2017 Frost Sullivan Predictions In Digital Health

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MEDINFO 2019: Health and Wellbeing e-Networks for All - L. Ohno-Machado 2019-11-12
Combining and integrating cross-institutional data remains a challenge for both researchers and those involved in patient care. Patient-generated data can contribute precious information to healthcare professionals by enabling monitoring under normal life conditions and also helping patients play a more active role

in their own care. This book presents the proceedings of MEDINFO 2019, the 17th World Congress on Medical and Health Informatics, held in Lyon, France, from 25 to 30 August 2019. The theme of this year's conference was 'Health and Wellbeing: E-Networks for All', stressing the increasing importance of networks in healthcare on the one hand, and the patient-centered perspective on the other. Over 1100 manuscripts were submitted to the conference and, after a thorough review process by at least three reviewers and assessment by a scientific program committee member, 285 papers and 296 posters were accepted, together with 47 podium abstracts, 7 demonstrations, 45 panels, 21 workshops and 9 tutorials. All accepted paper and poster contributions are included in these proceedings. The papers are grouped under four thematic tracks: interpreting health and biomedical data, supporting care delivery, enabling precision medicine and public health, and the human element in medical informatics.

The posters are divided into the same four groups. The book presents an overview of state-of-the-art informatics projects from multiple regions of the world; it will be of interest to anyone working in the field of medical informatics.

Logistics 4.0 - Turan Paksoy 2020-12-18 Industrial revolutions have impacted both, manufacturing and service. From the steam engine to digital automated production, the industrial revolutions have conduced significant changes in operations and supply chain management (SCM) processes. Swift changes in manufacturing and service systems have led to phenomenal improvements in productivity. The fast-paced environment brings new challenges and opportunities for the companies that are associated with the adaptation to the new concepts such as Internet of Things (IoT) and Cyber Physical Systems, artificial intelligence (AI), robotics, cyber security, data analytics, block chain and cloud technology. These

emerging technologies facilitated and expedited the birth of Logistics 4.0. Industrial Revolution 4.0 initiatives in SCM has attracted stakeholders' attentions due to it is ability to empower using a set of technologies together that helps to execute more efficient production and distribution systems. This initiative has been called Logistics 4.0 of the fourth Industrial Revolution in SCM due to its high potential. Connecting entities, machines, physical items and enterprise resources to each other by using sensors, devices and the internet along the supply chains are the main attributes of Logistics 4.0. IoT enables customers to make more suitable and valuable decisions due to the data-driven structure of the Industry 4.0 paradigm. Besides that, the system's ability of gathering and analyzing information about the environment at any given time and adapting itself to the rapid changes add significant value to the SCM processes. In this peer-reviewed book, experts from all over the world, in the field present a conceptual framework for Logistics 4.0 and provide examples for usage of Industry 4.0 tools in SCM. This book is a work that will be beneficial for both practitioners and students and academicians, as it covers the theoretical framework, on the one hand, and includes examples of practice and real world.

Cyber Defence in the Age of AI, Smart Societies and Augmented Humanity - Hamid Jahankhani 2020-04-06

This publication highlights the fast-moving technological advancement and infiltration of Artificial Intelligence into society. Concepts of evolution of society through interconnectivity are explored, together with how the fusion of human and technological interaction leading to Augmented Humanity is fast becoming more than just an endemic phase, but a cultural phase shift to digital societies. It aims to balance both the positive progressive outlooks such developments bring with potential issues that may stem from innovation of this kind, such as

the invasive procedures of bio hacking or ethical connotations concerning the usage of digital twins. This publication will also give the reader a good level of understanding on fundamental cyber defence principles, interactions with Critical National Infrastructure (CNI) and the Command, Control, Communications and Intelligence (C3I) decision-making framework. A detailed view of the cyber-attack landscape will be garnered; touching on the tactics, techniques and procedures used, red and blue teaming initiatives, cyber resilience and the protection of larger scale systems. The integration of AI, smart societies, the human-centric approach and Augmented Humanity is discernible in the exponential growth, collection and use of [big] data; concepts woven throughout the diversity of topics covered in this publication; which also discusses the privacy and transparency of data ownership, and the potential dangers of exploitation through social media. As humans are become ever more interconnected, with the prolificacy of smart wearable devices and wearable body area networks, the availability of and abundance of user data and metadata derived from individuals has grown exponentially. The notion of data ownership, privacy and situational awareness are now at the forefront in this new age.

