

Bits Bytes And Barrels The Digital Transformation

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Makers - Chris Anderson 2012-10-02

3D Robotics co-founder and bestselling author Chris Anderson takes you to the front lines of a new industrial revolution as today's entrepreneurs, using open source design and 3-D printing, bring manufacturing to the desktop. In an age of custom-fabricated, do-it-yourself product design and creation, the collective potential of a million garage tinkerers and enthusiasts is about to be unleashed, driving a resurgence of American manufacturing. A generation of "Makers" using the Web's innovation model will help drive the next big wave in the global economy, as the new technologies of digital design and rapid prototyping gives everyone the power to invent--creating "the long tail of things".

Exploring Engineering - Philip Kosky 2009-11-11

Winner in its first edition of the Best New Undergraduate Textbook by the Professional and Scholarly Publishing Division of the American Association of Publishers (AAP), Kosky, et al is the first text offering an introduction to the major engineering fields, and the engineering design process, with an interdisciplinary case study approach. It introduces the fundamental physical, chemical and material bases for all engineering work and presents the engineering design process using examples and hands-on projects. Organized in two parts to cover both the concepts and practice of engineering: Part I, Minds On, introduces the fundamental physical, chemical and material bases for all engineering work while Part II, Hands On, provides opportunity to do design projects An Engineering Ethics Decision Matrix is introduced in Chapter 1 and used throughout the book to pose ethical challenges and explore ethical decision-making in an engineering context Lists of "Top Engineering Achievements" and "Top Engineering Challenges" help put the material in context and show engineering as a vibrant discipline involved in solving societal problems New to this edition: Additional discussions on what engineers do, and the distinctions between engineers, technicians, and managers (Chapter 1) New coverage of Renewable Energy and Environmental Engineering helps emphasize the emerging interest in Sustainable Engineering New discussions of Six Sigma in the Design section, and expanded material on writing technical reports Re-organized and updated chapters in Part I to more closely align with specific engineering disciplines new end of chapter excercises throughout the book

Applied Statistical Modeling and Data Analytics - Srikanta Mishra 2017-10-27

Applied Statistical Modeling and Data Analytics: A Practical Guide for the Petroleum Geosciences provides a practical guide to many of the classical and modern statistical techniques that have become established for oil and gas professionals in recent years. It serves as a "how to" reference volume for the practicing petroleum engineer or geoscientist interested in applying statistical methods in formation evaluation, reservoir characterization, reservoir modeling and management, and uncertainty quantification. Beginning with a foundational discussion of exploratory data analysis, probability distributions and linear regression modeling, the book focuses on fundamentals and practical examples of such key topics as multivariate analysis, uncertainty quantification, data-driven modeling, and experimental design and response surface analysis. Data sets from the petroleum geosciences are extensively used to demonstrate the applicability of these techniques. The book will also be useful for professionals dealing with subsurface flow problems in hydrogeology, geologic carbon sequestration, and nuclear waste disposal. Authored by internationally

renowned experts in developing and applying statistical methods for oil & gas and other subsurface problem domains Written by practitioners for practitioners Presents an easy to follow narrative which progresses from simple concepts to more challenging ones Includes online resources with software applications and practical examples for the most relevant and popular statistical methods, using data sets from the petroleum geosciences Addresses the theory and practice of statistical modeling and data analytics from the perspective of petroleum geoscience applications

Art of Computer Programming, Volume 2 - Donald E. Knuth 2014-05-06

The bible of all fundamental algorithms and the work that taught many of today's software developers most of what they know about computer programming. —Byte, September 1995 I can't begin to tell you how many pleasurable hours of study and recreation they have afforded me! I have pored over them in cars, restaurants, at work, at home... and even at a Little League game when my son wasn't in the line-up.

—Charles Long If you think you're a really good programmer... read [Knuth's] Art of Computer Programming... You should definitely send me a resume if you can read the whole thing. —Bill Gates It's always a pleasure when a problem is hard enough that you have to get the Knuths off the shelf. I find that merely opening one has a very useful terrorizing effect on computers. —Jonathan Laventhol The second volume offers a complete introduction to the field of seminumerical algorithms, with separate chapters on random numbers and arithmetic. The book summarizes the major paradigms and basic theory of such algorithms, thereby providing a comprehensive interface between computer programming and numerical analysis. Particularly noteworthy in this third edition is Knuth's new treatment of random number generators, and his discussion of calculations with formal power series.

