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Understanding Machine Learning Shai Shalev-Shwartz 2014-05-19 Introduces machine learning and its algorithmic paradigms, explaining the principles behind automated learning approaches and the considerations underlying their usage.
Object-Based Image Analysis Thomas Blaschke 2008-08-09 This book brings together a collection of invited interdisciplinary persp- tives on the recent topic of Object-based Image Analysis (OBIA). Its c- st tent is based on select papers from the 1 OBIA International Conference held in Salzburg in July 2006, and is enriched by several invited chapters.

All submissions have passed through a blind peer-review process resulting in what we believe is a timely volume of the highest scientific, theoretical and technical standards. The concept of OBIA first gained widespread interest within the GIScience (Geographic Information Science) community circa 2000, with the advent of the first commercial software for what was then termed 'obje- oriented image analysis'. However, it is widely agreed that OBIA builds on older segmentation, edge-detection and classification concepts that have been used in remote sensing image analysis for several decades. Nevert- less, its emergence has provided a new critical bridge to spatial concepts applied in multiscale landscape analysis, Geographic Information Systems (GIS) and the synergy between image-objects and their radiometric char- teristics and analyses in Earth Observation data (EO).

The R Book Michael J. Crawley 2007-06-13 The high-level language of R is recognized as one of the mostpowerful and flexible statistical software environments, and israpidly becoming the standard setting for quantitative analysis,statistics and graphics. R provides free access to unrivalledcoverage and cutting-edge applications, enabling the user to applynumerous statistical methods ranging from simple regression to timeseries or multivariate analysis. Building on the success of the author's bestsellingStatistics: An Introduction using R, The R Book ispacked with worked examples, providing an all inclusive guide to R,ideal for novice and more accomplished users alike. The bookassumes no background in statistics or computing and introduces theadvantages of the R environment, detailing its applications in awide range of disciplines. Provides the first

comprehensive reference manual for the Rlanguage, including practical guidance and full coverage of thegraphics facilities. Introduces all the statistical models covered by R, beginningwith simple classical tests such as chi-square and t-test. Proceeds to examine more advance methods, from regression andanalysis of variance, through to generalized linear models,generalized mixed models, time series, spatial statistics,multivariate statistics and much more. The R Book is aimed at undergraduates, postgraduates andprofessionals in science, engineering and medicine. It is alsoideal for students and professionals in statistics, economics,geography and the social sciences.

Mathematics for Machine Learning Marc Peter Deisenroth 2020-04-23 The fundamental mathematical tools needed to understand machine learning include linear algebra, analytic geometry, matrix decompositions, vector calculus, optimization, probability and statistics. These topics are traditionally taught in disparate courses, making it hard for data science or computer science students, or professionals, to efficiently learn the mathematics. This self-contained textbook bridges the gap between mathematical and machine learning texts, introducing the mathematical concepts with a minimum of prerequisites. It uses these concepts to derive four central machine learning methods: linear regression, principal component analysis, Gaussian mixture models and support vector machines. For students and others with a mathematical background, these derivations provide a starting point to machine learning texts. For those learning the mathematics for the first time, the methods help build intuition and practical experience with applying mathematical concepts. Every chapter

includes worked examples and exercises to test understanding. Programming tutorials are offered on the book's web site.

Raspberry Pi User Guide Eben Upton 2016-08-29 Learn the Raspberry Pi 3 from the experts! Raspberry Pi User Guide, 4th Edition is the "unofficial official" guide to everything Raspberry Pi 3. Written by the Pi's creator and a leading Pi guru, this book goes straight to the source to bring you the ultimate Raspberry Pi 3 manual. This new fourth edition has been updated to cover the Raspberry Pi 3 board and software, with detailed discussion on its wide array of configurations, languages, and applications. You'll learn how to take full advantage of the mighty Pi's full capabilities, and then expand those capabilities even more with add-on technologies. You'll write productivity and multimedia programs, and learn flexible programming languages that allow you to shape your Raspberry Pi into whatever you want it to be. If you're ready to jump right in, this book gets you started with clear, step-by-step instruction from software installation to system customization. The Raspberry Pi's tremendous popularity has spawned an entire industry of add-ons, parts, hacks, ideas, and inventions. The movement is growing, and pushing the boundaries of possibility along with it—are you ready to be a part of it? This book is your ideal companion for claiming your piece of the Pi. Get all set up with software, and connect to other devices Understand Linux System Admin nomenclature and conventions Write your own programs using Python and Scratch Extend the Pi's capabilities with add-ons like Wi-Fi dongles, a touch screen, and more The credit-card sized Raspberry Pi has become a global phenomenon. Created by the Raspberry Pi Foundation to get kids interested in

