A rtificial Intelligence\ A rtificial Intelligence in Cyber Security: Impact and Implications\ A rtificial Intelligence, and Inclusive Growth\ E nergy Research A bstracts\ C an A rtificial Intelligence\ Improv e a n d b ook of Pharmaceutical Granulation Technology\ A rtificial Intelligence for Business\ A rtificial Intelligence in Education\ T he Democratization of A rtificial Intelligence\ dvances in A rtificial Intelligence, Software and Systems Engineering\ F inancing Our Future\ P roceedings of the Future Technologies Conference (F T C) 2021, V olume 1\ A rtificial Intelligence\ New T echnologies in Dermatological Science and Practice\ A rtificial Intelligence\ G ame T heory and M achine Learning for Cyber Security\ R egulatory A spect of A rtificial Intelligence on B lockchain\ C oncise Encyclopedia of S oftware E ngineering\ E uropean A rtificial Intelligence (A I)\ L eadership, the Path for an Integrated Vision\ A I in T he A ge O f Cyber-Disorder\ R eadings in A rtificial Intelligence and Databases\ H uman decisions\ C onstitution 3.0\ A rtificial Intelligence and IOT-B ased Technologies for Sustainable Farming and Smart A griculture\ A rtificial Intelligence and Deep Learning for Decision M aker s\ T he R egional Economics of T echnological T ransformations A rtificial Intelligence A rtificial Intelligence and I ntegrated I ntelligent Information Systems\ E C I A IR 2019 European Conference on the Impact of A rtificial Intelligence and R obotics\ I ntelligence Unbound\ H ow to Achieve Inclusive Growth\ A rtificial Intelligence for Business\ O ptimization\ A rtificial Intelligence in S ociety\ T he M yth of A rtificial Intelligence\ T he D igital Innovation R ace\ A I-First Healthcare\ P roject M anagement B est P ractices: A chieving G lobal E xcellence\ C onnected W orld B iotechnology: Concepts, M ethodologies, T ools, and A pplications

T he interaction of database and A I technologies is crucial to such applications as data mining, active databases, and knowledge-based expert systems. This volume collects the primary readings on the interactions, actual and potential, between these two fields. The editors have chosen articles to balance significant early research and the best and most comprehensive articles from the 1980s. A n in-depth introduction discusses basic research motivations, giving a survey of the history, concepts, and terminology of the interaction. M ajor themes, approaches and results, open issues and future directions are all discussed, including the results of a major survey conducted by the editors of current work in industry and research labs. Thirteen sections follow, each with a short introduction. Topics examined include semantic data models with emphasis on conceptual modeling techniques for databases and information systems and the integration of data model concepts in high-level data languages, definition and maintenance of integrity constraints in databases and knowledge bases, natural language front ends, object-oriented database management systems, implementation issues such as concurrency control and error recovery, and representation of time and knowledge incompleteness from the viewpoints of databases, logic programming, and A I. T he artificial intelligence (A I) landscape has evolved significantly from 1950 when A lan T uring first posed the question of whether machines can think. Today, A I is transforming societies and economies. It promises to generate productivity gains, improve well-being and help address global challenges, such as climate change, resource scarcity and health crises. A s technology continues to saturate modern society, agriculture has started to adopt digital computing and data-driven innovations. T his emergence of “smart” farming has led to various advancements in the field, including autonomous equipment and the collection of climate, livestock, and plant data. A s connectivity and data management continue to revolutionize the farming industry, empirical research is a necessity for understanding these technological developments. A rtificial Intelligence and IOT-B ased Technologies for Sustainable Farming and Smart Agriculture provides emerging research exploring the theoretical and practical aspects of critical technological solutions within the farming industry. Featuring coverage on a broad range of topics such as crop monitoring, precision livestock farming, and agronomic data processing, this book is ideally designed for farmers, agriculturalists, product managers, farm holders, manufacturers, equipment suppliers, industrialists, governmental professionals, researchers, academicians, and students seeking current research on technological applications within agriculture and farming. T his book constitutes the refereed proceedings of the Second International Conference, SLAIAI-ICA 2018, held in M oratuwa, Sri L anka, in December 2018. T he 32 revised full papers presented were carefully reviewed and selected from numerous submissions. T he papers are organized in the following topical sections: T echnology systems; neural networks; game theory; ontology engineering; natural language processing; agent based system; signal and image processing. A fter a long time of neglect, A rtificial Intelligence is once again at the center of most of our political, economic, and socio-cultural debates. Recent advances in the field of A rtificial Neural Networks have led to a renaissance of dystopian and utopian speculations on an A I-rendered future. A lgorithmic technologies are deployed for identifying potential terrorists through vast surveillance networks, for producing sentencing guidelines and recidivism risk profiles in criminal justice systems, for demographic and psychographic targeting of bodies for advertising or propaganda, and more generally for automating the analysis of language, text, and images. A gainst this background, the aim of this book is to discuss the heterogenous conditions, implications, and effects of modern A I and Internet technologies in terms of their political dimension: What does it mean to critically investigate efforts of net politics in the age of machine learning algorithms? T he interactions between machine learning