchers and as a text in graduate-level courses. Distinguished scholars clearly describe established and emerging methodologies, discuss the types of questions and claims for which each is best suited, identify standards of quality, and present exemplary studies that illustrate the approaches at their best. The book demonstrates how each mode of inquiry can yield unique insights into literacy learning and teaching and how the methods can work together to move the field forward"--

Every day, more and more kinds of historical data become available, opening exciting new avenues of inquiry but also new challenges. This updated and expanded book describes and demonstrates the ways these data can be explored to construct cultural heritage knowledge, for research and in teaching and learning. It helps humanities scholars to grasp Big Data in order to do their work, whether that means understanding the underlying algorithms at work in search engines or designing and using their own tools to process large amounts of information. Demonstrating what digital tools have to offer and also what 'digital' does to how we understand the past, the authors introduce the many different tools and developing approaches in Big Data for historical and humanistic scholarship, show how to use them, what to be wary of, and discuss the kinds of questions and new perspectives this new macroscopic perspective opens up. Originally authored 'live' online with ongoing feedback from the wider digital history community, Exploring Big Historical Data breaks new ground and sets the direction for the conversation into the future. Exploring Big Historical Data should be the go-to resource for undergraduate and graduate students confronted by a vast corpus of data, and researchers encountering these methods for the first time. It will also offer a helping hand to the interested individual seeking to make sense of genealogical data or digitized newspapers, and even the local historical society who are trying to see the value in digitizing their holdings.

The two centuries after 1800 witnessed a series of sweeping changes in the way in which Britain was governed, the duties of the state, and its role in the wider world. Powerful processes--from the development of democracy, the changing nature of the social contract, war, and economic dislocation--have challenged, and at times threatened to overwhelm, both governors and governed. Such shifts have also presented challenges to the historians who have researched and written about Britain's past politics. This Handbook shows the ways in which political historians have responded to these challenges, providing a snapshot of a field which has long been at the forefront of conceptual and methodological innovation within historical studies. It comprises thirty-three thematic essays by leading and emerging scholars in the field. Collectively, these essays assess and rethink the nature of modern British political history itself and suggest avenues and questions for future research. The Oxford Handbook of Modern British Political History thus provides a unique resource for those who wish to understand Britain's political past and a thought-provoking 'long view' for those interested in current political challenges.

The use of computation in archaeology is a kind of magic, a way of heightening the archaeological imagination. Agent-based modelling allows archaeologists to test the 'just-so' stories they tell about the past. It requires a formalization of the story so that it can be represented as a simulation; researchers are then able to explore the unintended consequences or emergent outcomes of stories about the past. Agent-based models are one end of a spectrum that, at the opposite side, ends with video games. This volume explores this spectrum in the context of Roman archaeology, addressing the strengths, weaknesses, and opportunities of a formalized approach to computation and archaeogaming. Power beaming is the ability to move energy without moving or employing mass between an energy input and energy output. It is an emerging technology that could reshape how we generate and distribute energy and how our devices and autonomous systems are powered. This comprehensive compendium provides the foundation needed for researchers, technology developers, and end users to understand the promise and challenges for power beaming. By establishing a common nomenclature and conceptual approach to the analysis and assessment of power beaming systems, this unique reference text provides a true status of advancements in the field, and lays the groundwork for fruitful future research and applications.

This book leapfrogs over the usual pedagogical progression, taking readers to a real understanding of quantum, relativistic, nuclear and particle physics. These areas are usually reserved for the end of one's undergraduate career or even for graduate students in physics programs, but do not need to be. The Scenic Route is really created out of the joy of science; it is not designed to produce problem-solving ability but rather is designed to reveal some physics that is just plain nifty. Guided by an understanding that much of modern physics is available to almost everyone with a moderate mathematical vocabulary, we lead the student through a short, trenchant tour of quantum physics, relativity, modern particle physics and its history.

