

Big Data Fundamentals Concepts Drivers Techniques The Prentice Hall Service Technology Series From Thomas Erl

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Python for Data Science - Ethan Williams 2019-08-18

This book is a comprehensive guide for beginners to learn Python Programming, especially its application for Data Science. While the lessons in this book are targeted at the absolute beginner to programming, people at various levels of proficiency in Python, or any other programming languages can also learn some basics and concepts of data science. A few Python libraries are introduced, including NumPy, Pandas, Matplotlib, and Seaborn for data analysis and visualisation. To make the lessons more intuitive and relatable, practical examples and applications of each lesson are given. The reader is equally encouraged to practise the techniques via exercises, within and at the end of the relevant chapters. To help the reader get a full learning experience, there are references to relevant reading and practice materials, and the reader is encouraged to click these links and explore the possibilities they offer. It is expected that with consistency in learning and practicing the reader

can master Python and the basics of its application in data science. The only limitation to the reader's progress, however, is themselves!

Fundamentals of Predictive Analytics with JMP, Second Edition - Ron Klimberg 2017-12-19

Written for students in undergraduate and graduate statistics courses, as well as for the practitioner who wants to make better decisions from data and models, this updated and expanded second edition of Fundamentals of Predictive Analytics with JMP(R) bridges the gap between courses on basic statistics, which focus on univariate and bivariate analysis, and courses on data mining and predictive analytics. Going beyond the theoretical foundation, this book gives you the technical knowledge and problem-solving skills that you need to perform real-world multivariate data analysis. First, this book teaches you to recognize when it is appropriate to use a tool, what variables and data are required, and what the results might be. Second, it teaches you how to interpret the results

and then, step-by-step, how and where to perform and evaluate the analysis in JMP . Using JMP 13 and JMP 13 Pro, this book offers the following new and enhanced features in an example-driven format: an add-in for Microsoft Excel Graph Builder dirty data visualization regression ANOVA logistic regression principal component analysis LASSO elastic net cluster analysis decision trees k-nearest neighbors neural networks bootstrap forests boosted trees text mining association rules model comparison With today's emphasis on business intelligence, business analytics, and predictive analytics, this second edition is invaluable to anyone who needs to expand his or her knowledge of statistics and to apply real-world, problem-solving analysis. This book is part of the SAS Press program.

Big Data For Dummies - Judith S. Hurwitz 2013-04-02

Find the right big data solution for your business or organization Big data management is one of the major challenges facing business, industry, and not-for-profit organizations. Data sets such as customer transactions for a mega-retailer, weather patterns monitored by meteorologists, or social network activity can quickly outpace the capacity of traditional data management tools. If you need to develop or manage big data solutions, you'll appreciate how these four experts define, explain, and guide you through this new and often confusing concept. You'll learn what it is, why it matters, and how to choose and implement solutions that work. Effectively managing big data is an issue of growing importance to businesses, not-for-profit organizations, government, and IT professionals. Authors are experts in information management, big data, and a variety of solutions. Explains big data in detail and discusses how to select and implement a solution, security concerns to consider, data storage and presentation issues, analytics, and much more. Provides essential information in a no-nonsense, easy-to-understand style that is empowering. Big Data For Dummies cuts through the confusion and helps you take charge of big data solutions for your organization.

Big Data Science & Analytics - Arshdeep Bahga 2016-04-15

Big data is defined as collections of datasets whose volume, velocity or variety is so large that it is difficult to store, manage, process and analyze

the data using traditional databases and data processing tools. We have written this textbook to meet this need at colleges and universities, and also for big data service providers.

Presto: The Definitive Guide - Matt Fuller 2020-04-03

Perform fast interactive analytics against different data sources using the Presto high-performance, distributed SQL query engine. With this practical guide, you'll learn how to conduct analytics on data where it lives, whether it's Hive, Cassandra, a relational database, or a proprietary data store. Analysts, software engineers, and production engineers will learn how to manage, use, and even develop with Presto. Initially developed by Facebook, open source Presto is now used by Netflix, Airbnb, LinkedIn, Twitter, Uber, and many other companies. Matt Fuller, Manfred Moser, and Martin Traverso show you how a single Presto query can combine data from multiple sources to allow for analytics across your entire organization. Get started: Explore Presto's use cases and learn about tools that will help you connect to Presto and query data. Go deeper: Learn Presto's internal workings, including how to connect to and query data sources with support for SQL statements, operators, functions, and more. Put Presto in production: Secure Presto, monitor workloads, tune queries, and connect more applications; learn how other organizations apply Presto.

Driven by Data - Paul Bambrick-Santoyo 2010-04-12

Offers a practical guide for improving schools dramatically that will enable all students from all backgrounds to achieve at high levels. Includes assessment forms, an index, and a DVD.