Artificial Intelligence - Sandeep Reddy 2020-12-02
The rediscovery of the potential of artificial intelligence (AI) to improve healthcare delivery and patient outcomes has led to an increasing application of AI techniques such as deep learning, computer vision, natural language processing, and robotics in the healthcare domain. Many governments and health authorities have prioritized the application of AI in the delivery of healthcare. Also, technological giants and leading universities have established teams dedicated to the application of AI in medicine. These trends will mean an expanded role for AI in the provision of healthcare. Yet,

there is an incomplete understanding of what AI is and its potential for use in healthcare. This book discusses the different types of AI applicable to healthcare and their application in medicine, population health, genomics, healthcare administration, and delivery. Readers, especially healthcare professionals and managers, will find the book useful to understand the different types of AI and how they are relevant to healthcare delivery. The book provides examples of AI being applied in medicine, population health, genomics, healthcare administration, and delivery and how they can commence applying AI in their health services. Researchers and technology professionals will also find the book useful to note current trends in the application of AI in healthcare and initiate their own projects to enable the application of AI in healthcare/medical domains.

Only Humans Need Apply - Thomas H. Davenport 2016-05-24

An invigorating, thought-provoking, and positive look at the rise of automation that explores how professionals across industries can find sustainable careers in the near future. Nearly half of all working Americans could risk losing their jobs because of technology. It's not only blue-collar jobs at stake. Millions of educated knowledge workers—writers, paralegals, assistants, medical technicians—are threatened by accelerating advances in artificial intelligence. The industrial revolution shifted workers from farms to factories. In the first era of automation, machines relieved humans of manually exhausting work. Today, Era Two of automation continues to wash across the entire services-based economy that has replaced jobs in agriculture and manufacturing. Era Three, and the rise of AI, is dawning. Smart computers are demonstrating they are capable of making better decisions than humans. Brilliant technologies can now decide, learn, predict, and even comprehend much faster and more

accurately than the human brain, and their progress is accelerating. Where will this leave lawyers, nurses, teachers, and editors? In Only Humans Need Apply, Thomas Hayes Davenport and Julia Kirby reframe the conversation about automation, arguing that the future of increased productivity and business success isn't either human or machine. It's both. The key is augmentation, utilizing technology to help humans work better, smarter, and faster. Instead of viewing these machines as competitive interlopers, we can see them as partners and collaborators in creative problem solving as we move into the next era. The choice is ours.

Applications of Small Unmanned Aircraft Systems - J.B. Sharma 2019-10-18
Advances in high spatial resolution mapping capabilities and the new rules established by the Federal Aviation Administration in the United States for the operation of Small Unmanned Aircraft Systems (sUAS) have provided new opportunities to acquire aerial data at a lower cost and more safely versus other methods. A similar opening of the skies for sUAS applications is being allowed in countries across the world. Also, sUAS can access hazardous or inaccessible areas during disaster events and provide rapid response when needed. Applications of Small Unmanned Aircraft systems: Best Practices and Case Studies is the first book that brings together the best practices of sUAS applied to a broad range of issues in high spatial resolution mapping projects. Very few sUAS pilots have the knowledge of how the collected imagery is processed into value added mapping products that have commercial and/or academic import. Since the field of sUAS applications is just a few years old, this book covers the need for a compendium of case studies to guide the planning, data collection, and most importantly data processing and map error issues, with the range of sensors available to the user community. Written by experienced

academics and professionals, this book serves as a guide on how to formulate sUAS based projects, from choice of a sUAS, flight planning for a particular application, sensors and data acquisition, data processing software, mapping software and use of the high spatial resolution maps produced for particular types of geospatial modeling. Features: Focus on sUAS based data acquisition and processing into map products Broad range of case studies by highly experienced academics Practical guidance on sUAS hardware, sensors, and software utilized Compilation of workflow insights from expert professors and professionals Relevant to academia, government, and industry Positional and thematic map accuracy, UAS curriculum development and workflow replicability issues This book would be an excellent text for upper-level undergraduate to graduate level sUAS mapping application courses. It is also invaluable as a reference for educators designing sUAS based curriculum as well as for potential sUAS users to assess the scope of mapping projects that can be done with this technology.

Digital Phenotyping/Digital Biomarkers to Monitor Psychiatric Disorders - Jennifer H. Barnett 2022-08-29

Operations Management in Healthcare, Second Edition - Corinne M. Karuppan, PhD, CPIM 2021-12-07
This thoroughly revised and updated second edition of Operations Management in Healthcare: Strategy and Practice describes how healthcare organizations can cultivate a competitive lead by developing superior operations using a strategic perspective. In clearly demonstrating the "how-tos" of effectively managing a healthcare organization, this new edition also addresses the "why" of providing quality and value-based care. Comprehensive and practice-oriented, chapters illustrate how to excel in the four competitive