Visualize and analyze your Hadoop data using Hunk About This Book Explore your data in Hadoop and NoSQL data stores Create and optimize your reporting experience with advanced data visualizations and data analytics A comprehensive developer's guide that helps you create outstanding analytical solutions efficiently Who This Book Is For If you are Hadoop developers who want to build efficient real-time Operation Intelligence Solutions based on Hadoop deployments or various NoSQL data stores using Hunk, this book is for you. Some familiarity with Splunk is assumed. What You Will Learn Deploy and configure Hunk on top of Cloudera Hadoop Create and configure Virtual Indexes for datasets Make your data presentable using the wide variety of data visualization components and knowledge objects Design a data model using Hunk best practices Add more flexibility to your analytics solution via extended SDK and custom visualizations Discover data using MongoDB as a data source Integrate Hunk with AWS Elastic MapReduce to improve scalability In Detail Hunk is the big data analytics platform that lets you rapidly explore, analyse, and visualize data in Hadoop and NoSQL data stores. It provides a single, fluid user experience, designed to show you insights from

your big data without the need for specialized skills, fixed schemas, or months of development. Hunk goes beyond typical data analysis methods and gives you the power to rapidly detect patterns and find anomalies across petabytes of raw data. This book focuses on exploring, analysing, and visualizing big data in Hadoop and NoSQL data stores with this powerful full-featured big data analytics platform. You will begin by learning the Hunk architecture and Hunk Virtual Index before moving on to how to easily analyze and visualize data using Splunk Search Language (SPL). Next you will meet Hunk Apps which can easily integrate with NoSQL data stores such as MongoDB or Sqrl. You will also discover Hunk knowledge objects, build a semantic layer on top of Hadoop, and explore data using the friendly user-interface of Hunk Pivot. You will connect MongoDB and explore data in the data store. Finally, you will go through report acceleration techniques and analyze data in the AWS Cloud. Style and approach A step-by-step guide starting right from the basics and deep diving into the more advanced and technical aspects of Hunk.

This is the ultimate source for anyone who wants a comprehensive view of how the sharing economy began and how it may fundamentally change capitalism across the globe. • Takes a global and multidisciplinary approach to defining the sharing economy, its facilitators, and its outcomes • Provides a concise yet thorough study of the sharing economy, in one volume • Presents case-based research to explain how the sharing economy works • Offers real-world examples of collaborative consumption and of sharing economy organizations

This edited volume focuses on big data implications for computational social science and humanities from management to usage. The first part of the book covers geographic data, text corpus data, and social media data, and exemplifies their concrete applications in a wide range of fields including anthropology, economics, finance, geography, history, linguistics, political science, psychology, public health, and mass communications. The second part of the book provides a panoramic view of the development of big data in the fields of computational social sciences and humanities. The following questions are addressed: why is there a need for novel data governance for this new type of data?, why is big data important for social scientists?, and how will it revolutionize the way social scientists conduct research? With the advent of the information age and technologies such as Web 2.0, ubiquitous computing, wearable devices, and the Internet of Things, digital society has fundamentally changed what we now know as "data", the very use of this data, and what we now call "knowledge". Big data has become the standard in social sciences, and has made these sciences more computational. Big Data in Computational Social Science and Humanities will appeal to graduate students and researchers working in the many subfields of the social sciences and humanities.

Historical scholarship is currently undergoing a digital turn. All historians have experienced this change in one way or another, by writing on word processors, applying quantitative methods on digitalized source materials, or using internet resources and digital tools. Digital Histories showcases this emerging wave of digital history research. It presents work by historians who – on their own or through collaborations with e.g. information technology specialists – have uncovered new, empirical historical knowledge through digital and computational methods. The topics of the volume range from the medieval period to the present day, including various parts of Europe. The chapters apply an exemplary array of methods, such as digital metadata analysis, machine learning, network analysis, topic modelling, named entity recognition, collocation analysis, critical search, and text and data mining. The volume argues that digital history is entering a mature phase, digital history 'in action', where its focus is shifting from the building of resources towards the making of new historical knowledge. This also involves novel challenges that digital methods pose to historical research, including awareness of the pitfalls and limitations of the digital tools and the necessity of new forms of digital source criticisms. Through its combination of empirical, conceptual and contextual studies, Digital Histories is a timely and pioneering contribution taking stock of how digital research currently advances historical scholarship.