The Enterprise Big Data Lake - Alex Gorelik 2019-02-21

The data lake is a daring new approach for harnessing the power of big data technology and providing convenient self-service capabilities. But is it right for your company? This book is based on discussions with practitioners and executives from more than a hundred organizations, ranging from data-driven companies such as Google, LinkedIn, and Facebook, to governments and traditional corporate enterprises. You'll learn what a data lake is, why enterprises need one, and how to build one successfully with the best practices in this book. Alex Gorelik, CTO and

founder of Waterline Data, explains why old systems and processes can no longer support data needs in the enterprise. Then, in a collection of essays about data lake implementation, you'll examine data lake initiatives, analytic projects, experiences, and best practices from data experts working in various industries. Get a succinct introduction to data warehousing, big data, and data science Learn various paths enterprises take to build a data lake Explore how to build a self-service model and best practices for providing analysts access to the data Use different methods for architecting your data lake Discover ways to implement a data lake from experts in different industries

Analytics, Data Science, and Artificial Intelligence - Ramesh Sharda
2020-03-06

For courses in decision support systems, computerized decision-making tools, and management support systems. Market-leading guide to modern analytics, for better business decisions Analytics, Data Science, & Artificial Intelligence: Systems for Decision Support is the most comprehensive introduction to technologies collectively called analytics (or business analytics) and the fundamental methods, techniques, and software used to design and develop these systems. Students gain inspiration from examples of organisations that have employed analytics to make decisions, while leveraging the resources of a companion website. With six new chapters, the 11th edition marks a major reorganisation reflecting a new focus -- analytics and its enabling technologies, including AI, machine-learning, robotics, chatbots, and IoT.

Software Testing and Quality Assurance - Kshirasagar Naik 2011-09-23

A superior primer on software testing and quality assurance, from integration to execution and automation This important new work fills the pressing need for a user-friendly text that aims to provide software engineers, software quality professionals, software developers, and students with the fundamental developments in testing theory and common testing practices. Software Testing and Quality Assurance: Theory and Practice equips readers with a solid understanding of: Practices that support the production of quality software Software testing techniques Life-cycle models for requirements, defects, test cases, and

test results Process models for units, integration, system, and acceptance testing How to build test teams, including recruiting and retaining test engineers Quality Models, Capability Maturity Model, Testing Maturity Model, and Test Process Improvement Model Expertly balancing theory with practice, and complemented with an abundance of pedagogical tools, including test questions, examples, teaching suggestions, and chapter summaries, this book is a valuable, self-contained tool for professionals and an ideal introductory text for courses in software testing, quality assurance, and software engineering.

The Practice of Research in Criminology and Criminal Justice - Ronet D. Bachman 2018-12-20

The authors are proud sponsors of the 2020 SAGE Keith Roberts Teaching Innovations Award—enabling graduate students and early career faculty to attend the annual ASA pre-conference teaching and learning workshop. "Very practical approach to teaching research methods and very student friendly. This text "breathes life" into the research process. —Sherill Morris-Francis, Mississippi Valley State University The Practice of Research in Criminology and Criminal Justice, Seventh Edition demonstrates the vital role research plays in criminology and criminal justice by integrating in-depth, real-world case studies with a comprehensive discussion of research methods. By pairing research techniques with practical examples from the field, Ronet D. Bachman and Russell K. Schutt equip students to critically evaluate and confidently conduct research. The Seventh Edition of this best-selling text retains the strengths of previous editions while breaking ground with emergent research methods, enhanced tools for learning in the text and online, and contemporary, fascinating research findings. This edition incorporates new topics like intelligence-led policing, social network analysis (SNA), the evolution of cybercrime, and more. Students engage with the wide realm of research methods available to them, delve deeper into topics relevant to their field of study, and benefit from the wide variety of new exercises to help them practice as they learn. Give your students the SAGE edge! SAGE edge offers a robust online environment featuring an impressive array of free tools and resources for review, study, and further exploration, keeping

both instructors and students on the cutting edge of teaching and learning.

Cloud Computing - Thomas Erl 2013

Explores cloud computing, breaking down the concepts, models, mechanisms, and architectures of this technology while allowing for the financial assessment of resources and how they compare to traditional storage systems.

Big Data Analytics for Cyber-Physical Systems - Guido Dartmann 2019-07-15

Big Data Analytics in Cyber-Physical Systems: Machine Learning for the Internet of Things examines sensor signal processing, IoT gateways, optimization and decision-making, intelligent mobility, and implementation of machine learning algorithms in embedded systems. This book focuses on the interaction between IoT technology and the mathematical tools used to evaluate the extracted data of those systems. Each chapter provides the reader with a broad list of data analytics and machine learning methods for multiple IoT applications. Additionally, this volume addresses the educational transfer needed to incorporate these technologies into our society by examining new platforms for IoT in schools, new courses and concepts for universities and adult education on IoT and data science. . Bridges the gap between IoT, CPS, and mathematical modelling. Features numerous use cases that discuss how concepts are applied in different domains and applications. Provides "best practices", "winning stories" and "real-world examples" to complement innovation. Includes highlights of mathematical foundations of signal processing and machine learning in CPS and IoT.