Digital Strategies in a Global Market - Natalia Konina 2021-01-02

This book examines the impact of the Fourth Industrial Revolution on business strategy, marketing, management, sustainability innovation, and various kinds of industry. It provides a broad overview of ways that organisations have sought to develop a digital strategy, and explores the challenges and opportunities posed by a rapidly transforming digital world. It draws on European and Russian case studies, with chapters addressing smart cities, corporate governance, the digital single market, and agrobusiness. This book will be of interest to academics and practitioners in management and economics, who are interested in digital strategies performance in global markets.

The Future Belongs to the Digital Engineer - Dutch Holland 2013-12-30

The Future Belongs to the Digital Engineer By Dutch Holland and Jim Crompton The Digital Engineer will be a person with knowledge and skill in the use of engineering and digital technology to enable major process improvements and performance increases in both physical and business operations. New engineers today enter the workforce with high digital literacy, in addition to their qualifications in traditional disciplines. The challenge is to turn new professionals into Digital Engineers who bring value to the business. Jim Crompton, with his coauthor Dutch Holland, has clearly shown us how to bring historically-disconnected skills, organizations and technologies together to drive competitive advantage. This book needs to be on every upstream business persons digital bookshelf. Peter J. Robertson, former Vice Chairman of the Board, Chevron Corporation

Introduction to Computing Systems - Yale N. Patt 2019

[Automating Manufacturing Systems with Plcs](#) - Hugh Jack 2009-08-27

An in depth examination of manufacturing control systems using structured design methods. Topics include ladder logic and other IEC 61131 standards, wiring, communication, analog IO, structured programming, and communications. Allen Bradley PLCs are used extensively through the book, but the formal design methods are applicable to most other PLC brands. A full version of the book and other materials are available on-line at <http://engineeronadisk.com>

Digital @ Scale - Anand Swaminathan 2017-06-02

A blueprint for reinventing the core of your business Value in the next phase of the digital era will go to those companies that don't just try digital but also scale it. Digital@Scale examines what it takes for companies to break through the gravitational pull of their legacy organizations and capture the full value of digital. Digging into more than fifty detailed case studies and years of McKinsey experience and data, the authors, along with a group of expert contributors, show how companies can move beyond incremental change to transform the business where the greatest value is generated—at its core. The authors provide practical insights into the three pillars of digital transformations that successfully scale: reinventing the business model, building out a business architecture from the customer back into the organization, and establishing an 'amoeba' IT and organizational foundation that learns and evolves. This is the ideal guide for all leaders who recognize the power and promise of a digital transformation.

The Philosophy of Software - D. Berry 2016-05-04

This book is a critical introduction to code and software that develops an understanding of its social and philosophical implications in the digital age. Written specifically for people interested in the subject from a non-technical background, the book provides a lively and interesting analysis of these new media forms.

Introduction to Information Systems - R. Kelly Rainer 2008-01-09

WHAT'S IN IT FOR ME? Information technology lives all around us—in how we communicate, how we do business, how we shop, and how we learn. Smart phones, iPods, PDAs, and wireless devices dominate our lives, and yet it's all too easy for students to take information technology for granted. Rainer and Turban's Introduction to Information Systems, 2nd edition helps make Information Technology come alive in the classroom. This text takes students where IT lives—in today's businesses and in our daily lives while helping students understand how valuable information technology is to their future careers. The new edition provides concise and accessible coverage of core IT topics while connecting these topics to Accounting, Finance, Marketing, Management, Human resources, and Operations, so students can discover how critical IT is to each functional area and every business. Also available with this edition is WileyPLUS - a powerful online tool that provides instructors and students with an integrated suite of teaching and learning resources in one easy-to-use website. The WileyPLUS course for Introduction to Information Systems, 2nd edition includes animated tutorials in Microsoft Office 2007, with iPod content and podcasts of chapter summaries provided by author Kelly Rainer.

Hackers - Steven Levy 2010-05-19

This 25th anniversary edition of Steven Levy's classic book traces the exploits of the computer revolution's original hackers -- those brilliant and eccentric nerds from the late 1950s through the early '80s who took risks, bent the rules, and pushed the world in a radical new direction. With updated material from noteworthy hackers such as Bill Gates, Mark Zuckerberg, Richard Stallman, and Steve Wozniak, Hackers is a fascinating story that begins in early computer research labs and leads to the first home computers. Levy profiles the imaginative brainiacs who found clever and unorthodox solutions to computer engineering problems. They had a shared sense of values, known as "the hacker ethic," that still thrives today. Hackers captures a seminal period in recent history when underground activities blazed a trail for today's digital world, from MIT students finagling access to clunky computer-card machines to the DIY culture that spawned the Altair and the Apple II.