Every day, more and more kinds of historical data become available, opening exciting new avenues of inquiry but also new challenges. This updated and expanded book describes and demonstrates the ways these data can be explored to construct cultural heritage knowledge, for research and in teaching and learning. It helps humanities scholars to grasp Big Data in order to do their work, whether that means understanding the underlying algorithms at work in search engines or designing and using their own tools to process large amounts of information. Demonstrating what digital tools have to offer and also what 'digital' does to how we understand the past, the authors introduce the many different tools and developing approaches in Big Data for historical and humanistic scholarship, show how to use them, what to be wary of, and discuss the kinds of questions and new perspectives this new macroscopic perspective opens up. Originally authored 'live' online with ongoing feedback from the wider digital history community, Exploring Big Historical Data breaks new ground and sets the direction for the conversation into the future. Exploring Big Historical Data should be the go-to resource for undergraduate and graduate students confronted by a vast corpus of data, and researchers encountering these methods for the first time. It will also offer a helping hand to the interested individual seeking to make sense of genealogical data or digitized newspapers, and even the local historical society who are trying to see the value in digitizing their holdings.

"This evidence-based book provides the framework and guidelines that professionals need for working with the contemporary explosion of data that is creating opportunities and challenges to all phases of our society and commerce."

–Larry R. Medsker, Research Professor in Physics and Data Science, The George Washington University Knowledge Management in Practice is a resource on how knowledge management (KM) is implemented. It provides specific KM methods, tips, techniques, and best practices to gain competitive advantage and the most from investing in KM. It examines how KM is leveraged by first responders, the military, healthcare providers, insurance and financial services companies, legal firms, human resources departments, merger and acquisition (M&A) firms, and research institutions. Essential KM concepts are explored not only from a foundational perspective but also from a practical application. These concepts include capturing and codifying tacit and explicit knowledge, KM methods, information architecture, search, KM

and social media, KM and Big Data, and the adoption of KM. Readers can visit the book's companion website, KM Mentor (www.KMMentor.com), where they can access: Presentations by industry leaders on a variety of topics KM templates and instruction on executing KM strategy, performing knowledge transfer, and KM assessments and audits KM program and project implementation guidance Insights and reviews on KM tools Guidance on implementing and executing various KM Methods Specialized KM publications A private secure collaboration community for members to discuss ideas and get expert answers and advice

This timely and lucid guide is intended for students and scholars working on all historical periods and topics in the humanities and social sciences--especially for those who do not think of themselves as experts in quantification, "big data," or "digital humanities." The authors reveal quantification to be a powerful and versatile tool, applicable to a myriad of materials from the past. Their book, accessible to complete beginners, offers detailed advice and practical tips on how to build a dataset from historical sources and how to categorize it according to specific research questions. Drawing on examples from works in social, political, economic, and cultural history, the book guides readers through a wide range of methods, including sampling, cross-tabulations, statistical tests, regression, factor analysis, network analysis, sequence analysis, event history analysis, geographical information systems, text analysis, and visualization. The requirements, advantages, and pitfalls of these techniques are presented in layperson's terms, avoiding mathematical terminology. Conceived primarily for historians, the book will prove invaluable to other humanists, as well as to social scientists looking for a nontechnical introduction to quantitative methods. Covering the most recent techniques, in addition to others not often enough discussed, the book will also have much to offer to the most seasoned practitioners of quantification.

This book constitutes the proceedings of the 9th International Conference on Big Data, BigData 2020, held as part of SCF 2020, during September 18-20, 2020. The conference was planned to take place in Honolulu, HI, USA and was changed to a virtual format due to the COVID-19 pandemic. The 16 full and 3 short papers presented were carefully reviewed and selected from 52 submissions. The topics covered are Big Data Architecture, Big Data Modeling, Big Data As A Service, Big Data for Vertical Industries (Government, Healthcare, etc.), Big Data Analytics, Big Data Toolkits, Big Data Open Platforms, Economic Analysis, Big Data for Enterprise Transformation, Big Data in Business Performance Management, Big Data for Business Model Innovations and Analytics, Big Data in Enterprise Management Models and Practices, Big Data in Government Management Models and Practices, and Big Data in Smart Planet Solutions.