Using Big Data Analytics In: Passenger Travel with Mobile Trajectory , Usage of E-Wallet, Luxury Brand's Social Media Marketing - David Gerald 2021-07-06

Contents ***** Discovering spatiotemporal characteristics of passenger travel with mobile trajectory big data ***** Examining actual consumer usage of E-wallet ***** Examining the impact of luxury brand's social media marketing on

customer engagement ***** Keywords: IT investment IT risk Big data Data Privacy Data Security Event study Big data analytics Environmental air pollution BDA-EAP management system UTAUT Task-technology fit Mobile payment E-Wallet Big data analytics Promotional campaigns Ecosystem Big data Luxury brand Customer engagement Social media Twitter big data big design big data book big data dangerous big data demystified big data design big data does size matter big data driven business big data engineer big data engineering big data español big data finance big data for beginners big data for social good big data frameworks big data fundamentals big data fundamentals concepts, drivers & techniques big data genomics big data glossary big data health analytics big data in education big data in finance big data in healthcare big data in practice big data integration big data interview big data lake big data management big data manning big data marketing big data marz big data mba big data mba driving business strategies with data science big data modeling big data on campus big data para ceos y directores de marketing big data platform big data policing big data principles and best practices big data profits success analytics big data project big data project management big data python big data questions and answers big data race big data real estate big data revolution big data science big data science in finance big data security big data small wars big data spanish big data spark big data system big data technologies for business big data textbook big data uncharted big data understanding how data powers big business big data using hadoop big data using hadoop and hive big data visualization big data with java big data with spark

Apache Spark Implementation on IBM z/OS - Lydia Parziale 2016-08-13

The term big data refers to extremely large sets of data that are analyzed to reveal insights, such as patterns, trends, and associations. The algorithms that analyze this data to provide these insights must extract value from a wide range of data sources, including business data and live, streaming, social media data. However, the real value of these insights comes from their timeliness. Rapid delivery of insights enables anyone

(not only data scientists) to make effective decisions, applying deep intelligence to every enterprise application. Apache Spark is an integrated analytics framework and runtime to accelerate and simplify algorithm development, deployment, and realization of business insight from analytics. Apache Spark on IBM® z/OS® puts the open source engine, augmented with unique differentiated features, built specifically for data science, where big data resides. This IBM Redbooks® publication describes the installation and configuration of IBM z/OS Platform for Apache Spark for field teams and clients. Additionally, it includes examples of business analytics scenarios.

Practical Data Acquisition for Instrumentation and Control Systems - John Park 2003-07-28

Introduction to Data Acquisition & Control; Analog and Digital Signals; Signal Conditioning; The Personal Computer for Real Time Work; Plug-in Data Acquisition Boards; Serial Data Communications; Distributed & Standalone Loggers/Controllers; IEEE 488 Standard; Ethernet & LAN Systems; The Universal Serial Bus (USB); Specific Techniques; The PCMCIA Card; Appendix A: Glossary; Appendix B: IBM PC Bus Specifications; Appendix C: Review of the Intel 8255 PPI Chip; Appendix D: Review of the Intel 8254 Timer-Counter Chip; Appendix E: Thermocouple Tables; Appendix F: Numbers Systems; Appendix G: GPIB (IEEE-488) Mnemonics & their Definition; Appendix H: Practical Laboratories & Demonstrations; Appendix I: Command Structure & Programming.

Infonomics - Douglas B. Laney 2017-09-05

Many senior executives talk about information as one of their most important assets, but few behave as if it is. They report to the board on the health of their workforce, their financials, their customers, and their partnerships, but rarely the health of their information assets. Corporations typically exhibit greater discipline in tracking and accounting for their office furniture than their data. Infonomics is the theory, study, and discipline of asserting economic significance to information. It strives to apply both economic and asset management principles and practices to the valuation, handling, and deployment of information assets. This book specifically shows: CEOs and business leaders how to more fully

wield information as a corporate asset CIOs how to improve the flow and accessibility of information CFOs how to help their organizations measure the actual and latent value in their information assets. More directly, this book is for the burgeoning force of chief data officers (CDOs) and other information and analytics leaders in their valiant struggle to help their organizations become more infosavvy. Author Douglas Laney has spent years researching and developing Infonomics and advising organizations on the infinite opportunities to monetize, manage, and measure information. This book delivers a set of new ideas, frameworks, evidence, and even approaches adapted from other disciplines on how to administer, wield, and understand the value of information. Infonomics can help organizations not only to better develop, sell, and market their offerings, but to transform their organizations altogether. "Doug Laney masterfully weaves together a collection of great examples with a solid framework to guide readers on how to gain competitive advantage through what he labels "the unruly asset" – data. The framework is comprehensive, the advice practical and the success stories global and across industries and applications." Liz Rowe, Chief Data Officer, State of New Jersey "A must read for anybody who wants to survive in a data centric world." Shaun Adams, Head of Data Science, Betterbathrooms.com "Phenomenal! An absolute must read for data practitioners, business leaders and technology strategists. Doug's lucid style has a set a new standard in providing intelligible material in the field of information economics. His passion and knowledge on the subject exudes thru his literature and inspires individuals like me." Ruchi Rajasekhar, Principal Data Architect, MISO Energy "I highly recommend Infonomics to all aspiring analytics leaders. Doug Laney's work gives readers a deeper understanding of how and why information should be monetized and managed as an enterprise asset. Laney's assertion that accounting should recognize information as a capital asset is quite convincing and one I agree with. Infonomics enjoyably echoes that sentiment!" Matt Green, independent business analytics consultant, Atlanta area "If you care about the digital economy, and you should, read this book." Tanya Shuckhart, Analyst Relations Lead, IRI Worldwide