priorities - quality, cost, delivery, and flexibility - in order to build a cumulative model of healthcare operations in which all concepts and tools fit together. This textbook encourages a hands-on approach and integrates mind maps to connect concepts, icons for quick reference, dashboards for measurement and tracking of progress, and newly updated end-of-chapter problems and assignments to reinforce creative and critical thinking. Written with the diverse learning needs in mind for programs in health administration, public health, business administration, public administration, and nursing, the textbook equips students with essential high-level problem-solving and process improvement skills. The book reveals concepts and tools through a series of short vignettes of a fictitious healthcare organization as it embarks on its journey to becoming a highly reliable organization. This second edition also includes a strong emphasis on the patient's perspective as well as expanded and added coverage of Lean Six Sigma, value-based payment models, vertical integration, mergers and acquisitions, artificial intelligence, population health, and more to reflect evolving innovations in the healthcare environment across the United States. Complete with a full and updated suite of Instructor Resources, including Instructor's Manual, PowerPoints, and test bank in addition to data sets, tutorial videos, and Excel templates for students. Key Features: Demonstrates the "how-tos" of effectively managing a healthcare organization Sharpens problem-solving and process improvement skills through use of an extensive toolkit developed throughout the text Prepares students for Lean Six Sigma certification with expanded coverage of concepts, tools, and analytics Highlights new trends in healthcare management with coverage of value-based payments, mergers and acquisitions, population health, telehealth, and more Intertwines concepts with vivid vignettes to describe human dynamics, organizational

challenges, and applications of tools Employs boxed features and YouTube videos to address frequently asked questions and real-world instances of operations in practice

The AI Advantage - Thomas H. Davenport 2019-08-06
Cutting through the hype, a practical guide to using artificial intelligence for business benefits and competitive advantage. In The AI Advantage, Thomas Davenport offers a guide to using artificial intelligence in business. He describes what technologies are available and how companies can use them for business benefits and competitive advantage. He cuts through the hype of the AI craze—remember when it seemed plausible that IBM's Watson could cure cancer?—to explain how businesses can put artificial intelligence to work now, in the real world. His key recommendation: don't go for the "moonshot" (curing cancer, or synthesizing all investment knowledge); look for the "low-hanging fruit" to make your company more efficient. Davenport explains that the business value AI offers is solid rather than sexy or splashy. AI will improve products and processes and make decisions better informed—important but largely invisible tasks. AI technologies won't replace human workers but augment their capabilities, with smart machines to work alongside smart people. AI can automate structured and repetitive work; provide extensive analysis of data through machine learning ("analytics on steroids"), and engage with customers and employees via chatbots and intelligent agents. Companies should experiment with these technologies and develop their own expertise. Davenport describes the major AI technologies and explains how they are being used, reports on the AI work done by large commercial enterprises like Amazon and Google, and outlines strategies and steps to becoming a cognitive corporation. This book provides an invaluable guide to the real-world future of business AI. A book in the Management on the

Cutting Edge series, published in cooperation with MIT Sloan Management Review.

Internet of Medical Things - D. Jude Hemanth 2021-04-13
This book looks at the growing segment of Internet of Things technology (IoT) known as Internet of Medical Things (IoMT), an automated system that aids in bridging the gap between isolated and rural communities and the critical healthcare services that are available in more populated and urban areas. Many technological aspects of IoMT are still being researched and developed, with the objective of minimizing the cost and improving the performance of the overall healthcare system. This book focuses on innovative IoMT methods and solutions being developed for use in the application of healthcare services, including post-surgery care, virtual home assistance, smart real-time patient monitoring, implantable sensors and cameras, and diagnosis and treatment planning. It also examines critical issues around the technology, such as security vulnerabilities, IoMT machine learning approaches, and medical data compression for lossless data transmission and archiving. Internet of Medical Things is a valuable reference for researchers, students, and postgraduates working in biomedical, electronics, and communications engineering, as well as practicing healthcare professionals.

Sensors for Health Monitoring - Nilanjan Dey 2019-09-09
Sensors for Health Monitoring discusses the characteristics of U-Healthcare systems in different domains, providing a foundation for working professionals and undergraduate and postgraduate students. The book provides information and advice on how to choose the best sensors for a U-Healthcare system, advises and guides readers on how to overcome challenges relating to data acquisition and signal processing, and presents comprehensive coverage of up-to-date requirements in hardware, communication and calculation for

next-generation uHealth systems. It then compares new technological and technical trends and discusses how they address expected u-Health requirements. In addition, detailed information on system operations is presented and challenges in ubiquitous computing are highlighted. The book not only helps beginners with a holistic approach toward understanding u-Health systems, but also presents researchers with the technological trends and design challenges they may face when designing such systems. Presents an outstanding update on the use of U-Health data analysis and management tools in different applications, highlighting sensor systems Highlights Internet of Things enabled U-Healthcare Covers different data transmission techniques, applications and challenges with extensive case studies for U-Healthcare systems