Bits, Bytes, and Barrels - Geoffrey Cann 2019-01-08

The oil and gas industry is at a crossroads. Recent low prices, rapidly growing alternative fuels like renewables, the permanent swing from peak oil to super abundance, shifting consumer preferences, and

global pressures to decarbonize suggest a challenged industry for the foreseeable future. Digital advances offer ways to lower costs of production, improve productivity, reduce carbon emissions, and regain public confidence. A wait-and-see attitude to digital innovation has failed many industries already, and the leaders of oil and gas urgently need guidance on how digital both disrupts and enhances their industry. Written by the world's leading experts on the intersection of digital technologies and the oil and gas industry, Bits, Bytes, and Barrels sets out the reasons why adoption is slow, describes the size and scale of both the opportunity and the threat from digital, identifies the key digital technologies and the role that they play in a digital future, and recommends a set of actions for leaders to take to accelerate the adoption of digital in the business. Providing an independent and expert perspective, Bits, Bytes, and Barrels addresses the impacts of digital across the breadth of the industry—from onshore to offshore, from upstream to midstream to integrated—and outlines a roadmap to help the decision-makers at all levels of the industry take meaningful action toward promising and rewarding digital adoption.

Digital Rubbish - Jennifer Gabrys 2013-04-29

This is a study of the material life of information and its devices; of electronic waste in its physical and electronic incarnations; a cultural and material mapping of the spaces where electronics in the form of both hardware and information accumulate, break down, or are stowed away. Where other studies have addressed "digital" technology through a focus on its immateriality or virtual qualities, Gabrys traces the material, spatial, cultural and political infrastructures that enable the emergence and dissolution of these technologies. In the course of her book, she explores five interrelated "spaces" where electronics fall apart: from Silicon Valley to Nasdaq, from containers bound for China to museums and archives that preserve obsolete electronics as cultural artifacts, to the landfill as material repository. Digital Rubbish: A Natural History of Electronics describes the materiality of electronics from a unique perspective, examining the multiple forms of waste that electronics create as evidence of the resources, labor, and imaginaries that are bundled into these machines. Ranging across studies of media and technology, as well as environments, geography, and design, Jennifer Gabrys draws together the far-reaching material and cultural processes that enable the making and breaking of these technologies.

Treasury's War - Juan Zarate 2013-09-10

For more than a decade, America has been waging a new kind of war against the financial networks of rogue regimes, proliferators, terrorist groups, and criminal syndicates. Juan Zarate, a chief architect of modern financial warfare and a former senior Treasury and White House official, pulls back the curtain on this shadowy world. In this gripping story, he explains in unprecedented detail how a small, dedicated group of officials redefined the Treasury's role and used its unique powers, relationships, and reputation to apply financial pressure against America's enemies. This group unleashed a new brand of financial power—one that leveraged the private sector and banks directly to isolate rogues from the international financial system. By harnessing the forces of globalization and the centrality of the American market and dollar, Treasury developed a new way of undermining America's foes. Treasury and its tools soon became, and remain, critical in the most vital geopolitical challenges facing the United States, including terrorism, nuclear proliferation, and the regimes in Iran, North Korea, and Syria. This book is the definitive account, by an unparalleled expert, of how financial warfare has taken pride of place in American foreign policy and how America's competitors and enemies are now learning to use this type of power themselves. This is the unique story of the United States' financial war campaigns and the contours and uses of financial power, and of the warfare to come.

Beyond the Rail and Other Nightmares - Ichabod Ebenezer 2021-06-28

Intelligent Digital Oil and Gas Fields - Gustavo Carvajal 2017-12-14

Intelligent Digital Oil and Gas Fields: Concepts, Collaboration, and Right-time Decisions delivers to the reader a roadmap through the fast-paced changes in the digital oil field landscape of technology in the form of new sensors, well mechanics such as downhole valves, data analytics and models for dealing with a barrage of data, and changes in the way professionals collaborate on decisions. The book introduces the new age of digital oil and gas technology and process components and provides a backdrop to the value and experience industry has achieved from these in the last few years. The book then takes the reader on a

journey first at a well level through instrumentation and measurement for real-time data acquisition, and then provides practical information on analytics on the real-time data. Artificial intelligence techniques provide insights from the data. The road then travels to the "integrated asset" by detailing how companies utilize Integrated Asset Models to manage assets (reservoirs) within DOF context. From model to practice, new ways to operate smart wells enable optimizing the asset. Intelligent Digital Oil and Gas Fields is packed with examples and lessons learned from various case studies and provides extensive references for further reading and a final chapter on the "next generation digital oil field," e.g., cloud computing, big data analytics and advances in nanotechnology. This book is a reference that can help managers, engineers, operations, and IT experts understand specifics on how to filter data to create useful information, address analytics, and link workflows across the production value chain enabling teams to make better decisions with a higher degree of certainty and reduced risk. Covers multiple examples and lessons learned from a variety of reservoirs from around the world and production situations Includes techniques on change management and collaboration Delivers real and readily applicable knowledge on technical equipment, workflows and data challenges such as acquisition and quality control that make up the digital oil and gas field solutions of today Describes collaborative systems and ways of working and how companies are transitioning work force to use the technology and making more optimal decisions