The book considers the challenges of navigating in a pathogenic world. It includes articles and reviews from top scientists from around the world who weigh in with their perspectives on the global pandemic, comparing this to other disease outbreaks and modes of treatment. It also offers insight into new breakthroughs in combatting the current pandemic and future disease. The combination of these varied approaches offer a unique consideration of the current challenges that the world now faces as well as for those that lie ahead.

This book provides a basic introduction to Sustainability & Sustainable Developments, integrated with current business models and future business prospects. In 10 chapters, the authors cover a wide array of topics comprehensively, in an accessible style of language that will appeal to the uninitiated. Many eye-catching self-illustrated artworks, coupled with in-depth analyses of numerous case studies, allow the reader to grasp the theoretical concepts with ease. Multiple-choice exercises at the end of every chapter (with answers provided) further aid readers in verifying their own understanding. Sustainability for Beginners hopes to encourage effective learning, improve abstract thinking, and culminate sustainable entrepreneurship among students and innovators.

The Web has been with us now for almost 25 years. An integral part of our social, cultural and political lives, 'new media' is simply not that new anymore. Despite the rapidly expanding archives of information at our disposal, and the recent growth of interest in web history as a field of research, the information available to us still far outstrips our understanding of how to interpret it. The SAGE Handbook of Web History marks the first comprehensive review of this subject to date. Its editors emphasise two main different forms of study: the use of the web as an historical resource, and the web as an object of study in its own right. Bringing together all the existing knowledge of the field, with an interdisciplinary focus and an international scope, this is an incomparable resource for researchers and students alike. Part One: The Web and Historiography Part Two: Theoretical and Methodological Reflections Part Three: Technical and Structural Dimensions of Web History Part Four: Platforms on the Web Part Five: Web History and Users, some Case Studies Part Six: The Roads Ahead

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Data Science and Big Data Analytics is about harnessing the power of data for new insights. The book covers the breadth of activities and methods and tools that Data Scientists use. The content focuses on concepts, principles and practical applications that are applicable to any industry and technology environment, and the learning is supported and explained with examples that you can replicate using open-source software. This book will help you: Become a contributor on a data science team Deploy a structured lifecycle approach to data analytics problems Apply appropriate analytic techniques and tools to analyzing big data Learn how to tell a compelling story with data to drive business action Prepare for EMC Proven Professional Data Science Certification Corresponding data sets are available at www.wiley.com/go/9781118876138. Get started discovering, analyzing, visualizing, and presenting data in a meaningful way today!

Introduction to Information Literacy for Students presents a concise, practical guide to navigating information in the digital age. Features a unique step-by-step method that can be applied to any research project Includes research insights from professionals, along with review exercises, insiders' tips and tools, search screen images utilized by students, and more Encourages active inquiry-based learning through the inclusion of various study questions and exercises Provides students with effective research strategies to serve them through their academic years and professional careers Ensures accessibility and a strong instructional approach due to authorship by a librarian and award-winning English professor

This book has a collection of articles written by Big Data experts to describe some of the cutting-edge methods and applications from their respective areas of interest, and provides the reader with a detailed overview of the field of Big Data Analytics as it is practiced today. The chapters cover technical aspects of key areas that generate and use Big Data such as management and finance; medicine and healthcare; genome, cytochrome and microbiome; graphs and networks; Internet of Things; Big Data standards; bench-marking of systems; and others. In addition to different applications, key algorithmic approaches such as graph partitioning, clustering and finite mixture modelling of high-dimensional data are also covered. The varied collection of themes in this volume introduces the reader to the richness of the emerging field of Big Data Analytics.

