# Getting Started With Orientdb

Master MongoDB - The widely used modern database in a step-by-step, practical, and easy-to-understand approach covering all major topics KEY FEATURES ? In-depth practical demonstration of MongoDB concepts with numerous examples. ? Includes graphical illustrations and visual explanations for MongoDB commands and methods. ? Covers advanced topics such as MongoDB Compass, MongoDB Security, Backup and Restore, and Replication and Sharding. DESCRIPTION MongoDB Complete Guide book starts with the basics of MongoDB, what exactly is MongoDB, and how to use it practically. You will understand how MongoDB is different from the traditional RDBMS. Topics such as installation and configuration of the MongoDB server, MongoDB commands, MongoDB Shell methods, and data types in MongoDB are covered in detail. You will practice how to perform MongoDB CRUD operations, indexing, MongoDB query selectors, projection in MongoDB and projection operators as well as aggregation in a very detailed and step-by-step manner. You learn how to work with MongoDB Compass and some of the advanced MongoDB topics like managing and administering MongoDB, managing the MongoDB process, monitoring and diagnosing MongoDB, backup and restore, MongoDB security, replication and sharding. WHAT YOU WILL LEARN ? Perform write operations, search documents, and define complex queries in MongoDB. ? Perform indexing, aggregation, and data replication. ? End-to-end MongoDB administration along with authentication and authorization. ? Running backups, restoring, and monitoring of MongoDB database enterprise-wide. WHO THIS BOOK IS FOR This book is designed for software developers and server administrators who want to quickly learn MongoDB basics and start applying the knowledge of MongoDB in their business systems. TABLE OF CONTENTS MongoDB Basics 1.Introduction to MongoDB 2. MongoDB Installation and Setup on Windows 3. MongoDB Installation and Setup on Linux (Ubuntu) 4. MongoDB Installation and Setup on macOS 5. Getting started with MongoDB 6. Storage Engines in MongoDB 7. Managing and Administering MongoDB 8. MongoDB Shell Methods 9. Data Types in MongoDB MongoDB Intermediate Level Topics 10. Introduction to MongoDB CRUD Operations 11. MongoDB Intermediate Concepts 12. Introduction to MongoDB Indexes 13. MongoDB Query Selectors 14. Projection in MongoDB and Projection Operators 15. Aggregation in MongoDB 16. MongoDB Data Manipulations Using MongoDB Compass MongoDB Advanced Level Topics 17. Managing and Administering MongoDB (Advanced Level) 18. Replication in MongoDB 19. Sharding in MongoDB

This book constitutes the thoroughly refereed post-conference proceedings of the First International Workshop on Algorithmic Aspects of Cloud Computing, ALGOCLOUD 2015, held in Patras, Greece, in September 2015 in conjunction with ALGO 2015. The 13 revised full papers presented together with 2 tutorial papers were carefully reviewed and selected from 37 initial submissions. They cover a wide range of topics in two main tracks: algorithmic aspects of large-scale data stores, and software tools and distributed architectures for cloud-based data management.

This book constitutes revised selected papers from the 8th and 9th IFIP WG 2.6 International Symposium on Data-Driven Process Discovery and Analysis, SIMPDA 2018, held in Seville, Spain, on December 13–14, 2018, and SIMPDA 2019, held in Bled, Slovenia, on September 8, 2019. From 16 submissions received for SIMPDA 2018 and 9 submissions received for SIMPDA 2019, 3 papers each were carefully reviewed and selected for presentation in this volume. They cover theoretical issues related to process representation, discovery, and analysis or provide practical and operational examples of their application.

This book constitutes the thoroughly refereed proceedings of the 6th International Conference on Data Management Technologies and Applications, DATA 2017, held in Madrid, Spain, in July 2017. The 13 revised full papers were carefully reviewed and selected from 66 submissions. The papers deal with the following topics: databases, big data, data mining, data management, data security, and other aspects of information systems and technology involving advanced applications of data.

The proven Study Guide that prepares you for this new Google Cloud exam The Google Cloud Certified Professional Data Engineer Study Guide, provides everything you need to prepare for this important exam and master the skills necessary to land that coveted Google Cloud Professional Data Engineer certification. Beginning with a pre-book assessment quiz to evaluate what you know before you begin, each chapter features exam objectives and review questions, plus the online learning environment includes additional complete practice tests. Written by Dan Sullivan, a popular and experienced online course author for machine learning, big data, and Cloud topics, Google Cloud Certified Professional Data Engineer Study Guide is your ace in the hole for deploying and managing analytics and machine learning applications. • Build and operationalize storage systems, pipelines, and compute infrastructure • Understand machine learning models and learn how to select pre-built models • Monitor and troubleshoot machine learning models • Design analytics and machine learning applications that are secure, scalable, and highly available. This exam guide is designed to help you develop an in depth understanding of data engineering and machine learning on Google Cloud Platform.