programming, this tiny computer kick-started a movement of tinkerers, thinkers, experimenters, and inventors. Where will your Raspberry Pi 3 take you? The Raspberry Pi User Guide, 3rd Edition is your ultimate roadmap to discovery.

Photon-Counting Image Sensors Eric R. Fossum 2018-07-06 This book is a printed edition of the Special Issue "Photon-Counting Image Sensors" that was published in Sensors

Control Engineering and Information Systems Zhijing Liu 2015-01-19 Control Engineering and Information Systems contains the papers presented at the 2014 International Conference on Control Engineering and Information Systems (ICCEIS 2014, Yueyang, Hunan, China, 20-22 June 2014). All major aspects of the theory and applications of control engineering and information systems are addressed, including: Intelligent s

Digital-Forensics and Watermarking Yun Qing Shi 2014-07-08 This book constitutes the thoroughly refereed post-proceedings of the 12th International Workshop on Digital-Forensics and Watermarking, IWDW 2013, held in Auckland, New Zealand, during October 2013. The 24 full and 13 poster papers, presented together with 2 abstracts, were carefully reviewed and selected from 55 submissions. The papers are organized in topical sections on steganography and steganalysis; visual cryptography; reversible data hiding; forensics; watermarking; anonymizing and plate recognition.

Foundations of Data Science Avrim Blum 2020-01-23 This book provides an introduction to the mathematical and algorithmic foundations of data science, including machine learning, high-dimensional geometry, and analysis of large networks. Topics include the counterintuitive nature of data in high dimensions, important linear algebraic techniques such as

singular value decomposition, the theory of random walks and Markov chains, the fundamentals of and important algorithms for machine learning, algorithms and analysis for clustering, probabilistic models for large networks, representation learning including topic modelling and non-negative matrix factorization, wavelets and compressed sensing. Important probabilistic techniques are developed including the law of large numbers, tail inequalities, analysis of random projections, generalization guarantees in machine learning, and moment methods for analysis of phase transitions in large random graphs. Additionally, important structural and complexity measures are discussed such as matrix norms and VC-dimension. This book is suitable for both undergraduate and graduate courses in the design and analysis of algorithms for data.

Children of the Dream Rucker C. Johnson 2019-04-16 An acclaimed economist reveals that school integration efforts in the 1970s and 1980s were overwhelmingly successful -- and argues that we must renew our commitment to integration for the sake of all Americans We are frequently told that school integration was a social experiment doomed from the start. But as Rucker C. Johnson demonstrates in Children of the Dream, it was, in fact, a spectacular achievement. Drawing on longitudinal studies going back to the 1960s, he shows that students who attended integrated and well-funded schools were more successful in life than those who did not -- and this held true for children of all races. Yet as a society we have given up on integration. Since the high point of integration in 1988, we have regressed and segregation again prevails. Contending that integrated, well-funded schools are the primary engine of social mobility, Children

of the Dream offers a radical new take on social policy. It is essential reading in our divided times.

The Age of Surveillance Capitalism Shoshana Zuboff 2019-01-15 The challenges to humanity posed by the digital future, the first detailed examination of the unprecedented form of power called "surveillance capitalism," and the quest by powerful corporations to predict and control our behavior. In this masterwork of original thinking and research, Shoshana Zuboff provides startling insights into the phenomenon that she has named surveillance capitalism. The stakes could not be higher: a global architecture of behavior modification threatens human nature in the twenty-first century just as industrial capitalism disfigured the natural world in the twentieth. Zuboff vividly brings to life the consequences as surveillance capitalism advances from Silicon Valley into every economic sector. Vast wealth and power are accumulated in ominous new "behavioral futures markets," where predictions about our behavior are bought and sold, and the production of goods and services is subordinated to a new "means of behavioral modification." The threat has shifted from a totalitarian Big Brother state to a ubiquitous digital architecture: a "Big Other" operating in the interests of surveillance capital. Here is the crucible of an unprecedented form of power marked by extreme concentrations of knowledge and free from democratic oversight. Zuboff's comprehensive and moving analysis lays bare the threats to twenty-first century society: a controlled "hive" of total connection that seduces with promises of total certainty for maximum profit -- at the expense of democracy, freedom, and our human future. With little resistance from law or society,