Handbook of Research on Driving Transformational Change in the Digital Built Environment - Underwood, Jason 2021-05-07 The construction industry is amidst a digital transformation that is focused on addressing well-documented issues and calls for significant improvements and changes through increased productivity, whole-life value, client focus, reduction of waste, and being more sustainable. The key aspect to driving change and transformation is the education and upskilling of the required workforce towards developing the required capacities. Various approaches can be taken to embed digital construction within education and through collaborative efforts in order to drive change and facilitate improvements. The Handbook of Research on Driving Transformational Change in the Digital Built Environment focuses on current developments in practice and education towards facilitating transformation in the built environment. This book provides insight, from a practice perspective, in relation to the client's understanding, digitally enabled collaboration, interoperability and open standards, and

maturity/capability. Covering topics that include digital transformation and construction, digitally enabled infrastructure, building information modelling, collaborative digital education, and the digital built environment, this book is an ideal reference source for engineers, professionals, and researchers in the field of digital transformation as well as doctoral scholars, doctoral researchers, professionals, and academicians.

Artificial Intelligence in Healthcare - Adam Bohr 2020-06-21
Artificial Intelligence (AI) in Healthcare is more than a comprehensive introduction to artificial intelligence as a tool in the generation and analysis of healthcare data. The book is split into two sections where the first section describes the current healthcare challenges and the rise of AI in this arena. The ten following chapters are written by specialists in each area, covering the whole healthcare ecosystem. First, the AI applications in drug design and drug development are presented followed by its applications in the field of cancer diagnostics, treatment and medical imaging. Subsequently, the application of AI in medical devices and surgery are covered as well as remote patient monitoring. Finally, the book dives into the topics of security, privacy, information sharing, health insurances and legal aspects of AI in healthcare. Highlights different data techniques in healthcare data analysis, including machine learning and data mining Illustrates different applications and challenges across the design, implementation and management of intelligent systems and healthcare data networks Includes applications and case studies across all areas of AI in healthcare data

Emerging Technologies for Nurses - Whende M. Carroll, MSN, RN-BC 2020-02-01
Learn and innovate with the latest technologies in nursing and healthcare! The first text of its kind in nursing, this book provides up-to-date information on innovative, smart technologies

that nurses can use in clinical and nonclinical settings to keep up with the changing face of healthcare. This compelling guide will provide you with information about exciting areas of technology that have great potential to improve patient care. Subjects include big data, artificial intelligence, virtual and augmented realities, connected technologies, and precision health. There is also discusson of the shift of healthcare delivery into the community, with an outlook on improving outcomes and enhancing practice. Each chapter focuses on developing competency in current and future real-world applications of emerging technologies. Early chapters describe how to utilize new tools, processes, models, and products to serve the quadruple aim of better managing populations, decreasing costs, and enhancing both the patient's and the clinician's experience. The culture of innovation coincides with the ever-changing politics of healthcare in later chapters, which then evolves into the entrepreneurial opportunities for nurses. This text is an essential introduction for all practicing nurses, nurse leaders, and nurses teaching health information technology or informatics courses. Key Features: Written by nurses for nurses The latest information on emerging health information technology and associated nursing implications Compelling cases show the dramatic effect of innovations on value-based care Learn how applying novel technologies can improve patient care Qualified instructors have access to supplementary materials, including PowerPoint slides and an Instructor's Manual

COVID-19 in the Environment - Deepak Rawtani 2021-09-24
COVID-19 in the Environment: Impact, Concerns, and Management of Coronavirus highlights the research and technology addressing COVID-19 in the environment, including the associated fate, transport, and disposal. It examines the impacts of the virus at local, national, and global levels, including both positive and negative environmental impacts and

techniques for assessing and managing them. Utilizing case studies, it also presents examples of various issues around handling these impacts, as well as policies and strategies being developed as a result. Organized into six parts, COVID-19 in the Environment begins by presenting the nature of the virus and its transmission in various environmental media, as well as models for reducing the transmission. Section 2 describes methods for monitoring and detecting the virus, whereas Sections 3, 4, and 5 go on to examine the socio-economic impact, the environmental impact and risk, and the waste management impact, respectively. Finally, Section 6 explores the environmental policies and strategies that have comes as a result of COVID-19, the implications for climate change, and what the long-term effects will be on environmental sustainability. Examines the fate, transport, and management of COVID-19 and COVID-19 related waste in the environment Explores a variety of issues related to the environmental handling and impacts of COVID-19, particularly utilizing case studies Offers tools and techniques for assessing real-time environmental issues related to COVID-19

Telemedicine Technologies - Hemanth D. Jude 2019-05-04
Telemedicine Technologies: Big Data, Deep Learning, Robotics, Mobile and Remote Applications for Global Healthcare illustrates the innovative concepts, methodologies and frameworks that will increase the feasibility of the existing telemedicine system. The book also focuses on showcasing prototypes of remote healthcare systems, thus emphasizing the data processing side that is often recognized as the backbone of any telemedicine system. Illustrates the innovative concepts, methodologies and frameworks that will increase the feasibility of the existing telemedicine system Focuses on showcasing prototypes of remote healthcare systems

Advances in Simulation and Digital Human

Modeling - Julia L. Wright 2021-06-26 This book provides readers with a timely snapshot of modeling and simulation tools, including virtual and mixed-reality environment, for human factors research. It covers applications in healthcare and physical ergonomics, military and transportation systems, industrial monitoring, as well as economics and social sciences. Based on the AHFE 2021 International Conference on Human Factors and Simulation and the AHFE 2021 International Conference on Digital Human Modeling and Applied Optimization, held virtually on 25–29 July, 2021, from USA, the book offers a unique resource for modelling and simulation researchers seeking insights into human factors research and to human factors experts seeking reliable computational tools.