Get up to speed on Scala--the JVM, JavaScript, and natively compiled language that offers all the benefits of functional programming, a modern object model, and an advanced type system. Packed with code examples, this comprehensive book shows you how to be productive with the language and ecosystem right away. You'll learn why Scala is ideal for building today's highly scalable, data-centric applications while maximizing developer productivity. While Java remains popular and Kotlin has become popular, Scala hasn't been sitting still. This third edition covers the new features in Scala 3 with updates throughout the book. Programming Scala is ideal for beginning to advanced developers who want a complete understanding of Scala's design philosophy and features with a thoroughly practical focus. Program faster with Scala's succinct and flexible syntax Dive into basic and advanced functional programming techniques Build killer big data and distributed apps using Scala's functional combinators and tools like Spark and Akka Create concise solutions to challenging design problems with the sophisticated type system, mixin composition with traits, pattern matching, and more

Are you a non-native English speaker? Are you often confronted with manuscript rejections because of poor language impeding comprehension of your paper? A Practical Guide to Scientific and Technical Translation is your solution. In this one-stop guide, two authors with extensive experience as reviewers and translators in a vast medley of scientific fields assist you to produce professional quality documents, whether through direct authoring in a language foreign to you or translation from an existing text. The book is not intended as a text on English grammar but as a troubleshooting guide to linguistic and style errors. We will help you overcome at least the most common problems here. Technical terminology searching and choice will also be covered with examples from a number of engineering disciplines (aviation, transport, nuclear, environment, civil engineering, etc.), with advice on how to choose the right term for the right job. While the emphasis is on producing documents in English (the lingua franca of modern scientific literature), general translation concepts are also discussed. Hence, A Practical Guide to Scientific and Technical Translation will also be useful to translators, and scientists who need to present their work in languages other than English.

Fully updated and carefully revised, this new 2nd edition of History by Numbers still stands alone as the only textbook on quantitative methods suitable for students of history. Even the numerically challenged will find inspiration. Taking a problem-solving approach and using authentic historical data, it describes each method in turn, including its origin, purpose, usefulness and associated pitfalls. The problems are developed gradually and with narrative skill, allowing readers to experience the moment of discovery for each of the interpretative outcomes. Quantitative methods are essential for the modern historian, and this lively and accessible text will prove an invaluable guide for anyone entering the discipline.

Technological advancements in recent years have led to significant developments within a variety of business applications. In particular, data-driven research provides ample opportunity for enterprise growth, if utilized efficiently. Supply Chain Management in the Big Data Era is an authoritative reference source for the latest scholarly material on the implementation of big data analytics for improved operations and supply chain processes. Highlighting emerging strategies from different industry perspectives, this book is ideally designed for managers, professionals, practitioners, and students interested in the most recent research on supply chain innovations.

"Havill's problem-driven approach introduces algorithmic concepts in context and motivates students with a wide range of interests and backgrounds." -- Janet Davis, Associate Professor and Microsoft Chair of Computer Science, Whitman College "This book looks really great and takes exactly the approach I think should be used for a CS 1 course. I think it really fills a need in the textbook landscape." -- Marie desJardins, Dean of the College of Organizational, Computational, and Information Sciences, Simmons University "Discovering Computer Science is a refreshing departure from introductory programming texts, offering students a much more sincere introduction to the breadth and complexity of this ever-growing field." -- James Deverick, Senior Lecturer, The College of William and Mary "This unique introduction to the science of computing guides students through broad and universal approaches to problem solving in a variety of contexts and their ultimate implementation as computer programs." -- Daniel Kaplan, DeWitt Wallace Professor, Macalester College Discovering Computer Science: Interdisciplinary Problems, Principles, and Python Programming is a problem-oriented introduction to computational problem solving and programming in Python, appropriate for a first course for computer science majors, a more targeted disciplinary computing course or, at a slower pace, any introductory computer science course for a general audience. Realizing that an organization around language features only resonates with a narrow audience, this textbook instead connects programming to students' prior interests using a range of authentic problems from the natural and social sciences and the digital humanities. The presentation begins with an introduction to the problem-solving process, contextualizing programming as an essential component. Then, as the book progresses, each chapter guides students through solutions to increasingly complex problems, using a spiral approach to introduce Python language features. The text also places programming in the context of fundamental computer science principles, such as abstraction, efficiency, testing, and algorithmic techniques, offering glimpses of topics that are traditionally put off until later courses. This book contains 30 well-developed independent projects that encourage students to explore questions across disciplinary boundaries, over 750 homework exercises, and 300 integrated reflection questions engage students in problem solving and active reading. The accompanying website — <https://www.discoveringcs.net> — includes more advanced content, solutions to selected exercises, sample code and data files, and pointers for further exploration.