surveillance capitalism is on the verge of dominating the social order and shaping the digital future -- if we let it.

MultiMedia Modeling Yong Man Ro 2019-12-27 The two-volume set LNCS 11961 and 11962 constitutes the thoroughly refereed proceedings of the 25th International Conference on MultiMedia Modeling, MMM 2020, held in Daejeon, South Korea, in January 2020. Of the 171 submitted full research papers, 40 papers were selected for oral presentation and 46 for poster presentation; 28 special session papers were selected for oral presentation and 8 for poster presentation; in addition, 9 demonstration papers and 6 papers for the Video Browser Showdown 2020 were accepted. The papers of LNCS 11961 are organized in the following topical sections: audio and signal processing; coding and HVS; color processing and art; detection and classification; face; image processing; learning and knowledge representation; video processing; poster papers; the papers of LNCS 11962 are organized in the following topical sections: poster papers; AI-powered 3D vision; multimedia analytics: perspectives, tools and applications; multimedia datasets for repeatable experimentation; multi-modal affective computing of large-scale multimedia data; multimedia and multimodal analytics in the medical domain and pervasive environments; intelligent multimedia security; demo papers; and VBS papers.

Middle Atmosphere PLUMB 2013-11-21 PAGEOPH, stratosphere, these differences provide us with new evidence, interpretation of which can materially help to advance our understanding of stratospheric dynamics in general. It is now weil established that smaller-scale motions-in particular gravity waves and turbulence-are of fundamental importance in the general circulation

of the mesosphere; they seem to be similarly, if less spectacularly, significant in the troposphere, and probably also in the stratosphere. Our understanding of these motions, their effects on the mean circulation and their mutual interactions is progressing rapidly, as is weil illustrated by the papers in this issue; there are reports of observational studies, especially with new instruments such as the Japanese MV radar, reviews of the state of theory, a laboratory study and an analysis of gravity waves and their effects in the high resolution "SKYHI" general circulation model. There are good reasons to suspect that gravity waves may be of crucial significance in making the stratospheric circulation the way it is (modeling experience being one suggestive piece of evidence for this). Direct observational proof has thus far been prevented by the difficulty of making observations of such scales of motion in this region; in one study reported here, falling sphere observations are used to obtain information on the structure and intensity of waves in the upper stratosphere.

Autonomous Horizons Greg Zacharias 2019-04-05 Dr. Greg Zacharias, former Chief Scientist of the United States Air Force (2015-18), explores next steps in autonomous systems (AS) development, fielding, and training. Rapid advances in AS development and artificial intelligence (AI) research will change how we think about machines, whether they are individual vehicle platforms or networked enterprises. The payoff will be considerable, affording the US military significant protection for aviators, greater effectiveness in employment, and unlimited opportunities for novel and disruptive concepts of operations. Autonomous Horizons: The Way Forward identifies issues and makes

recommendations for the Air Force to take full advantage of this transformational technology.

Advances and Trends in Artificial Intelligence. From Theory to Practice Franz Wotawa 2019-06-28 This book constitutes the thoroughly refereed proceedings of the 32nd International Conference on Industrial, Engineering and Other Applications of Applied Intelligent Systems, IEA/AIE 2019, held in Graz, Austria, in July 2019. The 41 full papers and 32 short papers presented were carefully reviewed and selected from 151 submissions. The IEA/AIE 2019 conference will continue the tradition of emphasizing on applications of applied intelligent systems to solve real-life problems in all areas. These areas include engineering, science, industry, automation and robotics, business and finance, medicine and biomedicine, bioinformatics, cyberspace, and human-machine interactions. IEA/AIE 2019 will have a special focus on automated driving and autonomous systems and also contributions dealing with such systems or their verification and validation as well.