Python Projects for Beginners - Connor P. Milliken 2019-11-15

Immerse yourself in learning Python and introductory data analytics with this book's project-based approach. Through the structure of a ten-week coding bootcamp course, you'll learn key concepts and gain hands-on experience through weekly projects. Each chapter in this book is presented as a full week of topics, with Monday through Thursday covering specific concepts, leading up to Friday, when you are challenged to create a project using the skills learned throughout the week. Topics include Python basics and essential intermediate concepts such as list comprehension, generators and iterators, understanding algorithmic complexity, and data analysis with pandas. From beginning to end, this book builds up your abilities through exercises and challenges, culminating in your solid understanding of Python. Challenge yourself with the intensity of a coding bootcamp experience or learn at your own pace. With this hands-on learning approach, you will gain the skills you need to jumpstart a new career in programming or further your current one as a software developer. What You Will Learn Understand beginning and more advanced concepts of the Python language Be introduced to data analysis using pandas, the Python Data Analysis library Walk through the process of interviewing and answering technical questions Create real-world applications with the Python language Learn how to use Anaconda, Jupyter Notebooks, and the Python Shell Who This Book Is For Those trying to jumpstart a new career into programming, and those already in the software development industry and would like to learn Python programming.

Ethics of Big Data - Kord Davis 2012-09-13

What are your organization's policies for generating and using huge datasets full of personal information? This book examines ethical questions raised by the big data phenomenon, and explains why enterprises need to reconsider business decisions concerning privacy and identity. Authors Kord Davis and Doug Patterson provide methods and techniques to help your business engage in a transparent and productive ethical inquiry into your current data practices. Both individuals and organizations have legitimate interests in understanding how data is

handled. Your use of data can directly affect brand quality and revenue—as Target, Apple, Netflix, and dozens of other companies have discovered. With this book, you'll learn how to align your actions with explicit company values and preserve the trust of customers, partners, and stakeholders. Review your data-handling practices and examine whether they reflect core organizational values Express coherent and consistent positions on your organization's use of big data Define tactical plans to close gaps between values and practices—and discover how to maintain alignment as conditions change over time Maintain a balance between the benefits of innovation and the risks of unintended consequences

Learning to See Data - Ben Jones 2020-12-15

This book is associated with the 'Data Literacy Level 1' on-demand online course: <https://dataliteracy.com/courses/data-literacy-level-1> For most of us, it's rare to go a full day without coming across data in the form of a chart, map or dashboard. Graphical displays of data are all around us, from performance indicators at work to election trackers on the news to traffic maps on the road. But few of us have received training or instruction in how to actually read and interpret them. How many times have we been misled simply because we aren't aware of the pitfalls to avoid when interpreting data visualizations. *Learning to See Data* will teach you the different ways that data can be encoded in graphical form, and it will give you a deeper understanding of the way our human visual system interprets these encodings. You will also learn about the most common chart types, and the situations in which they are most appropriate. From basic bar charts to overused pie charts to helpful maps and many more, a wide array of chart types are covered in detail, and conventions, pitfalls, strengths and weaknesses of each of them are revealed. This book will help you develop fluency in the interpretation of charts, an ability that we all need to hone and perfect if we are to make meaningful contributions in the professional, public and personal arenas of life. The principles covered in it also serve as a critical background for anyone looking to create charts that others will be able to understand. "This book is clear and evocative, thorough and thoughtful, and

remarkably readable: a marvelous launchpad into the world of data."
-Tamara Munzner, Professor, University of British Columbia Computer Science "Everyone of us needs good data literacy skills to survive in the modern world. Without them, it's hard to succeed at work, or survive the onslaught of information (and misinformation) across all our media. Ben's book provides the necessary building blocks for a strong foundation. From that foundation, Ben's approach will inspire you to own the process of developing your skills further." -Andy Cotgreave, Technical Evangelism Director, Tableau

Data Science and Big Data Analytics - EMC Education Services
2015-01-05

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 from the book's page at Wiley which you can find on the Wiley site by searching for the ISBN 9781118876138. Get started discovering, analyzing, visualizing, and presenting data in a meaningful way today!

New Horizons for a Data-Driven Economy - José María Cavanillas
2016-04-04

In this book readers will find technological discussions on the existing and emerging technologies across the different stages of the big data value chain. They will learn about legal aspects of big data, the social impact, and about education needs and requirements. And they will discover the business perspective and how big data technology can be exploited to deliver value within different sectors of the economy. The book is

structured in four parts: Part I "The Big Data Opportunity" explores the value potential of big data with a particular focus on the European context. It also describes the legal, business and social dimensions that need to be addressed, and briefly introduces the European Commission's BIG project. Part II "The Big Data Value Chain" details the complete big data lifecycle from a technical point of view, ranging from data acquisition, analysis, curation and storage, to data usage and exploitation. Next, Part III "Usage and Exploitation of Big Data" illustrates the value creation possibilities of big data applications in various sectors, including industry, healthcare, finance, energy, media and public services. Finally, Part IV "A Roadmap for Big Data Research" identifies and prioritizes the cross-sectorial requirements for big data research, and outlines the most urgent and challenging technological, economic, political and societal issues for big data in Europe. This compendium summarizes more than two years of work performed by a leading group of major European research centers and industries in the context of the BIG project. It brings together research findings, forecasts and estimates related to this challenging technological context that is becoming the major axis of the new digitally transformed business environment.