An original methodological framework for approaching the archived web, both as a source and as an object of study in its own right. As life continues to move online, the web becomes increasingly important as a source for understanding the past. But historians have yet to formulate a methodology for approaching the archived web as a source of study. How should the history of the present be written? In this book, Niels Brügger offers an original methodological framework for approaching the web of the past, both as a source and as an object of study in its own right. While many studies of the web focus solely on its use and users, Brügger approaches the archived web as a semiotic, textual system in order to offer the first book-length treatment of its scholarly use. While the various forms of the archived web can challenge researchers' interactions with it, they also present a range of possibilities for interpretation. The Archived Web identifies characteristics of the online web that are significant now for scholars, investigates how the online web became the archived web, and explores how the particular digitality of the archived web can affect a historian's research process. Brügger offers suggestions for how to translate traditional historiographic methods for the study of the archived web, focusing on provenance, creating an overview of the archived material, evaluating versions, and citing the material. The Archived Web lays the foundations for doing web history in the digital age, offering important and timely guidance for today's media scholars and tomorrow's historians.

This book is devoted to the modeling and understanding of complex urban systems. This second volume of Understanding Complex Urban Systems focuses on the challenges of the modeling tools, concerning, e.g., the quality and quantity of data and the selection of an appropriate modeling approach. It is meant to support urban decision-makers—including municipal politicians, spatial planners, and citizen groups—in choosing an appropriate modeling approach for their particular modeling requirements. The contributors to this volume are from different disciplines, but all share the same goal: optimizing the representation of complex urban systems. They present and discuss a variety of approaches for dealing with data-availability problems and finding appropriate modeling approaches—and not only in terms of computer modeling. The selection of articles featured in this volume reflect a broad variety of new and established modeling approaches such as: - An argument for using Big Data methods in conjunction with Agent-based Modeling; - The introduction of a participatory approach involving citizens, in order to utilize an Agent-based Modeling approach to simulate urban-growth scenarios; - A presentation of semantic modeling to enable a flexible application of modeling methods and a flexible exchange of data; - An article about a nested-systems approach to analyzing a city's interdependent subsystems (according to these subsystems' different velocities of change); - An article about methods that use

Luhmann's system theory to characterize cities as systems that are composed of flows; - An article that demonstrates how the Sen-Nussbaum Capabilities Approach can be used in urban systems to measure household well-being shifts that occur in response to the resettlement of urban households; - A final article that illustrates how Adaptive Cycles of Complex Adaptive Systems, as well as innovation, can be applied to gain a better understanding of cities and to promote more resilient and more sustainable urban futures.

Big data has presented a number of opportunities across industries. With these opportunities come a number of challenges associated with handling, analyzing, and storing large data sets. One solution to this challenge is cloud computing, which supports a massive storage and computation facility in order to accommodate big data processing. *Managing and Processing Big Data in Cloud Computing* explores the challenges of supporting big data processing and cloud-based platforms as a proposed solution. Emphasizing a number of crucial topics such as data analytics, wireless networks, mobile clouds, and machine learning, this publication meets the research needs of data analysts, IT professionals, researchers, graduate students, and educators in the areas of data science, computer programming, and IT development.

"This book's purpose is to consider the public dimension of the local environment, to see that environment as a product of historical forces, and, finally to contemplate the relationship of individual members of a community to the places where they encounter each other"--Pref. Throughout Germany's tumultuous twentieth century, photography was an indispensable form of documentation. Whether acting as artists, witnesses, or reformers, both professional and amateur photographers chronicled social worlds through successive periods of radical upheaval. *The Ethics of Seeing* brings together an international group of scholars to explore the complex relationship between the visual and the historic in German history. Emphasizing the transformation of the visual arena and the ways in which ordinary people made sense of world events, these revealing case studies illustrate photography's multilayered role as a new form of representation, a means to subjective experience, and a fresh mode of narrating the past.