Global Action Plan on Physical Activity 2018-2030 - World Health Organization 2019-01-21
Regular physical activity is proven to help prevent and treat noncommunicable diseases (NCDs) such as heart disease stroke diabetes and breast and colon cancer. It also helps to prevent hypertension overweight and obesity and can improve mental health quality of life and well-being. In addition to the multiple health benefits of physical activity societies that are more active can generate additional returns on investment including a reduced use of fossil fuels cleaner air and less congested safer roads. These outcomes are interconnected with achieving the shared goals political priorities and ambition of the Sustainable Development Agenda 2030. The new WHO global action plan to promote physical activity responds to the requests by countries for updated guidance and a framework of effective and feasible policy actions to increase physical activity at all levels. It also responds to requests for global leadership and stronger regional and national coordination and the need for a whole-of-society response to achieve a paradigm shift in both supporting and

valuing all people being regularly active according to ability and across the life course. The action plan was developed through a worldwide consultation process involving governments and key stakeholders across multiple sectors including health sports transport urban design civil society academia and the private sector.

Insights in Coronavirus Disease (COVID-19) - Surveillance, Prevention and Treatment - Marc Jean Struelens 2022-11-10

Fundamentals of Clinical Data Science - Pieter Kubben 2018-12-21
This open access book comprehensively covers the fundamentals of clinical data science, focusing on data collection, modelling and clinical applications. Topics covered in the first section on data collection include: data sources, data at scale (big data), data stewardship (FAIR data) and related privacy concerns. Aspects of predictive modelling using techniques such as classification, regression or clustering, and prediction model validation will be covered in the second section. The third section covers aspects of (mobile) clinical decision support systems, operational excellence and value-based healthcare. Fundamentals of Clinical Data Science is an essential resource for healthcare professionals and IT consultants intending to develop and refine their skills in personalized medicine, using solutions based on large datasets from electronic health records or telemonitoring programmes. The book's promise is "no math, no code"and will explain the topics in a style that is optimized for a healthcare audience.

A Greater Foundation for Machine Learning Engineering - Dr. Ganapathi Pulipaka 2021-10-01
This research scholarly illustrated book has more than 250 illustrations. The simple models of supervised machine learning with Gaussian Naïve Bayes, Naïve Bayes, decision trees,

classification rule learners, linear regression, logistic regression, local polynomial regression, regression trees, model trees, K-nearest neighbors, and support vector machines lay a more excellent foundation for statistics. The author of the book Dr. Ganapathi Pulipaka, a top influencer of machine learning in the US, has created this as a reference book for universities. This book contains an incredible foundation for machine learning and engineering beyond a compact manual. The author goes to extraordinary lengths to make academic machine learning and deep learning literature comprehensible to create a new body of knowledge. The book aims at readership from university students, enterprises, data science beginners, machine learning and deep learning engineers at scale for high-performance computing environments. A Greater Foundation of Machine Learning Engineering covers a broad range of classical linear algebra and calculus with program implementations in PyTorch, TensorFlow, R, and Python with in-depth coverage. The author does not hesitate to go into math equations for each algorithm at length that usually many foundational machine learning books lack leveraging the JupyterLab environment. Newcomers can leverage the book from University or people from all walks of data science or software lives to the advanced practitioners of machine learning and deep learning. Though the book title suggests machine learning, there are several implementations of deep learning algorithms, including deep reinforcement learning. The book's mission is to help build a strong foundation for machine learning and deep learning engineers with all the algorithms, processors to train and deploy into production for enterprise-wide machine learning implementations. This book also introduces all the concepts of natural language processing required for machine learning algorithms in Python. The book covers Bayesian statistics