Capitalism's Achilles Heel - Raymond W. Baker 2005-08-05

For over forty years in more than sixty countries, Raymond Baker has witnessed the free-market system operating illicitly and corruptly, with devastating consequences. In Capitalism's Achilles Heel, Baker takes readers on a fascinating journey through the global free-market system and reveals how dirty money, poverty, and inequality are inextricably intertwined. Readers will discover how small illicit transactions lead to massive illegalities and how staggering global income disparities are worsened by the illegalities that permeate international capitalism. Drawing on his experiences, Baker shows how Western banks and businesses use secret transactions and ignore laws while handling some \$1 trillion in illicit proceeds each year. He also illustrates how businesspeople, criminals, and kleptocrats perfect the same techniques to shift funds and how these tactics negatively affect individuals, institutions, and countries.

What To Do When Machines Do Everything - Malcolm Frank 2017-01-18

"Refreshingly thought-provoking..." - The Financial Times The essential playbook for the future of your business What To Do When Machines Do Everything is a guidebook to succeeding in the next generation of the digital economy. When systems running on Artificial Intelligence can drive our cars, diagnose medical patients, and manage our finances more effectively than humans it raises profound questions on the future of work and how companies compete. Illustrated with real-world cases, data, and insight, the authors provide clear strategic guidance and actionable steps to help you and your organization move ahead in a world where exponentially developing new technologies are changing how value is created. Written by a team of business and technology expert practitioners—who also authored Code Halos: How the Digital Lives of People, Things, and Organizations are Changing the Rules of Business—this book provides a clear path to the future of your work. The first part of the book examines the once in a generation upheaval most every organization will soon face as systems of intelligence go mainstream. The authors argue that contrary to the doom and gloom that surrounds much of IT and business at the moment, we are in fact on the cusp of the biggest wave of opportunity creation since the Industrial Revolution. Next, the authors detail a clear-cut business model to help leaders take part in this coming boom; the AHEAD model outlines five strategic initiatives—Automate, Halos, Enhance, Abundance, and Discovery—that are central to competing in the next phase of global business by driving new levels of efficiency, customer intimacy and innovation. Business leaders today have two options: be swallowed up by the ongoing technological evolution, or ride the crest of the wave to new profits and better business. This book shows you how to avoid your own extinction event, and will help you; Understand the untold full extent of technology's impact on the way we work and live. Find out where we're headed, and how soon the future will arrive Leverage the new emerging paradigm into a sustainable business advantage Adopt a strategic model for winning in the new economy The digital world is already transforming how we work, live, and shop, how we are governed and entertained, and how we manage our money, health, security, and relationships. Don't let your business—or your career—get left behind. What To Do When Machines Do Everything is your strategic roadmap to a

future full of possibility and success. Or peril.

Applications of Artificial Intelligence Techniques in the Petroleum Industry - Abdolhossein Hemmati Sarapardeh 2020-08-26

Applications of Artificial Intelligence Techniques in the Petroleum Industry gives engineers a critical resource to help them understand the machine learning that will solve specific engineering challenges. The reference begins with fundamentals, covering preprocessing of data, types of intelligent models, and training and optimization algorithms. The book moves on to methodically address artificial intelligence technology and applications by the upstream sector, covering exploration, drilling, reservoir and production engineering. Final sections cover current gaps and future challenges. Teaches how to apply machine learning algorithms that work best in exploration, drilling, reservoir or production engineering Helps readers increase their existing knowledge on intelligent data modeling, machine learning and artificial intelligence, with foundational chapters covering the preprocessing of data and training on algorithms Provides tactics on how to cover complex projects such as shale gas, tight oils, and other types of unconventional reservoirs with more advanced model input