Specimen Science Holly Fernandez Lynch 2017-10-06 Advances in medicine often depend on the effective collection, storage, research use, and sharing of human biological specimens and associated data. But what about the sources of such specimens? When a blood specimen is drawn from a vein in your arm, is that specimen still you? Is it your property, intellectual or otherwise? Should you be allowed not only to consent to its use in research but also to specify under what circumstances it may be used? These and other questions are at the center of a vigorous debate over the use of human biospecimens in research. In this book, experts offer legal, regulatory, and ethical perspectives on balancing social benefit and human

autonomy in biospecimen research. After discussing the background to current debates as well as several influential cases, including that of Henrietta Lacks, the contributors consider the rights, obligations, risks, and privacy of the specimen source; different types of informed consent under consideration (broad, blanket, and specific); implications for special patient and researcher communities; and the governance of biospecimen repositories and the responsibilities of investigators. *The Economics of Discrimination* Gary S. Becker 2010-08-15 This second edition of Gary S. Becker's The Economics of Discrimination has been expanded to include three further discussions of the problem and an entirely new introduction which considers the contributions made by others in recent years and some of the more important problems remaining. Mr. Becker's work confronts the economic effects of discrimination in the market place because of race, religion, sex, color, social class, personality, or other non-pecuniary considerations. He demonstrates that discrimination in the market place by any group reduces their own real incomes as well as those of the minority. The original edition of The Economics of Discrimination was warmly received by economists, sociologists, and psychologists alike for focusing the discerning eye of economic analysis upon a vital social problem—discrimination in the market place. "This is an unusual book; not only is it filled with ingenious theorizing but the implications of the theory are boldly confronted with facts. . . . The intimate relation of the theory and observation has resulted in a book of great vitality on a subject whose interest and importance are obvious."—M.W. Reder, American Economic Review "The author's solution to the problem of

measuring the motive behind actual discrimination is something of a tour de force. . . . Sociologists in the field of race relations will wish to read this book."—Karl Schuessler, American Sociological Review
Natural Zeolites David L. Bish 2018-12-17 Volume 45 of Reviews in Mineralogy and Geochemistry is a new and expanded update of Volume 4 from 1977. Most of the material in this volume is entirely new, and Natural Zeolites: Occurrence, Properties, Applications presents a fresh and expanded look at many of the subjects contained in Volume 4. There has been an explosion in our knowledge of the crystal chemistry and structures of natural zeolites (Chapters 1 and 2), due in part to the now-common Rietveld method that allows treatment of powder diffraction data. Studies on the geochemistry of natural zeolites have also greatly increased, partly as a result of the interests related to the disposal of radioactive wastes, and Chapters 3, 4, 5, 13, and 14 detail the latest results in this important area. Until the latter part of the 20th century, zeolites were often looked upon as a geological curiosity, but they are now known to be widespread throughout the world in sedimentary and igneous deposits and in soils (Chapters 6-12). The application of natural zeolites has greatly expanded since the first zeolite volume. Chapter 15 details the use of natural zeolites for removal of ammonium ions, heavy metals, radioactive cations, and organic molecules from natural waters, wastewaters, and soils. Similarly, Chapter 16 describes the use of natural zeolites as building blocks and cements in the building industry, Chapter 17 outlines their use in solar energy storage, heating, and cooling applications, and Chapter 18 describes their use in a variety of agricultural applications, including as soil conditioners, slow-

release fertilizers, soil-less substrates, carriers for insecticides and pesticides, and remediation agents in contaminated soils.

The built environment and public health: New insights Linchuan Yang 2023-02-06

Neural Networks Simon Haykin 1994 Learning process - Correlation matrix memory - The perceptron - Least-mean-square algorithm - Multilayer perceptrons - Radial-basic function networks - Recurrent networks rooted in statistical physics - Self-organizing systems I : hebbian learning - Self-organizing systems II : competitive learning - Self-organizing systems III : information-theoretic models - Modular networks - Temporal processing - Neurodynamics - VLSI implementations of neural networks.