Quickly and productively develop complex Spring applications and microservices - out of the box - with minimal fuss on things like configurations. This book will show you how to fully leverage the Spring Boot productivity suite of tools and how to apply them through the use of case studies. Pro Spring Boot is your authoritative hands-on practical guide for increasing your Spring Framework-based enterprise Java and cloud application productivity while decreasing development time using the Spring Boot productivity suite of tools. It's a no nonsense guide with case studies of increasing complexity throughout the book. This book is written by Felipe Gutierrez, a Spring expert consultant who works with Pivotal, the company behind the popular Spring Framework. What You Will Learn Write your first Spring Boot application Configure Spring Boot Use the Spring Boot Actuator Carry out web development with Spring Boot Build microservices with Spring Boot Handle databases and messaging with Spring Boot Test and deploy with Spring Boot Extend

Spring Boot and its available plug-ins Who This Book Is For Experienced Spring and Java developers seeking increased productivity gains and decreased complexity and development time in their applications and software services.

Get up to speed on the nuances of NoSQL databases and what they mean for your organization This easy to read guide to NoSQL databases provides the type of no-nonsense overview and analysis that you need to learn, including what NoSQL is and which database is right for you. Featuring specific evaluation criteria for NoSQL databases, along with a look into the pros and cons of the most popular options, NoSQL For Dummies provides the fastest and easiest way to dive into the details of this incredible technology. You'll gain an understanding of how to use NoSQL databases for mission-critical enterprise architectures and projects, and real-world examples reinforce the primary points to create an action-oriented resource for IT pros. If you're planning a big data project or platform, you probably already know you need to select a NoSQL database to complete your architecture. But with options flooding the market and updates and add-ons coming at a rapid pace, determining what you require now, and in the future, can be a tall task. This is where NoSQL For Dummies comes in! Learn the basic tenets of NoSQL databases and why they have come to the forefront as data has outpaced the capabilities of relational databases Discover major players among NoSQL databases, including Cassandra, MongoDB, MarkLogic, Neo4J, and others Get an in-depth look at the benefits and disadvantages of the wide variety of NoSQL database options Explore the needs of your organization as they relate to the capabilities of specific NoSQL databases Big data and Hadoop get all the attention, but when it comes down to it, NoSQL databases are the engines that power many big data analytics initiatives. With NoSQL For Dummies, you'll go beyond relational databases to ramp up your enterprise's data architecture in no time.

This book constitutes the refereed proceedings of the 17th International Conference on Model Driven Engineering Languages and Systems, MODELS 2014, held in Valencia, Spain, in September/October 2014. The 41 full papers presented in this volume were carefully reviewed and selected from a total of 126 submissions. The scope of the conference series is broad, encompassing modeling languages, methods, tools, and applications considered from theoretical and practical angles and in academic and industrial settings. The papers report on the use of modeling in a wide range of cloud, mobile, and web computing, model transformation behavioral modeling, MDE: past, present, future, formal semantics, specification, and verification, models at runtime, feature and variability modeling, composition and adaptation, practices and experience, modeling for analysis, pragmatics, model extraction, manipulation and persistence, querying, and reasoning.

Learn the fundamental aspects of the business statistics, data mining, and machine learning techniques required to understand the huge amount of data generated by your organization. This book explains practical business analytics through examples, covers the steps involved in using it correctly, and shows you the context in which a particular technique does not make sense. Further, Practical Business Analytics using R helps you understand specific issues faced by organizations and how the solutions to these issues can be facilitated by business analytics. This book will discuss and explore the following through examples and case studies: An introduction to R: data management and R functions The architecture, framework, and life cycle of a business analytics project Descriptive analytics using R: descriptive statistics and data cleaning Data mining: classification, association rules, and clustering Predictive analytics: simple regression, multiple regression, and logistic regression This book includes case studies on important business analytic techniques, such as classification, association, clustering, and regression. The R language is the statistical tool used to demonstrate the concepts throughout the book. What You Will Learn • Write R programs to handle data • Build analytical models and draw useful inferences from them • Discover the basic concepts of data mining and machine learning • Carry out predictive modeling • Define a business issue as an analytical problem Who This Book Is For Beginners who want to understand and learn the fundamentals of analytics using R. Students, managers, executives, strategy and planning professionals, software professionals, and BI/DW professionals.