without assuming high-level mathematics or statistics experience from the readers. It delivers the core concepts and implementations required with R code with open datasets. The book also covers unsupervised machine learning algorithms with association rules and k-means clustering, metal-learning algorithms, bagging, boosting, random forests, and ensemble methods. The book delves into the origins of deep learning in a scholarly way covering neural networks, restricted Boltzmann machines, deep belief networks, autoencoders, deep Boltzmann machines, LSTM, and natural language processing techniques with deep learning algorithms and math equations. It leverages the NLTK library of Python with PyTorch, Python, and TensorFlow's installation steps, then demonstrates how to build neural networks with TensorFlow. Deploying machine learning algorithms require a blend of cloud computing platforms, SQL databases, and NoSQL databases. Any data scientist with a statistics background that looks to transition into a machine learning engineer role requires an in-depth understanding of machine learning project implementations on Amazon, Google, or Microsoft Azure cloud computing platforms. The book provides real-world client projects for understanding the complete implementation of machine learning algorithms. This book is a marvel that does not leave any application of machine learning and deep learning algorithms. It sets a more excellent foundation for newcomers and expands the horizons for experienced deep learning practitioners. It is almost inevitable that there will be a series of more advanced algorithms follow-up books from the author in some shape or form after setting such a perfect foundation for machine learning engineering.

How Healthcare Data Privacy Is Almost Dead ... and What Can Be Done to Revive It!
- John J. Trinckes, Jr. 2017-01-27
The healthcare industry is under privacy attack.

The book discusses the issues from the healthcare organization and individual perspectives. Someone hacking into a medical device and changing it is life-threatening. Personal information is available on the black market. And there are increased medical costs, erroneous medical record data that could lead to wrong diagnoses, insurance companies or the government data-mining healthcare information to formulate a medical 'FICO' score that could lead to increased insurance costs or restrictions of insurance. Experts discuss these issues and provide solutions and recommendations so that we can change course before a Healthcare Armageddon occurs.

Backpacker - 2007-09
Backpacker brings the outdoors straight to the reader's doorstep, inspiring and enabling them to go more places and enjoy nature more often. The authority on active adventure, Backpacker is the world's first GPS-enabled magazine, and the only magazine whose editors personally test the hiking trails, camping gear, and survival tips they publish. Backpacker's Editors' Choice Awards, an industry honor recognizing design, feature and product innovation, has become the gold standard against which all other outdoor-industry awards are measured.

Management Information Systems - Kenneth C. Laudon 2004
Management Information Systems provides comprehensive and integrative coverage of essential new technologies, information system applications, and their impact on business models and managerial decision-making in an exciting and interactive manner. The twelfth edition focuses on the major changes that have been made in information technology over the past two years, and includes new opening, closing, and Interactive Session cases.

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.

Global Trends 2040 - National Intelligence Council 2021-03
"The ongoing COVID-19 pandemic marks the most significant, singular global disruption since

World War II, with health, economic, political, and security implications that will ripple for years to come." -Global Trends 2040 (2021) Global Trends 2040-A More Contested World (2021), released by the US National Intelligence Council, is the latest report in its series of reports starting in 1997 about megatrends and the world's future. This report, strongly influenced by the COVID-19 pandemic, paints a bleak picture of the future and describes a contested, fragmented and turbulent world. It specifically discusses the four main trends that will shape tomorrow's world: - Demographics-by 2040, 1.4 billion people will be added mostly in Africa and South Asia. - Economics-increased government debt and concentrated economic power will escalate problems for the poor and middleclass. - Climate-a hotter world will increase water, food, and health insecurity. - Technology-the emergence of new technologies could both solve and cause problems for human life. Students of trends, policymakers, entrepreneurs, academics, journalists and anyone eager for a glimpse into the next decades, will find this report, with colored graphs, essential reading.

Defining Contemporary Professionalism (missing jacket) - Alan Jones 2019-10-18 This book is a series of curated essays by high-profile architecture and design leaders and educators on the topic of professionalism. The book first sets out the current agenda - defining professionalism for the architecture sector - before moving on to focus on delivering the increased professional skills curriculum content within architecture schools as set by the RIBA. With an introduction and conclusion by the Editors, this book explores what contemporary professionalism within architecture is, and its future, encouraging the current and future profession to address professionalism across the industry.

AI and Big Data's Potential for Disruptive Innovation - Strydom, Moses 2019-09-27

Big data and artificial intelligence (AI) are at the forefront of technological advances that represent a potential transformational mega-trend—a new multipolar and innovative disruption. These technologies, and their associated management paradigm, are already rapidly impacting many industries and occupations, but in some sectors, the change is just beginning. Innovating ahead of emerging technologies is the new imperative for any organization that aspires to succeed in the next decade. Faced with the power of this AI movement, it is imperative to understand the dynamics and new codes required by the disruption and to adapt accordingly. AI and Big Data's Potential for Disruptive Innovation provides emerging research exploring the theoretical and practical aspects of successfully implementing new and innovative technologies in a variety of sectors including business, transportation, and healthcare. Featuring coverage on a broad range of topics such as semantic mapping, ethics in AI, and big data governance, this book is ideally designed for IT specialists, industry professionals, managers, executives, researchers, scientists, and engineers seeking current research on the production of new and innovative mechanization and its disruptions.