As digital technologies occupy a more central role in working and everyday human life, individual and social realities are increasingly constructed and communicated through digital objects, which are progressively replacing and representing physical objects. They are even shaping new forms of virtual reality. This growing digital transformation coupled with technological evolution and the development of computer computation is shaping a cyber society whose working mechanisms are grounded upon the production, deployment, and exploitation of big data. In the arts and humanities, however, the notion of big data is still in its embryonic stage, and only in the last few years, have arts and cultural organizations and institutions, artists, and humanists started to investigate, explore, and experiment with the deployment and exploitation of big data as well as understand the possible forms of collaborations based on it. *Big Data in the Arts and Humanities: Theory and Practice* explores the meaning, properties, and applications of big data. This book examines the relevance of big data to the arts and humanities, digital humanities, and management of big data with and for the arts and humanities. It explores the reasons and opportunities for the arts and humanities to embrace the big data revolution. The book also delineates managerial implications to successfully shape a mutually beneficial partnership between the arts and humanities and the big data- and computational digital-based sciences. Big data and arts and humanities can be likened to the rational and emotional aspects of the human mind. This book attempts to integrate these two aspects of human thought to advance decision-making and to enhance the expression of the best of human life.

Interest in big data has swelled within the scholarly community as has increased attention to the internet of things (IoT). Algorithms are constructed in order to parse and analyze all this data to facilitate the exchange of information. However, big data has suffered from problems in connectivity, scalability, and privacy since its birth. The application of deep learning algorithms has helped process those challenges and remains a major issue in today's digital world. *Advanced Deep Learning Applications in Big Data Analytics* is a pivotal reference source that aims to develop new architecture and applications of deep learning algorithms in big data and the IoT. Highlighting a wide range of topics such as artificial intelligence, cloud computing, and neural networks, this book is ideally designed for engineers, data analysts, data scientists, IT specialists, programmers, marketers, entrepreneurs, researchers, academicians, and students.

The Digital Humanities have arrived at a moment when digital Big Data is becoming more readily available, opening exciting new avenues of inquiry but also new challenges. This pioneering book describes and demonstrates the ways these data can be explored to construct cultural heritage knowledge, for research and in teaching and learning. It helps humanities scholars to grasp Big Data in order to do their work, whether that means understanding the underlying algorithms at work in search engines, or designing and using their own tools to process large amounts of information. Demonstrating what digital tools have to offer and also what 'digital' does to how we understand the past, the authors introduce the many different tools and developing approaches in Big Data for historical and humanistic scholarship, show how to use them, what to be wary of, and discuss the kinds of questions and new perspectives this new macroscopic perspective opens up. Authored 'live' online with ongoing feedback from the wider digital history community, *Exploring Big Historical Data* breaks new ground and sets the direction for the conversation into the future. It represents the current state-of-the-art thinking in the field and exemplifies the way that digital work can enhance public engagement in the humanities. *Exploring Big Historical Data* should be the go-to resource for undergraduate and graduate students confronted by a vast corpus of data, and researchers encountering these methods for the first time. It will also offer a helping hand to the interested individual seeking to make sense of genealogical data or digitized newspapers, and even the local historical society who are trying to see the value in digitizing their holdings. The companion website to *Exploring Big Historical Data* can be found at <http://www.themacroscope.org/>. On this site you will find code, a discussion forum, essays, and datafiles that accompany this book.