This book constitutes the refereed post-conference proceedings of the 6th TPC Technology Conference, TPCTC 2014, held in Hangzhou, China, in September 2014. It contains 12 selected peer-reviewed papers, a report from the TPC Public Relations Committee. Many buyers use TPC benchmark results as points of comparison when purchasing new computing systems. The information technology landscape is evolving at a rapid pace, challenging industry experts and researchers to develop innovative techniques for evaluation, measurement and characterization of complex systems. The TPC remains committed to developing new benchmark standards to keep pace and one vehicle for achieving this objective is the sponsorship of the Technology Conference on Performance Evaluation and Benchmarking (TPCTC). Over the last five years TPCTC has been held successfully in conjunction with VLDB.

If you are a professional or enthusiast who has a basic understanding of graphs or has basic knowledge of Neo4j operations, this is the book for you. Although it is targeted at an advanced user base, this book can be used by beginners as it touches upon the basics. So, if you are passionate about taming complex data with the help of graphs and building high performance applications, you will be able to get valuable insights from this book.

Big Data Analytics is on the rise in the last years of the current decade. Data are overwhelming the computation capacity of high performance servers. Cloud, grid, edge and fog computing are a few examples of the current hype. Computational Intelligence offers two faces to deal with the development of models: on the one hand, the crisp approach, which considers for every variable an exact value and, on the other hand, the fuzzy focus, which copes with values between two boundaries. This book presents 114 papers from the 4th International Conference on Fuzzy Systems and Data Mining (FSDM 2018), held in Bangkok, Thailand, from 16 to 19 November 2018. All papers were carefully reviewed by program committee members, who took into consideration the breadth and depth of the research topics that fall within the scope of FSDM. The acceptance rate was 32.85% .

Offering a state-of-the-art overview of fuzzy systems and data mining, the publication will be of interest to all those whose work involves data science.

A network is a mathematical object consisting of a set of points (called vertices or nodes) that are connected to each other in some fashion by lines (called edges). Turns out this simple description corresponds to a bewildering array of systems in the real world, ranging from technological ones such as the Internet and World Wide Web, biological networks such as that of connections of the nervous systems or blood vessels, food webs, protein interactions, infrastructural systems such as networks of roads, airports or the power-grid, to patterns of social acquaintance such as friendship, network of Hollywood actors, connections between business houses and many more. Recent years have witnessed a substantial amount of interest within the scientific community in the properties of these networks. The emergence of the internet in particular, coupled with the widespread availability of inexpensive computing resources has facilitated studies ranging from large scale empirical analysis of networks in the real world, to the development of theoretical models and tools to explore the various properties of these systems. The study of networks is broadly interdisciplinary and central developments have occurred in many fields, including mathematics, physics, computer and information sciences, biology, and the social sciences. This book brings together a collection of cutting-edge research in the field from a diverse array of researchers ranging from physicists to social scientists, and presents them in a coherent fashion, highlighting the strong interconnections between the different areas. Topics included are social networks and social media, opinion and innovation diffusion, syncronization, transportation networks and human mobility, as well as theory, modeling and metrics of Complex Networks.

This book includes high-quality, peer-reviewed research papers from the 6thInternational Conference on Innovations in Computer Science & Engineering (ICICSE 2018), held at Guru Nanak Institutions, Hyderabad, India from August 17 to 18, 2018. The book discusses a wide variety of industrial, engineering and scientific applications of the emerging techniques and offers a platform for researchers from academia and industry to present their original work and exchange ideas, information, techniques and applications in the field of computer science.

The need to handle increasingly larger data volumes is one factor driving the adoption of a new class of nonrelational "NoSQL" databases. Advocates of NoSQL databases claim they can be used to build systems that are more performant, scale better, and are easier to program. NoSQL Distilled is a concise but thorough introduction to this rapidly emerging technology. Pramod J. Sadalage and Martin Fowler explain how NoSQL databases work and the ways that they may be a superior alternative to a traditional RDBMS. The authors provide a fast-paced guide to the concepts you need to know in order to evaluate whether NoSQL databases are right for your needs and, if so, which technologies you should explore further. The first part of the book concentrates on core concepts, including schemaless data models, aggregates, new distribution models, the CAP theorem, and map-reduce. In the second part, the authors explore architectural and design issues associated with implementing NoSQL. They also present realistic use cases that demonstrate NoSQL databases at work and feature representative examples using Riak, MongoDB, Cassandra, and Neo4j. In addition, by drawing on Pramod Sadalage's pioneering work, NoSQL Distilled shows how to implement evolutionary design with schema migration: an essential technique for applying NoSQL databases. The book concludes by describing how NoSQL is ushering in a new age of Polyglot Persistence, where multiple data-storage worlds coexist, and architects can choose the technology best optimized for each type of data access.