International Aerospace Abstracts 1999

Computer Vision, Imaging and Computer Graphics Theory and Applications Kadi Bouatouch 2022-01-22 This book constitutes thoroughly revised and selected papers from the 15th International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications, VISIGRAPP 2020, held in Valletta, Malta, in February 2020. The 25 thoroughly revised and extended papers presented in this volume were carefully reviewed and selected from 455 submissions. The papers contribute to the understanding of relevant trends of current research on computer graphics; human computer interaction; information visualization; computer vision.

The Age of Em Robin Hanson 2016-05-13 Robots may one day rule the world, but what is a robot-ruled Earth like? Many think the first truly smart robots will be brain emulations or ems. Scan a human brain, then run a model with the same connections on a fast computer, and you have a robot brain, but recognizably human. Train

an em to do some job and copy it a million times: an army of workers is at your disposal. When they can be made cheaply, within perhaps a century, ems will displace humans in most jobs. In this new economic era, the world economy may double in size every few weeks. Some say we can't know the future, especially following such a disruptive new technology, but Professor Robin Hanson sets out to prove them wrong. Applying decades of expertise in physics, computer science, and economics, he uses standard theories to paint a detailed picture of a world dominated by ems. While human lives don't change greatly in the em era, em lives are as different from ours as our lives are from those of our farmer and forager ancestors. Ems make us question common assumptions of moral progress, because they reject many of the values we hold dear. Read about em mind speeds, body sizes, job training and career paths, energy use and cooling infrastructure, virtual reality, aging and retirement, death and immortality, security, wealth inequality, religion, teleportation, identity, cities, politics, law, war, status, friendship and love. This book shows you just how strange your descendants may be, though ems are no stranger than we would appear to our ancestors. To most ems, it seems good to be an em.

High Performance Computing Esteban Meneses 2019-03-30 This book constitutes the proceedings of the 5th Latin American Conference, CARLA 2018, held in Bucaramanga, Colombia, in September 2018. The 24 papers presented in this volume were carefully reviewed and selected from 38 submissions. They are organized in topical sections on: Artificial Intelligence; Accelerators; Applications; Performance Evaluation; Platforms and Infrastructures; Cloud Computing.

Automated Threat Handbook OWASP

Foundation 2018

Deep Learning on Graphs Yao Ma 2021-09-23 A comprehensive text on foundations and techniques of graph neural networks with applications in NLP, data mining, vision and healthcare.

Advances in Intelligent Information Hiding and Multimedia Signal Processing Jeng-Shyang Pan 2019-07-11 The book presents selected papers from the Fifteenth International Conference on Intelligent Information Hiding and Multimedia Signal Processing, in conjunction with the Twelfth International Conference on Frontiers of Information Technology, Applications and Tools, held on July 18-20, 2019 in Jilin, China. Featuring the latest research, it provides valuable information on problem solving and applications for engineers in computer science-related fields, and is a valuable reference resource for academics, industry practitioners and students.

Mars Up Close Marc Kaufman 2014 Featuring previously unpublished landscape photographs and complemented by a downloadable app, a detailed reference written in consultation with NASA scientists documents the ambitious space expedition through inside stories, accessible science and theories about the future of space exploration.

Nam June Paik Melissa Chiu 2014 This new, fully illustrated catalogue on the celebrated progenitor of video art, Nam June Paik (1932-2006), brings together a host of scholars, artists, and Paik's own collaborators to illuminate the work of this innovative artist. An essay by curator Michelle Yun takes readers through Paik's highly original career, providing insight into his radical and witty experiments with technology, especially in relation to the body, which he viewed as vital platforms for the future of art, science, and popular culture.

Scholars David Joselit and John Maeda contribute texts examining the artist's interest in new media and popular culture. A roundtable discussion with three of Paik's own artistic collaborators and contemporary artists' statements shed light on the collaborative process and Paik's enduring influence on artistic practice today. Drawing on the newly established Nam June Paik Archive at the Smithsonian American Art Museum, this book also features never-before-published primary sources that highlight Paik's prescient attitude towards the integration of increasingly indispensable technologies into modern life. Distributed for Asia Society Museum Exhibition Schedule: Asia Society Museum (09/05/14-01/04/15)

Future Mechatronics and Automation Guohui Yang 2015-02-28 This proceedings volume contains selected papers presented at the 2014 International Conference on Future Mechatronics and Automation, held in Beijing, China. Contributions cover the latest developments and advances in the field of Mechatronics and Automation.