Cape Town, South Africa, 7 Sept. 2016 – 8 Sept. 2016. Theme: Sustainable economies in the information economy. Purpose: To share the quality academic papers presented at the International Conference on Business and Management Dynamics (ICBMD) held from 7 to 8 September 2016 at African Pride Crystal Hotel and Spa in Cape Town. As grey literature, the proceedings are the contributions made by researchers at the conference and are considered the written record of the work that was presented to fellow conference delegates. Methodology: The methodology used varies from researcher to researcher but are suitable for the studies conducted. Thus, on the one hand, studies that were subjective in nature used the interpretive paradigm, where the qualitative approach adopted made use of the interview method to collect data. On the other hand, studies that were objectively inclined adopted the positivist philosophy and used survey questionnaires to collect data. However, there were some academic papers which used mixed methodology because of the nature of the study. Whatever methodology used adhered to the ethos of the philosophies underpinning the methodology. Contribution made to scholarship: The articles come from individual researchers and each article in the proceedings is unique. Mostly, there is no general argument leading from one contribution to the next. However, it is interesting to note that in the area of economic performance it was evident that real exchange rate and net foreign direct investment contribute more towards innovations in economic growth. With regard to human capital development, papers presented evidence that there exists a definite need to explore the phenomenon of personal branding as limited scientific academic research has been done within the field of personal branding or on elements of the topic. Thus, the outcome argues that

personal branding has an influence on leadership style which in turn impacts on organisational performance and related hygiene factors. Furthermore, it was demonstrated that current methods or strategies for enforcing institutionalisation of knowledge sharing within an organisation have not been successful, and, as such, new strategies are needed to reinforce efforts to nurture and invigorate the institutionalisation of knowledge sharing within an organisation. With regard to technology and big data impact on organisational performance, it was evident that system performance, memory consumption and CPU utilisation can be used as criteria to compare and evaluate big data technologies to improve organisational performance. Most of the articles' contribution reemphasised technology education and training as a means of digitising business and improving effectiveness. Target audience: The target readership is academic researchers and business leaders who require access to the latest developments in the fields of economics, information management, business, education, development studies, social sciences and technology. It is also for policymakers and other stakeholders who need a better understanding of the impact of new developments on existing policies and regulations for their review or amendment.

Social Complexity and Complex Systems in Archaeology turns to complex systems thinking in search of a suitable framework to explore social complexity in Archaeology. Social complexity in archaeology is commonly related to properties of complex societies such as states, as opposed to so-called simple societies such as tribes or chiefdoms. These conceptualisations of complexity are ultimately rooted in Eurocentric perspectives with problematic implications for the field of archaeology. This book provides an in-depth conceptualisation of social complexity as the core concept in archaeological and interdisciplinary studies of the past, integrating approaches from complex systems thinking, archaeological theory, social practice theory, and sustainability and resilience science. The book covers a long-term perspective of social change and stability, tracing the full cycle of complexity trajectories, from emergence and development to collapse, regeneration and transformation of communities and societies. It offers a broad vision on social complexity as a core concept for the present and future development of archaeology. This book is intended to be a valuable resource for students and scholars in the field of archaeology and related disciplines such as history, anthropology, sociology, as well as the natural sciences studying human-environment interactions in the past.

This book presents research into the urban archaeology of 19th-century Australia. It focuses on the detailed archaeology of 20 cesspits in The Rocks area of Sydney and the Commonwealth Block site in Melbourne. It also includes discussions of a significant site in Sydney – First Government House. The book is anchored around a detailed comparison of contents of 20 cesspits created during the 19th century, and examines patterns of similarity and dissimilarity, presenting analyses that work towards an integration of historical and archaeological data and perspectives. The book also outlines a transnational framework of comparison that assists in the larger context related to building a truly global archaeology of the modern city. This framework is directly related a multi-scalar approach to urban archaeology. Historical archaeologists have been advocating the need to explore the archaeology of the modern city using several different scales or frames of reference. The most popular (and most basic) of these has been the household. However, it has also been acknowledged that interpreting the archaeology of households beyond the notion that every household and associated archaeological assemblage is unique requires archaeologists and historians to compare and contrast, and to establish patterns. These comparisons frequently occur at the level of the area or district in the same city, where archaeologists seek to derive patterns that might be explained as being the result of status, class, ethnicity, or ideology. Other less frequent comparisons occur at larger scales, for example between cities or countries, acknowledging that the archaeology of the modern western city is also the archaeology of modern global forces of production, consumption, trade, immigration and ideology formation. This book makes a contribution to that general literature

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