Ubuntu Unleashed 2014 Edition is filled with unique and advanced information for everyone who wants to make the most of the Linux-based Ubuntu operating system. This new edition has been thoroughly revised and updated by a long-time Ubuntu community leader to reflect the exciting new Ubuntu 13.10 and the forthcoming Ubuntu 14.04. Former Ubuntu Forum administrator Matthew Helmke covers all you need to know about Ubuntu 13.10/14.04 installation, configuration, productivity, multimedia, development, system administration, server operations, networking, virtualization, security, DevOps, and more—including intermediate-to-advanced techniques you won't find in any other book. Helmke presents up-to-the-minute introductions to Ubuntu's key productivity and Web development tools, programming languages, hardware support, and more. You'll find new or improved coverage of Ubuntu's Unity interface, various types of servers, software repositories, database options, virtualization and cloud services, development tools, monitoring, troubleshooting, Ubuntu's push into mobile and other touch screen devices, and much more. Matthew Helmke served from 2006 to 2011 on the Ubuntu Forum Council, providing leadership and oversight of the Ubuntu Forums, and spent two years on the Ubuntu regional membership approval board for Europe, the Middle East, and Africa. He has written about Ubuntu for several magazines and websites and is the lead author of The Official Ubuntu Book. He works for Pearson Education writing technical documentation for educational testing software. Detailed information on how to… Configure and customize the Unity desktop Get started with multimedia and productivity applications, including LibreOffice Manage Linux services, users, and software packages Administer and run Ubuntu from the command line Automate tasks and use shell scripting Provide secure remote access and configure a secure VPN Manage kernels and modules Administer file, print, email, proxy, LDAP, DNS, and HTTP servers (Apache, Nginx, or alternatives) Learn about new options for managing large numbers of servers Work with databases (both SQL and the newest NoSQL alternatives) Get started with virtualization Build a private cloud with Juju and Charms Learn the basics about popular programming languages including Python, PHP, Perl, and new alternatives such as Go and Rust Learn about Ubuntu's work toward usability on touch-screen and phone devices Ubuntu 13.10 on DVD DVD includes the full Ubuntu 13.10 distribution for Intel x86 computers as well as the complete LibreOffice office suite and hundreds of additional programs and utilities. Free Kick Start Chapter! Purchase this book and receive a free Ubuntu 14.04 Kick Start chapter after Ubuntu 14.04 is released. See inside back cover for details

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Hibernate and MongoDB are a powerful combination of open source persistence and NoSQL technologies for today's Java-based enterprise and cloud application developers. Hibernate is the leading open source Java-based persistence, object relational management engine, recently repositioned as an object grid management engine. MongoDB is a growing, popular open source NoSQL framework, especially popular among cloud application and big data developers. With these two, enterprise and cloud developers have a "complete out of the box" solution. Pro Hibernate and MongoDB shows you how to use and integrate Hibernate and MongoDB. More specifically, this book guides you through the bootstrap; building transactions; handling queries and query entities; and mappings. Then, this book explores the principles and techniques for taking these application principles to the cloud, using the OpenShift Platform as a Service (PaaS) and more. In this book, you get two case studies: An enterprise application using Hibernate and MongoDB. then, A cloud application (OpenShip) migrated from the enterprise application case study After reading or using this book, you come away with the experience from two case studies that give you possible frameworks or templates that you can apply to your own specific application or cloud application building context.

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The recent discovery of small and long non-coding RNAs (ncRNAs) has represented a major breakthrough in the life sciences. These molecules add a new layer of complexity to biological processes and pathways by revealing a sophisticated and dynamic interconnected system whose structure is just beginning to be uncovered. Genetic and epigenetic aberrations affecting ncRNA gene sequences and their expression have been linked to a variety of pathological conditions, including cancer, cardiovascular and neurological diseases. Latest advances in the development of high throughput analysis techniques may help to shed light on the complex regulatory mechanisms in which ncRNA molecules are involved. Bioinformatics tools constitute a unique and essential resource for non-coding RNA studies, providing a powerful technology to organize, integrate and analyze the huge amount of data produced daily by wet biology experiments in order to discover patterns, identify relationships among heterogeneous biological elements and formulate functional hypotheses. This Research Topic reviews current knowledge, introduces novel methods, and discusses open challenges of this exciting and innovative field in connection with the most important biomedical applications. It consists of four reviews and six original research and methods articles, spanning the full scope of the Research Topic.