The Fourth Industrial Revolution - Klaus Schwab 2017-01-03
World-renowned economist Klaus Schwab, Founder and Executive Chairman of the World Economic Forum, explains that we have an opportunity to shape the fourth industrial revolution, which will fundamentally alter how we live and work. Schwab argues that this revolution is different in scale, scope and complexity from any that have come before. Characterized by a range of new technologies that are fusing the physical, digital and biological worlds, the developments are affecting all disciplines, economies, industries and governments, and even challenging ideas about what it means to be human. Artificial intelligence is already all around us, from supercomputers, drones and virtual assistants to 3D printing, DNA sequencing, smart thermostats, wearable sensors and microchips smaller than a grain of sand. But this is just the beginning: nanomaterials 200 times stronger than steel and a million times thinner than a strand of hair and the first transplant of a 3D printed

liver are already in development. Imagine “smart factories” in which global systems of manufacturing are coordinated virtually, or implantable mobile phones made of biosynthetic materials. The fourth industrial revolution, says Schwab, is more significant, and its ramifications more profound, than in any prior period of human history. He outlines the key technologies driving this revolution and discusses the major impacts expected on government, business, civil society and individuals. Schwab also offers bold ideas on how to harness these changes and shape a better future—one in which technology empowers people rather than replaces them; progress serves society rather than disrupts it; and in which innovators respect moral and ethical boundaries rather than cross them. We all have the opportunity to contribute to developing new frameworks that advance progress.

Big Data Fundamentals - Thomas Erl 2015-12-29

“This text should be required reading for everyone in contemporary business.” --Peter Woodhull, CEO, Modus21 “The one book that clearly describes and links Big Data concepts to business utility.” --Dr. Christopher Starr, PhD “Simply, this is the best Big Data book on the market!” --Sam Rostam, Cascadian IT Group “...one of the most contemporary approaches I’ve seen to Big Data fundamentals...” --Joshua M. Davis, PhD *The Definitive Plain-English Guide to Big Data for Business and Technology Professionals* *Big Data Fundamentals* provides a pragmatic, no-nonsense introduction to Big Data. Best-selling IT author Thomas Erl and his team clearly explain key Big Data concepts, theory and terminology, as well as fundamental technologies and techniques. All coverage is supported with case study examples and numerous simple diagrams. The authors begin by explaining how Big Data can propel an organization forward by solving a spectrum of previously intractable business problems. Next, they demystify key analysis techniques and technologies and show how a Big Data solution environment can be built and integrated to offer competitive advantages. *Discovering Big Data’s* fundamental concepts and what makes it different from previous forms of data analysis and data science *Understanding the business motivations and drivers behind Big Data adoption, from operational improvements*

through innovation Planning strategic, business-driven Big Data initiatives Addressing considerations such as data management, governance, and security Recognizing the 5 “V” characteristics of datasets in Big Data environments: volume, velocity, variety, veracity, and value Clarifying Big Data’s relationships with OLTP, OLAP, ETL, data warehouses, and data marts Working with Big Data in structured, unstructured, semi-structured, and metadata formats Increasing value by integrating Big Data resources with corporate performance monitoring Understanding how Big Data leverages distributed and parallel processing Using NoSQL and other technologies to meet Big Data’s distinct data processing requirements Leveraging statistical approaches of quantitative and qualitative analysis Applying computational analysis methods, including machine learning *Data Architecture* - Charles Tupper 2011-05-09

Data Architecture: From Zen to Reality explains the principles underlying data architecture, how data evolves with organizations, and the challenges organizations face in structuring and managing their data. Using a holistic approach to the field of data architecture, the book describes proven methods and technologies to solve the complex issues dealing with data. It covers the various applied areas of data, including data modelling and data model management, data quality, data governance, enterprise information management, database design, data warehousing, and warehouse design. This text is a core resource for anyone customizing or aligning data management systems, taking the Zen-like idea of data architecture to an attainable reality. The book presents fundamental concepts of enterprise architecture with definitions and real-world applications and scenarios. It teaches data managers and planners about the challenges of building a data architecture roadmap, structuring the right team, and building a long term set of solutions. It includes the detail needed to illustrate how the fundamental principles are used in current business practice. The book is divided into five sections, one of which addresses the software-application development process, defining tools, techniques, and methods that ensure repeatable results. *Data Architecture* is intended for people in business management involved with corporate data issues and information technology decisions,

ranging from data architects to IT consultants, IT auditors, and data administrators. It is also an ideal reference tool for those in a higher-level education process involved in data or information technology management. Presents fundamental concepts of enterprise architecture with definitions and real-world applications and scenarios Teaches data managers and planners about the challenges of building a data architecture roadmap, structuring the right team, and building a long term set of solutions Includes the detail needed to illustrate how the fundamental principles are used in current business practice