Pharmaceutical Care in Digital Revolution - Claudia Rijcken 2019-03-15 Pharmaceutical Care in Digital Revolution demonstrates how blending human and digital pharmaceutical care can establish optimal Apothecary Intelligence (AI). Organized into four parts, it examines digital health advances that will synergize the pharmaceutical care process and prepares stakeholders for a dynamic future, fueled with innovation. Beginning with the global picture on health care systems, patients' expectations, and current pharmaceutical care practices, the book covers details of relevant digital technologies as well as compliance, ethical, educational, and cultural aspects to take

successful steps towards digital pharmaceutical care. The text includes links to lectures and technology facts, tutorials on how to implement advances in your own working environment, and examples of stakeholders who are successful in building synergy between digital and pharma. Pharmaceutical Care in Digital Revolution is a practical resource to equip pharmaceutical care stakeholders, such as pharmacists, physicians, pharmacy technicians, and students as well as those in surrounding ecosystems like payers or regulators. It is a crucial reference to understand how technological innovation is changing the paradigm in which we provide current and future pharmaceutical care and how to keep it accessible, affordable, and sustainable. Learn about advances in digital health technology and apply them as a change leader to create circular pharmaceutical care Provides insights on future pharmaceutical care and implement essential conditions to create the best outlook for patients Access links, QR codes, and explanatory animations as educational material to the book

Personalized Digital Health and Patient-centric Services - Maria Hägglund 2022-03-28

Data Cartels - Sarah Lamdan 2022-11-08
In our digital world, data is power. Information hoarding businesses reign supreme, using intimidation, aggression, and force to maintain influence and control. Sarah Lamdan brings us into the unregulated underworld of these "data cartels", demonstrating how the entities mining, commodifying, and selling our data and informational resources perpetuate social inequalities and threaten the democratic sharing of knowledge. Just a few companies dominate most of our critical informational resources. Often self-identifying as "data analytics" or "business solutions" operations, they supply the digital lifeblood that flows through the circulatory system of the internet. With their control over data, they can prevent the free flow

of information, masterfully exploiting outdated information and privacy laws and curating online information in a way that amplifies digital racism and targets marginalized communities. They can also distribute private information to predatory entities. Alarmingly, everything they're doing is perfectly legal. In this book, Lamdan contends that privatization and tech exceptionalism have prevented us from creating effective legal regulation. This in turn has allowed oversized information oligopolies to coalesce. In addition to specific legal and market-based solutions, Lamdan calls for treating information like a public good and creating digital infrastructure that supports our democratic ideals.

Snow Crash - Neal Stephenson 2003-08-26
The "brilliantly realized" (The New York Times Book Review) breakthrough novel from visionary author Neal Stephenson, a modern classic that predicted the metaverse and inspired generations of Silicon Valley innovators Hiro lives in a Los Angeles where franchises line the freeway as far as the eye can see. The only relief from the sea of logos is within the autonomous city-states, where law-abiding citizens don't dare leave their mansions. Hiro delivers pizza to the mansions for a living, defending his pies from marauders when necessary with a matched set of samurai swords. His home is a shared 20 X 30 U-Stor-It. He spends most of his time goggled in to the Metaverse, where his avatar is legendary. But in the club known as The Black Sun, his fellow hackers are being felled by a weird new drug called Snow Crash that reduces them to nothing more than a jittering cloud of bad digital karma (and IRL, a vegetative state). Investigating the Infocalypse leads Hiro all the way back to the beginning of language itself, with roots in an ancient Sumerian priesthood. He'll be joined by Y.T., a fearless teenaged skateboard courier. Together, they must race to stop a shadowy virtual villain hell-bent on world domination.

Artificial Intelligence in Medicine - David Riaño

2019-06-19
This book constitutes the refereed proceedings of the 17th Conference on Artificial Intelligence in Medicine, AIME 2019, held in Poznan, Poland, in June 2019. The 22 revised full and 31 short papers presented were carefully reviewed and selected from 134 submissions. The papers are organized in the following topical sections: deep learning; simulation; knowledge representation; probabilistic models; behavior monitoring; clustering, natural language processing, and decision support; feature selection; image processing; general machine learning; and unsupervised learning.

Diffusion of Innovation in Health Care - Mary Cain 2002-05-01

Occupational Outlook Handbook - United States. Bureau of Labor Statistics 1976

Translational Informatics in Smart Healthcare - Bairong Shen 2017-09-15

This book is about the transformation of the biomedical information to smart healthcare, the chapters are designed to discuss the health associated factors such as genetics, lifestyle, nutrition and environmental factors. The interactions of these factors and the informatics for the analyses of their effects on health are also covered. The era of aging is approaching and the P4 (predictive, preventive, personalized and participatory) medicine paradigm is becoming practical and reality. According to the Kondratiev's long wave theory, IT (information technology) and health will be the next technological revolution for the new economic cycle. This book is written for biomedical informatics scientists, clinicians, health practitioners and researchers, etc.