This volume constitutes the proceedings of the 8th International Work-Conference on IWBBIO 2020, held in Granada, Spain, in May 2020. The total of 73papers presented in the proceedings, was carefully reviewed and selected from 241 submissions. The papers are organized in topical sections as follows: Biomarker Identification; Biomedical Engineering; Biomedical Signal Analysis; Bio-Nanotechnology; Computational Approaches for Drug Design and Personalized Medicine; Computational Proteomics and Protein-Protein Interactions; Data Mining from UV/VIS/NIR Imaging and Spectrophotometry; E-Health Technology, Services and Applications; Evolving Towards Digital Twins in Healthcare (EDITH); High Performance in Bioinformatics; High-Throughput Genomics: Bioinformatic Tools and Medical Applications; Machine Learning in Bioinformatics; Medical Image Processing; Simulation and Visualization of Biological Systems. --

The two volume set CCIS 775 and 776 constitutes the refereed proceedings of the First International Conference on Computational Intelligence, Communications, and Business Analytics, CICBA 2017, held in Kolkata, India, in March 2017. The 90 revised full papers presented in the two volumes were carefully reviewed and selected from 276 submissions. The papers are organized in topical sections on data science and advanced data analytics; signal processing and communications; microelectronics, sensors, intelligent networks; computational forensics (privacy and security); computational intelligence in bio-computing; computational intelligence in mobile and quantum computing; intelligent data mining and data warehousing; computational intelligence.

to date,="" research="" on="" interactive="" intelligent="" systems="" has="" largely="" focused="" either="" the="" realisation="" of="" systems's="" capabilities="" or="" cognitive="" processes="" and="" behaviour="" their="" users.="" with="" rapid="" development="" internet-based="" technologies,="" design="" is="" facing="" many="" emerging="" issues="" challenges="" such="" as="" investigating="" ways="" that="" artificial="" agents="" human="" intelligence="" can="" collaborate="" for="" better="" performance,="" understanding="" user="" requirements="" processes,="" safeguarding="" privacy,="" etc.="" divThis book provides the latest research findings and developments in the field of interactive intelligent systems, addressing diverse areas such as autonomous systems, Internet and cloud computing, pattern recognition and vision systems, mobile computing and intelligent networking, and e-enabled systems. It gathers selected papers from the International Conference on Intelligent and Interactive Systems and Applications (IISA2016) held on June 25–26, 2016 in Shanghai, China./divdivbr/divdivInteractive intelligent systems are among the most important multi-disciplinary research and development domains of artificial intelligence, human–computer interaction, machine learning and new Internet-based technologies. Accordingly, these systems embrace a considerable number of application areas such as autonomous systems, expert systems, mobile systems, recommender systems, knowledge-based and semantic web-based systems, virtual communication environments, and decision support systems, to name a few./divdivbr/divdivTo date, research on interactive intelligent systems has largely focused either on the realisation of the systems' capabilities or on the cognitive processes and/or behaviour of their users. With the rapid development of Internet-based technologies, the design of interactive intelligent systems is facing many emerging issues and challenges such as investigating the ways that artificial agents and human intelligence can collaborate for better performance, understanding user requirements and user cognitive processes, safeguarding user privacy, etc. /divdivbr

Getting Started with OrientDB

Combine advanced analytics including Machine Learning, Deep Learning Neural Networks and Natural Language Processing with modern scalable technologies including Apache Spark to derive actionable insights from Big Data in real-time Key Features Make a hands-on start in the fields of Big Data, Distributed Technologies and Machine Learning Learn how to design, develop and interpret the results of common Machine Learning algorithms Uncover hidden patterns in your data in order to derive real actionable insights and business value Book Description Every person and every organization in the world manages data, whether they realize it or not. Data is used to describe the world around us and can be used for almost any purpose, from analyzing consumer habits to fighting disease and serious organized crime. Ultimately, we manage data in order to derive value from it, and many organizations around the world have traditionally invested in technology to help process their data faster and more efficiently. But we now live in an interconnected world driven by mass data creation and consumption where data is no longer rows and columns restricted to a spreadsheet, but an organic and evolving asset in its own right. With this realization comes major challenges for organizations: how do we manage the sheer size of data being created every second (think not only spreadsheets and databases, but also social media posts, images, videos, music, blogs and so on)? And once we can manage all of this data, how do we derive real value from it? The focus of Machine Learning with Apache Spark is to help us answer these questions in a hands-on manner. We introduce the latest scalable technologies to help us manage and process big data. We then introduce advanced analytical algorithms applied to real-world use cases in order to uncover patterns, derive actionable insights, and learn from this big data. What you will learn Understand how Spark fits in the context of the big data ecosystem Understand how to deploy and

configure a local development environment using Apache Spark Understand how to design supervised and unsupervised learning models Build models to perform NLP, deep learning, and cognitive services using Spark ML libraries Design real-time machine learning pipelines in Apache Spark Become familiar with advanced techniques for processing a large volume of data by applying machine learning algorithms Who this book is for This book is aimed at Business Analysts, Data Analysts and Data Scientists who wish to make a hands-on start in order to take advantage of modern Big Data technologies combined with Advanced Analytics.