IoT Fundamentals - David Hanes 2017-05-30

Today, billions of devices are Internet-connected, IoT standards and protocols are stabilizing, and technical professionals must increasingly solve real problems with IoT technologies. Now, five leading Cisco IoT experts present the first comprehensive, practical reference for making IoT work. IoT Fundamentals brings together knowledge previously available only in white papers, standards documents, and other hard-to-find sources—or nowhere at all. The authors begin with a high-level overview of IoT and introduce key concepts needed to successfully design IoT solutions. Next, they walk through each key technology, protocol, and technical building block that combine into complete IoT solutions. Building on these essentials, they present several detailed use cases, including manufacturing, energy, utilities, smart+connected cities, transportation, mining, and public safety. Whatever your role or existing infrastructure, you'll gain deep insight what IoT applications can do, and what it takes to deliver them. Fully covers the principles and components of next-generation wireless networks built with Cisco IOT solutions such as IEEE 802.11 (Wi-Fi), IEEE 802.15.4-2015 (Mesh), and LoRaWAN Brings together real-world tips, insights, and best practices for designing and implementing next-generation wireless networks Presents start-to-finish configuration examples for common deployment scenarios Reflects the extensive first-hand experience of Cisco experts

Fundamentals of Oil & Gas Industry for Beginners - Samir Dalvi 2015-11-03

A prominent linchpin in world politics and in security policies world over, oil and gas have tremendous value in both, the political and economical sectors of global relations, business establishments and policy. Regardless of whether one is a novice to a given field, or a well accomplished veteran in the field, there is a need for the continued engagement with the basics that underlie the core subjects. With that in mind, the Fundamentals of Oil and Gas is a perfect primer for the first-timer in the field, while also a copious text to help a seasoned veteran stay abreast with the nuances of the world of Oil and Gas.

A Question of Power - Robert Bryce 2020-03-10

Historically, it was guns, germs, and steel that determined the fates of people and nations. Now, more than ever, it is electricity. Global demand for power is doubling every two decades, but electricity remains one of the most difficult forms of energy to supply and do so reliably. Today, some three billion people live in places where per-capita electricity use is less than what's used by an average American refrigerator. How we close the colossal gap between the electricity rich and the electricity poor will determine our success in addressing issues like women's rights, inequality, and climate change. In A Question of Power, veteran journalist Robert Bryce tells the human story of electricity, the world's most important form of energy. Through onsite reporting from India, Iceland, Lebanon, Puerto Rico, New York, and Colorado, he shows how our cities, our money--our very lives--depend on reliable flows of electricity. He highlights the factors needed for successful electrification and explains why so many people are still stuck in the dark. With vivid writing and incisive analysis, he powerfully debunks the notion that our energy needs can be met solely with renewables and demonstrates why--if we are serious about addressing climate change--nuclear energy must play a much bigger role. Electricity has fueled a new epoch in the history of civilization. A Question of Power explains how that happened and what it means for our future.

Department of Defense Dictionary of Military and Associated Terms - United States. Joint Chiefs of Staff 1994

Digital Transformation - Thomas M. Siebel 2019-07-09

The legendary Silicon Valley entrepreneur examines how both business and government organizations can harness the power of disruptive technologies. Tom Siebel, the billionaire technologist and founder of Siebel Systems, discusses how four technologies—elastic cloud computing, big data, artificial intelligence, and the internet of things—are fundamentally changing how business and government will operate in the 21st century. While this profound and fast-moving transformation can appear daunting to some, Siebel shows how organizations can not only survive, but thrive in the new digital landscape. In this authoritative yet accessible book, Siebel guides readers through the technologies driving digital transformation, and demonstrates how they can strategically exploit their powerful capabilities. He shows how leading enterprises such as Enel, 3M, Royal Dutch Shell, the U.S. Department of Defense, and others are applying AI and IoT with stunning results.

Product Lifecycle Management (Volume 1) - John Stark 2015-04-10

This third edition updates and adds to the successful second edition and gives the reader a thorough description of PLM, providing them with a full understanding of the theory and the practical skills to implement PLM within their own business environment. This new and expanded edition is fully updated to reflect the many technological and management advances made in PLM since the release of the second edition. Describing the environment in which products are developed, manufactured and supported, before addressing the Five Pillars of PLM: business processes, product data, PLM applications, Organisational Change Management (OCM) and Project Management, this book explains what Product Lifecycle Management is, and why it's needed. The final part of the book addresses the PLM timeline, showing the typical steps and activities of a PLM project or initiative. "Product Lifecycle Management" will broaden the reader's understanding of PLM, nurturing the skills needed to implement PLM successfully and to achieve world-class product performance across the lifecycle.