Innovation in Community-Based Private Practices Through eHealth - Nicola Cobelli 2020-06-03
There are many definitions of eHealth and no consensus around the underlying idea. Most

contributions on eHealth focus on informatic, public health, legal, social and anthropological implications. This book investigates eHealth through community-based private practices such as pharmacies, hearing centres, opticians, and private medical centres from a management perspective. It first presents a systematic review of the theoretical research models that have been developed on eHealth. It then identifies the many innovative managerial implications of eHealth, and finally, it analyses reasons why some eHealth tools are or are not adopted.

Artificial Intelligence in Surgery: Understanding the Role of AI in Surgical Practice - Daniel A. Hashimoto 2021-03-08 Build a solid foundation in surgical AI with this engaging, comprehensive guide for AI novices Machine learning, neural networks, and computer vision in surgical education, practice, and research will soon be de rigueur. Written for surgeons without a background in math or computer science, Artificial Intelligence in Surgery provides everything you need to evaluate new technologies and make the right decisions about bringing AI into your practice. Comprehensive and easy to understand, this first-of-its-kind resource illustrates the use of AI in surgery through real-life examples. It covers the issues most relevant to your practice, including: Neural Networks and Deep Learning Natural Language Processing Computer Vision Surgical Education and Simulation Preoperative Risk Stratification Intraoperative Video Analysis OR Black Box and Tracking of Intraoperative Events Artificial Intelligence and Robotic Surgery Natural Language Processing for Clinical Documentation Leveraging Artificial Intelligence in the EMR Ethical Implications of Artificial Intelligence in Surgery Artificial Intelligence and Health Policy Assessing Strengths and Weaknesses of Artificial Intelligence Research Finally, the appendix includes a detailed glossary of terms and important learning resources and

techniques—all of which helps you interpret claims made by studies or companies using AI.

Nursing and Informatics for the 21st Century - Embracing a Digital World, Book 1 - Connie White Delaney 2022-04-29
In just the past decade, the emergence of digital health has finally become palpable. Enhanced by the pandemic, social justice events, and planetary health urgency, Realizing Digital Health – Bold Challenges and Opportunities for Nursing explores that evolution with a focus on capturing the current state of digital health. Anchored in an introduction to digital health, new technologies, opportunities, and challenges are described. Consideration of the opportunities and challenges of digital health calls for specific attention to ethical considerations. This book includes a current state synopsis of healthcare in the USA, with the inclusion of specific implications for nursing leaders and executives. Engagement of the people (patients, families, communities) working in partnership to enhance health is described. Information management and the necessary definition and access to data are discussed with a particular explication of the function of information management and operational decision-making. The challenges and learnings related to informatics drawn from the experiences of leaders in large health systems shed insight into the current state of informatics-enabled digital health and healthcare. The global example of the integration of technology, nursing, and health systems expands our knowledge of the current state as well as explores possibilities. This book concludes with a commitment to and description of the current state of teamwork and the integral role/functions within informatics, nursing, and healthcare. This book provides the reader with a succinct overview of digital technologies, a reality-anchored description of the current state in the USA and globally and highlights the core foundation and integration of informatics and

information management. This book stimulates thought and actions to advance digital health within a full partnership among the people, organizations, systems, and global imperatives including planetary survival. This book lifts up the next era calling for full teamwork, collaboration, and partnership as we emerge into a true global community. Nursing and Informatics for the 21st Century – Embracing a Digital World, 3rd Edition is comprised of four books which can be purchased individually: Book 1: Realizing Digital Health – Bold Challenges and Opportunities for Nursing Book 2: Nursing Education and Digital Health Strategies Book 3: Innovation, Technology, and Applied Informatics for Nurses Book 4: Nursing in an Integrated Digital World that Supports People, Systems, and the Planet

Life 3.0 - Max Tegmark 2017-08-29
New York Times Best Seller How will Artificial Intelligence affect crime, war, justice, jobs, society and our very sense of being human? The rise of AI has the potential to transform our future more than any other technology—and there's nobody better qualified or situated to explore that future than Max Tegmark, an MIT professor who's helped mainstream research on how to keep AI beneficial. How can we grow our prosperity through automation without leaving people lacking income or purpose? What career advice should we give today's kids? How can we make future AI systems more robust, so that they do what we want without crashing, malfunctioning or getting hacked? Should we fear an arms race in lethal autonomous weapons? Will machines eventually outsmart us at all tasks, replacing humans on the job market and perhaps altogether? Will AI help life flourish like never before or give us more power than we can handle? What sort of future do you want? This book empowers you to join what may be the most important conversation of our time. It doesn't shy away from the full range of viewpoints or from the most controversial

issues—from superintelligence to meaning, consciousness and the ultimate physical limits on life in the cosmos.