If you are already using Neo4j in your application and want to learn more about data analysis or database graphs, this is the book for you. This book also caters for your needs if you are looking to migrate your existing application to Neo4j in the future. We assume that you are already familiar with any general purpose programming language and have some familiarity with Neo4j.

This book gathers 14 of the most promising papers presented at the 18th IEEE/ACIS International Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing (SNPD 2017), which was held on June 26–28, 2017 in Kanazawa, Japan. The aim of this conference was to bring together researchers and scientists, businessmen and entrepreneurs, teachers, engineers, computer users, and students to discuss the various fields of computer science and to share their experiences and exchange new ideas and information in a meaningful way. The book presents research findings concerning all aspects (theory, applications and tools) of computer and information science, and discusses the practical challenges encountered along the way, as well as the solutions adopted to solve them.

This book provides a comprehensive survey of techniques, technologies and applications of Big Data and its analysis. The Big Data phenomenon is increasingly impacting all sectors of business and industry, producing an emerging new information ecosystem. On the applications front, the book offers detailed descriptions of various application areas for Big Data Analytics in the important domains of Social Semantic Web Mining, Banking and Financial Services, Capital Markets, Insurance, Advertisement, Recommendation Systems, Bio-Informatics, the IoT and Fog Computing, before delving into issues of security and privacy. With regard to machine learning techniques, the book presents all the standard algorithms for learning – including supervised, semi-supervised and unsupervised techniques such as clustering and reinforcement learning techniques to perform collective Deep Learning. Multi-layered and nonlinear learning for Big Data are also covered. In turn, the book highlights real-life case studies on successful implementations of Big Data Analytics at large IT companies such as Google, Facebook, LinkedIn and Microsoft. Multi-sectorial case studies on domain-based companies such as Deutsche Bank, the power provider Opower, Delta Airlines and a Chinese City Transportation application represent a valuable addition. Given its comprehensive coverage of Big Data Analytics, the book offers a unique resource for undergraduate and graduate students, researchers, educators and IT professionals alike.

This book constitutes the thoroughly refereed short papers, workshops and doctoral consortium papers of the 23rd European Conference on Advances in Databases and Information Systems, ADBIS 2019, held in Bled, Slovenia, in September 2019. The 19 short research papers and the 5 doctoral consortium papers were carefully reviewed and selected from 103 submissions, and the 31 workshop papers were selected out of 67 submitted papers. The papers are organized in the following sections: Short Papers; Workshops Papers; Doctoral Consortium Papers; and cover a wide spectrum of topics related to database and information systems technologies for advanced applications.

Implement DevOps with ease About This Book Leverage OneOps to achieve continuous application lifecycle management Switch between multiple cloud providers in order to leverage better pricing, technology, and scalability Build complex environments in a repeatable and predictable method, and deploy and scale on multiple clouds Who This Book Is For This book targets DevOps who want to use OneOps daily to deploy their applications, and Sysadmins who will be administering those applications. What You Will Learn Learn how to install OneOps Configure OneOps, including customizing your organizations, teams and clouds Work through practical deployment scenarios Understand OneOps architecture and individual components like Circuit and Display Build custom components and add unsupported clouds programmatically to OneOps Extend OneOps by calling the REST API In Detail Walmart's OneOps is an open source DevOps platform that is used for cloud and application lifecycle management. It can manage critical and complex application workload on any multi cloud-based infrastructure and revolutionizes the way administrators, developers, and engineers develop and launch new products. This practical book focuses on real-life cases and hands-on scenarios to develop, launch, and test your applications faster, so you can implement the DevOps process using OneOps. You will be exposed to the fundamental aspects of OneOps starting with installing, deploying, and configuring OneOps in a test environment, which will also come in handy later for development and debugging. You will also learn about design and architecture, and work through steps to perform enterprise level deployment. You will understand the initial setup of OneOps such as creating organization, teams, and access management. Finally, you will be taught how to configure, repair, scale, and extend applications across various cloud platforms. Style and approach A practical book packed with real life examples, practical scenarios and case studies on leveraging OneOps to implement DevOps for your organization.