Hacker, Hoaxer, Whistleblower, Spy - Gabriella Coleman 2014-11-04

Here is the ultimate book on the worldwide movement of hackers, pranksters, and activists that operates under the non-name Anonymous, by the writer the Huffington Post says "knows all of Anonymous' deepest, darkest secrets." Half a dozen years ago, anthropologist Gabriella Coleman set out to study the rise of this global phenomenon just as some of its members were turning to political protest and dangerous disruption (before Anonymous shot to fame as a key player in the battles over WikiLeaks, the Arab Spring, and Occupy Wall Street). She ended up becoming so closely connected to Anonymous that the tricky story of her inside-outside status as Anon confidante, interpreter, and erstwhile mouthpiece forms one of the themes of this witty and entirely engrossing book. The narrative brims with details unearthed from within a notoriously mysterious subculture, whose semi-legendary tricksters—such as Topiary, tflow, Anachaos, and Sabu—emerge as complex, diverse, politically and culturally sophisticated people. Propelled by years of chats and encounters with a multitude of hackers, including imprisoned activist Jeremy Hammond and the double agent who helped put him away, Hector Monsegur, Hacker, Hoaxer, Whistleblower, Spy is filled with insights into the meaning of digital activism and little understood facets of culture in the Internet age, including the history of "trolling," the ethics and metaphysics of hacking, and the origins and manifold meanings of "the lulz."

GPU Parallel Program Development Using CUDA - Tolga Soyata 2018-01-19

GPU Parallel Program Development using CUDA teaches GPU programming by showing the differences among different families of GPUs. This approach prepares the reader for the next generation and future generations of GPUs. The book emphasizes concepts that will remain relevant for a long time, rather than concepts that are platform-specific. At the same time, the book also provides platform-dependent explanations that are as valuable as generalized GPU concepts. The book consists of three separate parts; it starts by explaining parallelism using CPU multi-threading in Part I. A few simple programs are used to demonstrate the concept of dividing a large task into multiple parallel sub-tasks and mapping them to CPU threads. Multiple ways of parallelizing the same task are analyzed and their pros/cons are studied in terms

of both core and memory operation. Part II of the book introduces GPU massive parallelism. The same programs are parallelized on multiple Nvidia GPU platforms and the same performance analysis is repeated. Because the core and memory structures of CPUs and GPUs are different, the results differ in interesting ways. The end goal is to make programmers aware of all the good ideas, as well as the bad ideas, so readers can apply the good ideas and avoid the bad ideas in their own programs. Part III of the book provides pointer for readers who want to expand their horizons. It provides a brief introduction to popular CUDA libraries (such as cuBLAS, cuFFT, NPP, and Thrust), the OpenCL programming language, an overview of GPU programming using other programming languages and API libraries (such as Python, OpenCV, OpenGL, and Apple's Swift and Metal,) and the deep learning library cuDNN.

The Grid Book - Hannah B Higgins 2009-01-23

Ten grids that changed the world: the emergence and evolution of the most prominent visual structure in Western culture. Emblematic of modernity, the grid is the underlying form of everything from skyscrapers and office cubicles to paintings by Mondrian and a piece of computer code. And yet, as Hannah Higgins makes clear in this engaging and evocative book, the grid has a history that long predates modernity; it is the most prominent visual structure in Western culture. In *The Grid Book*, Higgins examines the history of ten grids that changed the world: the brick, the tablet, the gridiron city plan, the map, musical notation, the ledger, the screen, moveable type, the manufactured box, and the net. Charting the evolution of each grid, from the Paleolithic brick of ancient Mesopotamia through the virtual connections of the Internet, Higgins demonstrates that once a grid is invented, it may bend, crumble, or shatter, but its organizing principle never disappears. The appearance of each grid was a watershed event. Brick, tablet, and city gridiron made possible sturdy housing, the standardization of language, and urban development. Maps, musical notation, financial ledgers, and moveable type promoted the organization of space, music, and time, international trade, and mass literacy. The screen of perspective painting heralded the science of the modern period, classical mechanics, and the screen arts, while the standardization of space made possible by the manufactured box suggested the purified box forms of industrial architecture and visual art. The net, the most ancient grid, made its first appearance in Stone Age Finland; today, the loose but clearly articulated networks of the World Wide Web suggest that we are in the middle of an emergent grid that is reshaping the world, as grids do, in its image.

Warehouse Management - Michael Hompel 2006-11-02

This book helps readers evaluate and specify the best Warehouse Management System (WMS) for their need. The advice is based on practical knowledge, describing in detail fundamental processes and technologies needed for a basic understanding. New approaches in the structure and design of WMS are presented, along with discussion of the limitations of current systems. The book shows how to operate a simple WMS based on the open-source initiative myWMS.