Mastering Your Data - Andy Graham 2015-01-01

This is my latest book on Data Architecture focusing on the subject of MDM (Master Data Management). It is intended to provide a overview of the subject with chapters covering key topics such as: the business case, data privacy, the challenges of global MDM, golden source and authoritative source explanations, the different MDM styles and the record matching process. The back cover text says the following: " Master Data Management (MDM for short) has become a whole industry, within an industry. There are many companies now claiming to be MDM software (or services) providers. Everyone wants a master data project on their CV, and in general it has become hip and trendy to talk about and do. The reality is that MDM is in fact the reincarnation of the problem of how to manage the consistency and integrity of the myriads of data assets that exist across the enterprise. This book provides an understanding of MDM, the business drivers behind it, the various techniques that are critical to its success and gives a good architectural grounding in the subject. It is perfect for anyone embarking on an 'adventure' in this problem space." I hope you find this book enjoyable and useful. Andy

Too Big to Ignore - Phil Simon 2013-03-05

Residents in Boston, Massachusetts are automatically reporting potholes and road hazards via their smartphones. Progressive Insurance tracks real-time customer driving patterns and uses that information to offer rates truly commensurate with individual safety. Google accurately predicts local flu outbreaks based upon thousands of user search queries. Amazon provides remarkably insightful, relevant, and timely product

recommendations to its hundreds of millions of customers. Quantcast lets companies target precise audiences and key demographics throughout the Web. NASA runs contests via gamification site TopCoder, awarding prizes to those with the most innovative and cost-effective solutions to its problems. Explorys offers penetrating and previously unknown insights into healthcare behavior. How do these organizations and municipalities do it? Technology is certainly a big part, but in each case the answer lies deeper than that. Individuals at these organizations have realized that they don't have to be Nate Silver to reap massive benefits from today's new and emerging types of data. And each of these organizations has embraced Big Data, allowing them to make astute and otherwise impossible observations, actions, and predictions. It's time to start thinking big. In *Too Big to Ignore*, recognized technology expert and award-winning author Phil Simon explores an unassailably important trend: Big Data, the massive amounts, new types, and multifaceted sources of information streaming at us faster than ever. Never before have we seen data with the volume, velocity, and variety of today. Big Data is no temporary blip of fad. In fact, it is only going to intensify in the coming years, and its ramifications for the future of business are impossible to overstate. *Too Big to Ignore* explains why Big Data is a big deal. Simon provides commonsense, jargon-free advice for people and organizations looking to understand and leverage Big Data. Rife with case studies, examples, analysis, and quotes from real-world Big Data practitioners, the book is required reading for chief executives, company owners, industry leaders, and business professionals.

Data Analytics for Intelligent Transportation Systems - Mashrur Chowdhury 2017-04-05

Data Analytics for Intelligent Transportation Systems provides in-depth coverage of data-enabled methods for analyzing intelligent transportation systems that includes detailed coverage of the tools needed to implement these methods using big data analytics and other computing techniques. The book examines the major characteristics of connected transportation systems, along with the fundamental concepts of how to analyze the data they produce. It explores collecting, archiving, processing, and

distributing the data, designing data infrastructures, data management and delivery systems, and the required hardware and software technologies. Users will learn how to design effective data visualizations, tactics on the planning process, and how to evaluate alternative data analytics for different connected transportation applications, along with key safety and environmental applications for both commercial and passenger vehicles, data privacy and security issues, and the role of social media data in traffic planning. Includes case studies in each chapter that illustrate the application of concepts covered Presents extensive coverage of existing and forthcoming intelligent transportation systems and data analytics technologies Contains contributors from both leading academic and commercial researchers Explains how to design effective data visualizations, tactics on the planning process, and how to evaluate alternative data analytics for different connected transportation applications

[Python for Data Analysis](#) - Wes McKinney 2017-09-25

Get complete instructions for manipulating, processing, cleaning, and crunching datasets in Python. Updated for Python 3.6, the second edition of this hands-on guide is packed with practical case studies that show you how to solve a broad set of data analysis problems effectively. You'll learn the latest versions of pandas, NumPy, IPython, and Jupyter in the process. Written by Wes McKinney, the creator of the Python pandas project, this book is a practical, modern introduction to data science tools in Python. It's ideal for analysts new to Python and for Python programmers new to data science and scientific computing. Data files and related material are available on GitHub. Use the IPython shell and Jupyter notebook for exploratory computing Learn basic and advanced features in NumPy (Numerical Python) Get started with data analysis tools in the pandas library Use flexible tools to load, clean, transform, merge, and reshape data Create informative visualizations with matplotlib Apply the pandas groupby facility to slice, dice, and summarize datasets Analyze and manipulate regular and irregular time series data Learn how to solve real-world data analysis problems with thorough, detailed examples

[Creating a Data-Driven Organization](#) - Carl Anderson 2015-07-23

"What do you need to become a data-driven organization? Far more than having big data or a crack team of unicorn data scientists, it requires establishing an effective, deeply-ingrained data culture. This practical book shows you how true data-drivenness involves processes that require genuine buy-in across your company ... Through interviews and examples from data scientists and analytics leaders in a variety of industries ... Anderson explains the analytics value chain you need to adopt when building predictive business models"--Publisher's description.