Cloud Computing and Security Xingming Sun 2018-09-12 This six volume set LNCS 11063 - 11068 constitutes the thoroughly refereed conference proceedings of the 4th International Conference on Cloud Computing and Security, ICCCS 2018, held in Haikou, China, in June 2018. The 386 full papers of these six volumes were carefully reviewed and selected from 1743 submissions. The papers cover ideas and achievements in the theory and practice of all areas of inventive systems which includes control, artificial intelligence, automation systems, computing systems, electrical and informative systems. The six volumes are arranged according to the subject areas as follows: cloud computing, cloud

security, encryption, information hiding, IoT security, multimedia forensics

The Principles of Beautiful Web Design Jason Beaird 2010-11-28 This second edition of The Principles of Beautiful Web Design is the ideal book for people who can build websites, but are seeking the skills and knowledge to visually enhance their sites. This book will teach you how to: Understand the process of what makes "good design," from discovery through to implementation Use color effectively, develop color schemes, and create a palette Create pleasing layouts using grids, the rule of thirds, and symmetry Employ textures: lines, points, shapes, volumes, and depth Apply typography to make ordinary designs look great Choose, edit, and position effective imagery And lots more... This revised, easy-to-follow guide is illustrated with beautiful, full-color examples, and leads readers through the process of creating great designs from start to finish. It also features: Updated information about grid-based design How to design for mobile resolutions Information about the future of web fonts including @font-face Common user-interface patterns and resources

Creativity, Inc. Ed Catmull 2014-04-08 From a co-founder of Pixar Animation Studios—the Academy Award-winning studio behind Coco, Inside Out, and Toy Story—comes an incisive book about creativity in business and leadership for readers of Daniel Pink, Tom Peters, and Chip and Dan Heath. NEW YORK TIMES BESTSELLER | NAMED ONE OF THE BEST BOOKS OF THE YEAR BY The Huffington Post • Financial Times • Success • Inc. • Library Journal Creativity, Inc. is a manual for anyone who strives for originality and the first-ever, all-access trip into the nerve center of Pixar Animation—into the meetings, postmortems, and

“Braintrust” sessions where some of the most successful films in history are made. It is, at heart, a book about creativity—but it is also, as Pixar co-founder and president Ed Catmull writes, “an expression of the ideas that I believe make the best in us possible.” For nearly twenty years, Pixar has dominated the world of animation, producing such beloved films as the Toy Story trilogy, Monsters, Inc., Finding Nemo, The Incredibles, Up, WALL-E, and Inside Out, which have gone on to set box-office records and garner thirty Academy Awards. The joyousness of the storytelling, the inventive plots, the emotional authenticity: In some ways, Pixar movies are an object lesson in what creativity really is. Here, in this book, Catmull reveals the ideals and techniques that have made Pixar so widely admired—and so profitable. As a young man, Ed Catmull had a dream: to make the first computer-animated movie. He nurtured that dream as a Ph.D. student at the University of Utah, where many computer science pioneers got their start, and then forged a partnership with George Lucas that led, indirectly, to his co-founding Pixar in 1986. Nine years later, Toy Story was released, changing animation forever. The essential ingredient in that movie’s success—and in the thirteen movies that followed—was the unique environment that Catmull and his colleagues built at Pixar, based on leadership and management philosophies that protect the creative process and defy convention, such as: • Give a good idea to a mediocre team, and they will screw it up. But give a mediocre idea to a great team, and they will either fix it or come up with something better. • If you don’t strive to uncover what is unseen and understand its nature, you will be ill prepared to lead. • It’s not the manager’s job to prevent

risks. It's the manager's job to make it safe for others to take them. • The cost of preventing errors is often far greater than the cost of fixing them. • A company's communication structure should not mirror its organizational structure. Everybody should be able to talk to anybody.