[Machine Learning and Data Science in the Oil and Gas Industry](#) - Patrick Bangert 2021-03-04

Machine Learning and Data Science in the Oil and Gas Industry explains how machine learning can be specifically tailored to oil and gas use cases. Petroleum engineers will learn when to use machine learning, how it is already used in oil and gas operations, and how to manage the data stream moving forward. Practical in its approach, the book explains all aspects of a data science or machine learning project, including the managerial parts of it that are so often the cause for failure. Several real-life case studies round out the book with topics such as predictive maintenance, soft sensing, and forecasting. Viewed as a guide book, this manual will lead a practitioner through the journey of a data science project in the oil and gas industry circumventing the pitfalls and articulating the business value. Chart an overview of the techniques and tools of machine learning including all the non-technological aspects necessary to be successful. Gain practical understanding of machine learning used in oil and gas operations through contributed case studies. Learn change management skills that will help gain confidence in pursuing the technology. Understand the workflow of a full-scale project and where machine learning benefits (and where it does not).

Statistics and Probability for Engineering Applications - William DeCoursey 2003-05-14

Statistics and Probability for Engineering Applications provides a complete discussion of all the major topics typically covered in a college engineering statistics course. This textbook minimizes the derivations

and mathematical theory, focusing instead on the information and techniques most needed and used in engineering applications. It is filled with practical techniques directly applicable on the job. Written by an experienced industry engineer and statistics professor, this book makes learning statistical methods easier for today's student. This book can be read sequentially like a normal textbook, but it is designed to be used as a handbook, pointing the reader to the topics and sections pertinent to a particular type of statistical problem. Each new concept is clearly and briefly described, whenever possible by relating it to previous topics. Then the student is given carefully chosen examples to deepen understanding of the basic ideas and how they are applied in engineering. The examples and case studies are taken from real-world engineering problems and use real data. A number of practice problems are provided for each section, with answers in the back for selected problems. This book will appeal to engineers in the entire engineering spectrum (electronics/electrical, mechanical, chemical, and civil engineering); engineering students and students taking computer science/computer engineering graduate courses; scientists needing to use applied statistical methods; and engineering technicians and technologists. * Filled with practical techniques directly applicable on the job * Contains hundreds of solved problems and case studies, using real data sets * Avoids unnecessary theory

Breaking the Cycle of Silence - Daniel Pearse 2020-10-13

The latest statistics tell us that one out of three girls and one out of six boys will be sexually abused before the age of eighteen, destroying their lives in ways we can't even imagine. We also know that 90 percent of the time, victims know their abuser. Daniel Pearse is living proof of both these statistics. He and his brother were sent to live with a pedophile after their mother died. For nine years, Daniel suffered sexual, physical, emotional, mental, and verbal abuse at the hands of his tormentor. Like many abused children, Daniel then suffered in silence for decades as an adult. Now, he's committed to stopping the cycle of abuse that causes so much pain. *Breaking the Cycle of Silence* proposes age-appropriate sexual abuse training and education in schools. It teaches children what is appropriate, shows adults the signs of abuse to look for, and offers sources of support for victims. With such training and education, we can identify and stop abusers, preventing them from claiming victim after victim for years.

Internet of Things From Hype to Reality - Ammar Rayes 2016-10-22

This book comprehensively describes an end-to-end Internet of Things (IoT) architecture that is comprised of devices, network, compute, storage, platform, applications along with management and security components. It is organized into five main parts, comprising of a total of 11 chapters. Part I presents a generic IoT reference model to establish a common vocabulary for IoT solutions. This includes a detailed description of the Internet protocol layers and the Things (sensors and actuators) as well as the key business drivers to realize the IoT vision. Part II focuses on the IoT requirements that impact networking protocols and provides a layer-by-layer walkthrough of the protocol stack with emphasis on industry progress and key gaps. Part III introduces the concept of Fog computing and describes the drivers for the technology, its constituent elements, and how it relates and differs from Cloud computing. Part IV discusses the IoT services platform, the cornerstone of the solution followed by the Security functions and requirements. Finally, Part V provides a treatment of the topic of connected ecosystems in IoT along with practical applications. It then surveys the latest IoT standards and discusses the pivotal role of open source in IoT. "Faculty will find well-crafted questions and answers at the end of each chapter, suitable for review and in classroom discussion topics. In addition, the material in the book can be used by engineers and technical leaders looking to gain a deep technical understanding of IoT, as well as by managers and business leaders looking to gain a competitive edge and understand innovation opportunities for the future." Dr. Jim Spohrer, IBM "This text provides a very compelling study of the IoT space and achieves a very good balance between engineering/technology focus and business context. As such, it is highly-recommended for anyone interested in this rapidly-expanding field and will have broad appeal to a wide cross-section of readers, i.e., including engineering professionals, business analysts, university students, and professors." Professor Nasir Ghani, University of South Florida

Introduction to Applied Linear Algebra - Stephen Boyd 2018-06-07

A groundbreaking introduction to vectors, matrices, and least squares for engineering applications, offering a wealth of practical examples.