Fundamentals of Software Architecture - Mark Richards 2020-01-28 Salary surveys worldwide regularly place software architect in the top 10 best jobs, yet no real guide exists to help developers become architects. Until now. This book provides the first comprehensive overview of software architecture's many aspects. Aspiring and existing architects alike will examine architectural characteristics, architectural patterns, component determination, diagramming and presenting architecture, evolutionary architecture, and many other topics. Mark Richards and Neal Ford—hands-on practitioners who have taught software architecture classes professionally for years—focus on architecture principles that apply across all technology stacks. You'll explore software architecture in a modern light, taking into account all the innovations of the past decade. This book examines: Architecture patterns: The technical basis for many architectural decisions Components: Identification, coupling, cohesion, partitioning, and granularity Soft skills: Effective team management, meetings, negotiation, presentations, and more Modernity: Engineering practices and operational approaches that have changed radically in the past few years Architecture as an engineering discipline: Repeatable results, metrics, and concrete valuations that add rigor to software architecture

Big Data - Hrushikesh Mohanty 2015-06-29

This book is a collection of chapters written by experts on various aspects of big data. The book aims to explain what big data is and how it is stored and used. The book starts from the fundamentals and builds up from there. It is intended to serve as a review of the state-of-the-practice in the field of big data handling. The traditional framework of relational

databases can no longer provide appropriate solutions for handling big data and making it available and useful to users scattered around the globe. The study of big data covers a wide range of issues including management of heterogeneous data, big data frameworks, change management, finding patterns in data usage and evolution, data as a service, service-generated data, service management, privacy and security. All of these aspects are touched upon in this book. It also discusses big data applications in different domains. The book will prove useful to students, researchers, and practicing database and networking engineers.

Big Data in Psychological Research - Sang Eun Woo 2020

Big Data in Psychological Research provides an overview of big data theory, research design and analysis, collection methods, applications, ethical concerns, best practices, and future research directions for psychologists.

Understanding Big Data: Analytics for Enterprise Class Hadoop and Streaming Data - Paul Zikopoulos 2011-10-22

Big Data represents a new era in data exploration and utilization, and IBM is uniquely positioned to help clients navigate this transformation. This book reveals how IBM is leveraging open source Big Data technology, infused with IBM technologies, to deliver a robust, secure, highly available, enterprise-class Big Data platform. The three defining characteristics of Big Data--volume, variety, and velocity--are discussed. You'll get a primer on Hadoop and how IBM is hardening it for the enterprise, and learn when to leverage IBM InfoSphere BigInsights (Big Data at rest) and IBM InfoSphere Streams (Big Data in motion) technologies. Industry use cases are also included in this practical guide. Learn how IBM hardens Hadoop for enterprise-class scalability and reliability Gain insight into IBM's unique in-motion and at-rest Big Data analytics platform Learn tips and tricks for Big Data use cases and solutions Get a quick Hadoop primer

Big Data Processing with Apache Spark - Srini Penchikala 2018-03-13

Apache Spark is a popular open-source big-data processing framework that's built around speed, ease of use, and unified distributed computing

architecture. Not only it supports developing applications in different languages like Java, Scala, Python, and R, it's also hundred times faster in memory and ten times faster even when running on disk compared to traditional data processing frameworks. Whether you are currently working on a big data project or interested in learning more about topics like machine learning, streaming data processing, and graph data analytics, this book is for you. You can learn about Apache Spark and develop Spark programs for various use cases in big data analytics using the code examples provided. This book covers all the libraries in Spark ecosystem: Spark Core, Spark SQL, Spark Streaming, Spark ML, and Spark GraphX.

Artificial Intelligence - Michael Negnevitsky 2005

Keeping the maths to a minimum, Negnevitsky explains the principles of AI, demonstrates how systems are built, what they are useful for and how to choose the right tool for the job.

The Fundamentals of Data Science: Big Data, Deep Learning, and Machine Learning: What You Need to Know about Data Science and why it Matters - Vlad Sozonov 2019-11-21