Serving as a flagship driver towards advance research in the area of Big Data platforms and applications, this book provides a platform for the dissemination of advanced topics of theory, research efforts and analysis, and implementation oriented on methods, techniques and performance evaluation. In 23 chapters, several important formulations of the architecture design, optimization techniques, advanced analytics methods, biological, medical and social media applications are presented. These chapters discuss the research of members from the ICT COST Action IC1406 High-Performance Modelling and Simulation for Big Data Applications (cHiPSet). This volume is ideal as a reference for students, researchers and industry practitioners working in or interested in joining interdisciplinary works in the areas of intelligent decision systems using emergent distributed computing paradigms. It will also allow newcomers to grasp the key concerns and their potential solutions.

This book includes a selection of articles from The 2019 World Conference on Information Systems and Technologies (WorldCIST'19), held from April 16 to 19, at La Toja, Spain. WorldCIST is a global forum for researchers and practitioners to present and discuss recent results and innovations, current trends, professional experiences and challenges in modern information systems and technologies research, together with their technological development and applications. The book covers a number of topics, including A) Information and Knowledge Management; B) Organizational Models and Information Systems; C) Software and Systems Modeling; D) Software Systems, Architectures, Applications and Tools; E) Multimedia Systems and Applications; F) Computer Networks, Mobility and Pervasive Systems; G) Intelligent and Decision Support Systems; H) Big Data Analytics and Applications; I) Human–Computer Interaction; J) Ethics, Computers & Security; K) Health Informatics; L) Information Technologies in Education; M) Information Technologies in Radiocommunications; and N) Technologies for Biomedical Applications.

This handbook offers comprehensive coverage of recent advancements in Big Data technologies and related paradigms. Chapters are authored by international leading experts in the field, and have been reviewed and revised for maximum reader value. The volume consists of twenty-five chapters organized into four main parts. Part one covers the fundamental concepts of Big Data technologies including data curation mechanisms, data models, storage models, programming models and programming platforms. It also dives into the details of implementing Big SQL query engines and big stream processing systems. Part Two focuses on the semantic aspects of Big Data management including data integration and exploratory ad hoc analysis in addition to structured querying and pattern matching techniques. Part Three presents a comprehensive overview of large scale graph processing. It covers the most recent research in large scale graph processing platforms, introducing several scalable graph querying and

mining mechanisms in domains such as social networks. Part Four details novel applications that have been made possible by the rapid emergence of Big Data technologies such as Internet-of-Things (IOT), Cognitive Computing and SCADA Systems. All parts of the book discuss open research problems, including potential opportunities, that have arisen from the rapid progress of Big Data technologies and the associated increasing requirements of application domains. Designed for researchers, IT professionals and graduate students, this book is a timely contribution to the growing Big Data field. Big Data has been recognized as one of leading emerging technologies that will have a major contribution and impact on the various fields of science and varies aspect of the human society over the coming decades. Therefore, the content in this book will be an essential tool to help readers understand the development and future of the field.

A standard tutorial aimed at making you an OrientDB expert, through the use of practical examples, explained in a step-by-step format.Getting Started with OrientDB 1.3.0 is great for database designers, developers, and systems engineers. It is assumed that you are familiar with NoSQL concepts, Java, and networking principles.

What is bad data? Some people consider it a technical phenomenon, like missing values or malformed records, but bad data includes a lot more. In this handbook, data expert Q. Ethan McCallum has gathered 19 colleagues from every corner of the data arena to reveal how they've recovered from nasty data problems. From cranky storage to poor representation to misguided policy, there are many paths to bad data. Bottom line? Bad data is data that gets in the way. This book explains effective ways to get around it. Among the many topics covered, you'll discover how to: Test drive your data to see if it's ready for analysis Work spreadsheet data into a usable form Handle encoding problems that lurk in text data Develop a successful web-scraping effort Use NLP tools to reveal the real sentiment of online reviews Address cloud computing issues that can impact your analysis effort Avoid policies that create data analysis roadblocks Take a systematic approach to data quality analysis

Biological Network Analysis: Trends, Approaches, Graph Theory, and Algorithms considers three major biological networks, including Gene Regulatory Networks (GRN), Protein-Protein Interaction Networks (PPIN), and Human Brain Connectomes. The book's authors discuss various graph theoretic and data analytics approaches used to analyze these networks with respect to available tools, technologies, standards, algorithms and databases for generating, representing and analyzing graphical data. As a wide variety of algorithms have been developed to analyze and compare networks, this book is a timely resource. Presents recent advances in biological network analysis, combining Graph Theory, Graph Analysis, and various network models Discusses three major biological networks, including Gene Regulatory Networks (GRN), Protein-Protein Interaction Networks (PPIN) and Human Brain Connectomes Includes a discussion of various graph theoretic and data analytics approaches