Information Theory, Inference and Learning Algorithms David J. C. MacKay 2003-09-25 Information theory and inference, taught together in this exciting textbook, lie at the heart of many important areas of modern technology - communication, signal processing, data mining, machine learning, pattern recognition, computational neuroscience, bioinformatics and cryptography. The book introduces theory in tandem with applications. Information theory is taught alongside practical communication systems such as arithmetic coding for data compression and sparse-graph codes for error-correction. Inference techniques, including message-passing algorithms, Monte Carlo methods and variational approximations, are developed alongside applications to clustering, convolutional codes, independent component analysis, and neural networks. Uniquely, the book covers state-of-the-art error-correcting codes, including low-density-parity-check codes, turbo codes, and digital fountain codes - the twenty-first-century standards for satellite communications, disk drives, and data broadcast. Richly illustrated, filled with worked examples and over 400 exercises, some with detailed solutions, the book is ideal for self-learning, and for undergraduate or graduate courses. It also provides an unparalleled entry point for professionals in areas as diverse as computational biology, financial engineering and machine learning.

Automated Machine Learning Frank

Hutter 2019-05-17 This open access book presents the first comprehensive overview of general methods in Automated Machine Learning (AutoML), collects descriptions of existing systems based on these methods, and discusses the first series of international challenges of AutoML systems. The recent success of commercial ML applications and the rapid growth of the field has created a high demand for off-the-shelf ML methods that can be used easily and without expert knowledge. However, many of the recent machine learning successes crucially rely on human experts, who manually select appropriate ML architectures (deep learning architectures or more traditional ML workflows) and their hyperparameters. To overcome this problem, the field of AutoML targets a progressive automation of machine learning, based on principles from optimization and machine learning itself. This book serves as a point of entry into this quickly-developing field for researchers and advanced students alike, as well as providing a reference for practitioners aiming to use AutoML in their work.

The Continuing Study of Newspaper Reading Advertising Research Foundation 1941

Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results (rev. Ed.) Barry N. Taylor 2009-11 Results of measurements and conclusions derived from them constitute much of the technical information produced by the National Institute of Standards and Technology (NIST). In July 1992 the Director of NIST appointed an Ad Hoc Committee on Uncertainty Statements and charged it with recommending a policy on this important topic. The Committee concluded that the CIPM approach could be used to provide quantitative expression of measurement that would satisfy NIST¿s customers¿ requirements. NIST

initially published a Technical Note on this issue in Jan. 1993. This 1994 edition addresses the most important questions raised by recipients concerning some of the points it addressed and some it did not. Illustrations.

The Google Story David A. Vise 2006 An inside look at the billion-dollar enterprise reveals how the Internet icon grew from a concept to a social phenomenon with a bold mission: to organize all of the world's information and make it easily accessible to people in more than one hundred languages. Reprint. 50,000 first printing.

Archaeology, Anthropology, and Interstellar Communication National Aeronautics Administration 2014-09-06 Addressing a field that has been dominated by astronomers, physicists, engineers, and computer scientists, the contributors to this collection raise questions that may have been overlooked by physical scientists about the ease of establishing meaningful communication with an extraterrestrial intelligence. These scholars are grappling with some of the enormous challenges that will face humanity if an information-rich signal emanating from another world is detected. By drawing on issues at the core of contemporary archaeology and anthropology, we can be much better prepared for contact with an extraterrestrial civilization, should that day ever come.

Flicker Jeffrey M. Zacks 2015 How is it that a patch of flickering light on a wall can produce experiences that engage our imaginations and can feel totally real? From the vertigo of a skydive to the emotional charge of an unexpected victory or defeat, movies give us some of our most vivid experiences and most lasting memories. They reshape our emotions and worldviews--but why? In Flicker, Jeff Zacks delves into the history of cinema and the latest research to

explain what happens between your ears when you sit down in the theatre and the lights go out. Some of the questions Flicker answers: Why do we flinch when Rocky takes a punch in Sylvester Stallone's movies, duck when the jet careens towards the tower in Airplane, and tap our toes to the dance numbers in Chicago or Moulin Rouge? Why do so many of us cry at the movies? What's the difference between remembering what happened in a movie and what happened in real life--and can we always tell the difference? To answer these questions and more, Flicker gives us an engaging, fast-paced look at what happens in your head when you watch a movie.