Data science is no easy term to define. While there are many definitions available that point out its statistical or logical aspects, others focus on its machine learning impacts. Today only, get this Amazon book for just \$19.99 for a limited time. Regularly priced at \$35.99. The truth is, data science is a process that requires an understanding of multiple fields, methods, techniques, and more. Data science cannot be easily labeled because, when applied, it looks different to each person, business, or organization utilizing it. While the term may not be easy to define, what it is used for, can be used for, and approaches to it can be more easily understood. And that is precisely what this book aims to do. Scroll Up & Click to Buy Now! Here Is A Preview Of What You'll Discover...In this step-by-step book: This book will not only thoroughly go over all the skills, people, and steps involved in data science, it will also look closely at: ● What big data is and how data science came from it. ● How data has evolved, resulting in new methods for understanding it. ● How data science influenced artificial intelligence. ● How data science is used in

machine learning and deep learning. ● How data science revolutionizes the way we train machines and set up neural networks. Data science, big data, machine learning, and deep learning tend to intimidate people. Many believe it is too complicated or technology-centered for them to break into these fields. This book is designed to simplify these complex areas in a way that anyone can understand the fundamentals. Whether you are just hearing about data science, are a student studying it in college, or looking to expand your career, this book has something to offer every type of data enthusiast. Order your copy today! Take action right away by purchase this book "The Fundamentals of Data Science: Big Data, Deep Learning, and Machine Learning: What you need to know about data science and why it matters.", for a limited time discount of only \$19.99! Hurry Up!! Tags: ● data science quick ● data science strategy ● data science trading ● data science journal ● insight data science ● data science salary ● data science jobs ● data science espanol ● data science case study ● data science beginner guide

Big Data - Rajkumar Buyya 2016-06-07

Big Data: Principles and Paradigms captures the state-of-the-art research on the architectural aspects, technologies, and applications of Big Data. The book identifies potential future directions and technologies that facilitate insight into numerous scientific, business, and consumer applications. To help realize Big Data's full potential, the book addresses numerous challenges, offering the conceptual and technological solutions for tackling them. These challenges include life-cycle data management, large-scale storage, flexible processing infrastructure, data modeling, scalable machine learning, data analysis algorithms, sampling techniques, and privacy and ethical issues. Covers computational platforms supporting Big Data applications Addresses key principles underlying Big Data computing Examines key developments supporting next generation Big Data platforms Explores the challenges in Big Data computing and ways to overcome them Contains expert contributors from both academia and industry

The Challenger Sale - Matthew Dixon 2011-11-10

What's the secret to sales success? If you're like most business leaders,

you'd say it's fundamentally about relationships-and you'd be wrong. The best salespeople don't just build relationships with customers. They challenge them. The need to understand what top-performing reps are doing that their average performing colleagues are not drove Matthew Dixon, Brent Adamson, and their colleagues at Corporate Executive Board to investigate the skills, behaviors, knowledge, and attitudes that matter most for high performance. And what they discovered may be the biggest shock to conventional sales wisdom in decades. Based on an exhaustive study of thousands of sales reps across multiple industries and geographies, *The Challenger Sale* argues that classic relationship building is a losing approach, especially when it comes to selling complex, large-scale business-to-business solutions. The authors' study found that every sales rep in the world falls into one of five distinct profiles, and while all of these types of reps can deliver average sales performance, only one-the Challenger- delivers consistently high performance. Instead of bludgeoning customers with endless facts and features about their company and products, Challengers approach customers with unique insights about how they can save or make money. They tailor their sales message to the customer's specific needs and objectives. Rather than acquiescing to the customer's every demand or objection, they are assertive, pushing back when necessary and taking control of the sale. The things that make Challengers unique are replicable and teachable to the average sales rep. Once you understand how to identify the Challengers in your organization, you can model their approach and embed it throughout your sales force. The authors explain how almost any average-performing rep, once equipped with the right tools, can successfully reframe customers' expectations and deliver a distinctive purchase experience that drives higher levels of customer loyalty and, ultimately, greater growth.

Big Data, Analytics, and the Future of Marketing and Sales -

Mckinsey Chief Marketing & Sales Officer Forum 2014-08-02

Big Data is the biggest game-changing opportunity for marketing and sales since the Internet went mainstream almost 20 years ago. The data big bang has unleashed torrents of terabytes about everything from

customer behaviors to weather patterns to demographic consumer shifts in emerging markets. This collection of articles, videos, interviews, and slideshows highlights the most important lessons for companies looking to turn data into above-market growth: Using analytics to identify valuable business opportunities from the data to drive decisions and improve marketing return on investment (MROI) Turning those insights into well-designed products and offers that delight customers Delivering those products and offers effectively to the marketplace. The goldmine of data represents a pivot-point moment for marketing and sales leaders. Companies that inject big data and analytics into their operations show productivity rates and profitability that are 5 percent to 6 percent higher than those of their peers. That's an advantage no company can afford to ignore.

[The Data Warehouse Toolkit](#) - Ralph Kimball 2011-08-08

This old edition was published in 2002. The current and final edition of this

book is [The Data Warehouse Toolkit: The Definitive Guide to Dimensional Modeling](#), 3rd Edition which was published in 2013 under ISBN: 9781118530801. The authors begin with fundamental design recommendations and gradually progress step-by-step through increasingly complex scenarios. Clear-cut guidelines for designing dimensional models are illustrated using real-world data warehouse case studies drawn from a variety of business application areas and industries, including: Retail sales and e-commerce Inventory management Procurement Order management Customer relationship management (CRM) Human resources management Accounting Financial services Telecommunications and utilities Education Transportation Health care and insurance By the end of the book, you will have mastered the full range of powerful techniques for designing dimensional databases that are easy to understand and provide fast query response. You will also learn how to create an architected framework that integrates the distributed data warehouse using standardized dimensions and facts.