With this practical book, architects, CTOs, and CIOs will learn a set of patterns for the practice of architecture, including analysis, documentation, and communication. Author Eben Hewitt shows you how to create holistic and thoughtful technology plans, communicate them clearly, lead people toward the vision, and become a great architect or Chief Architect. This book covers each key aspect of architecture comprehensively, including how to incorporate business architecture, information architecture, data architecture, application (software) architecture together to have the best chance for the system's success. Get a practical set of proven architecture practices focused on shipping great products using architecture Learn how architecture works effectively with development teams, management, and product management teams through the value chain Find updated special coverage on machine learning architecture Get usable templates to start incorporating into your teams immediately Incorporate business architecture, information architecture, data architecture, and application (software) architecture together

The Easy, Common-Sense Guide to Solving Real Problems with NoSQL The Mere Mortals ® tutorials have earned worldwide praise as the clearest, simplest way to master essential database technologies. Now, there's one for today's exciting new NoSQL databases. NoSQL for Mere Mortals guides you through solving real problems with NoSQL and achieving unprecedented scalability, cost efficiency, flexibility, and availability. Drawing on 20+ years of cutting-edge database experience, Dan Sullivan explains the advantages, use cases, and terminology associated with all four main categories of NoSQL databases: key-value, document, column family, and graph databases. For each, he introduces pragmatic best practices for building high-value applications. Through step-by-step examples, you'll discover how to choose the right database for each task, and use it the right way. Coverage includes --Getting started: What NoSQL databases are, how they differ from relational databases, when to use them, and when not to Data management principles and design criteria: Essential knowledge for creating any database solution, NoSQL or relational --Key-value databases: Gaining more utility from data structures --Document databases: Schemaless databases, normalization and denormalization, mutable documents, indexing, and design patterns --Column family databases: Google's BigTable design, table design, indexing, partitioning, and Big Data Graph databases: Graph/network modeling, design tips, query methods, and traps to avoid Whether you're a database developer, data modeler, database user, or student, learning NoSQL can open up immense new opportunities. As thousands of database professionals already know, For Mere Mortals is the fastest, easiest route to mastery.

Data has become a factor of production, like labor and steel, and is driving a new data-centered economy. The Data rEvolution is about data volume, variety, velocity and value. It is about new ways to organize and manage data for rapid processing using tools like Hadoop and MapReduce. It is about the explosion of new tools for "connecting the dots" and increasing knowledge, including link analysis, temporal analysis and predictive analytics. It is about a vision of "analytics for everyone" that puts sophisticated statistics into the hands of all. And, it is about using visual analytics to parse the data and literally see new relationships and insights on the fly. As the data and tools become democratized, we will see a new world of experimentation and creative problem-solving, where data comes from both inside and outside the organization. Your own data is not enough. This report is a must-read for IT and business leaders who want to maximize the value of data for their organization.

OrientDB TutorialOrientDB is an Open Source NoSQL Database Management System, which contains the features of traditional DBMS along with the new features of both Document and Graph DBMS. It is written in Java and is amazingly fast. It can store 220,000 records per second on commodity hardware.In the following chapters of this tutorial, we will look closely at OrientDB, one of the best open-source, multi-model, next generation NoSQL product.AudienceThis tutorial is designed for software professionals who are willing to learn NoSQL Database in simple and easy steps. This tutorial will give a great understanding on OrientDB concepts.PrerequisitesOrientDB is NoSQL Database technologies which deals with the Documents, Graphs and traditional database components, like Schema and relation. Thus it is better to have knowledge of SQL. Familiarity with NoSQL is an added advantage.

This book provides a review of advanced topics relating to the theory, research, analysis and implementation in the context of big data platforms and their applications, with a focus on methods, techniques, and performance evaluation. The explosive growth in the volume, speed, and variety of data being produced every day requires a continuous increase in the processing speeds of servers and of entire network infrastructures, as well as new resource management models. This poses significant challenges (and provides striking development opportunities) for data intensive and high-performance computing, i.e., how to efficiently turn extremely large datasets into valuable information and meaningful knowledge. The task of context data management is further complicated by the variety of sources such data derives from, resulting in different data formats, with varying storage, transformation, delivery, and archiving requirements. At the same time rapid responses are needed for real-time applications. With the emergence of cloud infrastructures, achieving highly scalable data management in such contexts is a critical problem, as the overall application performance is highly dependent on the properties of the data management service.