Quantitative Finance For Dummies - Steve Bell 2016-06-07

An accessible, thorough introduction to quantitative finance Does the complex world of quantitative finance make you quiver? You're not alone! It's a tough subject for even high-level financial gurus to grasp, but *Quantitative Finance For Dummies* offers plain-English guidance on making sense of applying mathematics to investing decisions. With this complete guide, you'll gain a solid understanding of futures, options and risk, and get up-to-speed on the most popular equations, methods, formulas and models (such as the Black-Scholes model) that are applied in quantitative finance. Also known as mathematical finance, quantitative finance is the field of mathematics applied to financial markets. It's a highly technical discipline—but almost all investment companies and hedge funds use quantitative methods. This fun and friendly guide breaks the subject of quantitative finance down to easily digestible parts, making it approachable for personal investors and finance students alike. With the help of *Quantitative Finance For Dummies*, you'll learn the mathematical skills necessary for success with quantitative finance, the most up-to-date portfolio and risk management applications and everything you need to know about basic derivatives pricing. Covers the core models, formulas and methods used in quantitative finance Includes examples and brief exercises to help augment your understanding of QF Provides an easy-to-follow introduction to the complex world of quantitative finance Explains how QF methods are used to define the current market value of a derivative security Whether you're an aspiring quant or a top-tier personal investor, *Quantitative Finance For Dummies* is your go-to guide for coming to grips with QF/risk management.

Collective Disruption - Michael Doeherty 2016-04-11

"Too often, disruption is a bad word -- something you don't see coming. It doesn't have to be that way. *Collective Disruption* is about changing that paradigm and learning to embrace disruption through collaboration. Learn how to leverage the entrepreneurial ecosystem and partner with startups to co-create transformative new businesses and whole new sources of growth. Whether you're an executive trying to drive growth in a change-resistant organization or an entrepreneur with a big idea and looking for corporate partnerships, this book is for you"--Page 4 of cover.

Information Technology and Mobile Communication - Vinu V Das 2011-04-13

This book constitutes the refereed proceedings of the International Conference on Advances in Information Technology and Mobile Communication, AIM 2011, held at Nagpur, India, in April 2011. The 31 revised full papers presented together with 27 short papers and 34 poster papers were carefully reviewed and selected from 313 submissions. The papers cover all current issues in theory, practices, and applications of Information Technology, Computer and Mobile Communication Technology and related topics.

Trends and Innovations in Information Systems and Technologies - Álvaro Rocha 2020-06-07

This book gathers selected papers presented at the 2020 World Conference on Information Systems and Technologies (WorldCIST'20), held in Budva, Montenegro, from April 7 to 10, 2020. WorldCIST provides a global forum for researchers and practitioners to present and discuss recent results and innovations, current trends, professional experiences with and challenges regarding various aspects of modern information systems and technologies. The main topics covered are 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.

Machine Learning in the Oil and Gas Industry - Yogendra Narayan Pandey 2020-11-03

Apply machine and deep learning to solve some of the challenges in the oil and gas industry. The book begins with a brief discussion of the oil and gas exploration and production life cycle in the context of data flow through the different stages of industry operations. This leads to a survey of some interesting problems, which are good candidates for applying machine and deep learning approaches. The initial chapters provide a primer on the Python programming language used for implementing the algorithms; this is followed by an overview of supervised and unsupervised machine learning concepts. The authors provide industry examples using open source data sets along with practical explanations of the algorithms, without

diving too deep into the theoretical aspects of the algorithms employed. Machine Learning in the Oil and Gas Industry covers problems encompassing diverse industry topics, including geophysics (seismic interpretation), geological modeling, reservoir engineering, and production engineering. Throughout the book, the emphasis is on providing a practical approach with step-by-step explanations and code examples for implementing machine and deep learning algorithms for solving real-life problems in the oil and gas industry. What You Will Learn Understanding the end-to-end industry life cycle and flow of data in the

industrial operations of the oil and gas industry Get the basic concepts of computer programming and machine and deep learning required for implementing the algorithms used Study interesting industry problems that are good candidates for being solved by machine and deep learning Discover the practical considerations and challenges for executing machine and deep learning projects in the oil and gas industry Who This Book Is For Professionals in the oil and gas industry who can benefit from a practical understanding of the machine and deep learning approach to solving real-life problems.