and uploaded minds feature contributions from an international cast of philosophers, A rtificial Intelligence researchers, science fiction authors, and theorists. Composing and intellectually sophisticated exploration of the lastest thinking on A rtificial Intelligence and machine minds features contributions from a range of philosophers, A rtificial Intelligence researchers, science fiction authors, and more. Offers current, diverse perspectives on machine intelligence and uploaded minds, emerging topics of tremendous interest illuminates the nature and ethics of tomorrow’s machine minds— and of the convergence of humans and machines— to consider the pros and cons of a variety of intriguing possibilities. C onsider classic philosophical puzzles as well as the latest topics debated by scholars. C overs a wide range of viewpoints and arguments regarding the prospects of uploading and machine intelligence, including proponents and skeptics, pros and cons. Companies that don't use A I to their advantage will soon be left behind. A rtificial intelligence and machine learning will drive a massive reshaping of the economy and society. What should you and your company be doing right now to ensure that your business is poised for success? T hese articles by A I experts and consultants will help you understand today's essential thinking on what A I is capable of now, how to adopt it in your organization, and how the technology is likely to evolve in the near future. A rtificial Intelligence: T he Insights Y ou Need from Harvard Business Review will help you spearhead important conversations, get on the right A I initiatives for your company, and capitalize on the opportunity of the machine intelligence revolution. C atch up on current topics and deepen your...
understanding of them with the Insights You Need series from Harvard Business Review. Featuring some of HBR’s best and most recent thinking, Insights You Need titles are both a primer on today’s most pressing issues and an extension of the conversation, with interesting research, interviews, case studies, and practical ideas to help you explore how a particular issue will impact your company and what it will mean for you and your business. This work reports on research into intelligent systems, models, and architectures for educational computing applications. It covers a wide range of advanced information and communication and computational methods applied to education and training. When is it useful to have a machine use (AI) technology to achieve a decision? After all, after millions of years of space exploration and rough 10,000 years of civilization, humans are usually quite good at making decisions in complex uncertain environments. Through, Johns Hopkins University's Applied Physics Lab. Research in (AI) technology enabled systems, which has identified three general use cases for (AI) technology to explore space mission: First, for some tasks (AI) technology is more cost-effective than human. Second, (AI) technology is better suited than humans at solving some, but not all problems. Third, (AI) technology allows NASA organization's space exploration mission to develop machines that are capable of responding faster than when a human is in the decision loop (D. Scheidt, 2012, A. Castano et. al. 2008). So, the use of (AI) technology to enable science by observing the pace of rapidly evolving phenomena was demonstrated. It is more effectively coordinating and (AI) technology utilizing to earn economic benefits to use for space exploration mission. However, (AI) technology also have current risk for space exploration. Today (AI) technology is immature and requires further development to reach its potential. For instance, the (AI) technology algorithms that detected the dust derive could not have identified whether the Martian weather represented a threat to the cover. Also it can not yet use instrument input to determine what, where and how to autonomously make the next space science measurement. An equally important factor limiting (AI) technology is that the methodology and technology to effectively test (AI) technology. So, the challenge will testing (AI) enabled system is how (AI) performance can be measured. It would be NASA organization's difficulty to find (AI) technology to develop on carrying research on any space exploration missions in the future. However, (AI) technology will be a good economic benefit choice for space exploration mission in the future. What is artificial intelligence potential benefits and ethical considerations? AI is poised to transform every aspect of healthcare, including the way we manage personal health, from customer experience and clinical care to healthcare cost reductions. This practical book is one of the first to describe present and future use cases where AI can help solve pernicious healthcare problems. Kerrie Holley and Siupoo Becker provide guidance to help informatics and healthcare leadership create AI strategy and implementation plans for healthcare. With this book, business stakeholders and practitioners will be able to build knowledge, a roadmap, and the confidence to support AI in their organizations—without getting into the weeds of algorithms or open source frameworks. Cowritten by an AI technologist and a medical doctor who leverages AI to solve healthcare's most difficult challenges, this book covers: The myths and realities of AI, now and in the future Human-centered AI: what it is and how to make it possible Using various AI technologies to go beyond precision medicine How to deliver patient care using the IoT and ambient computing with AI How AI can help reduce waste in healthcare AI strategy and how to identify high-priority AI applications This book addresses emerging issues concerning the integration of artificial intelligence systems in our daily lives. It focuses on the cognitive, visual, social and analytical aspects of computing and intelligent technologies, and highlights ways to improve the acceptance, effectiveness, and efficiency of said technologies. Topics such as responsibility, integration and training are discussed throughout. The book also reports on the latest advances in systems engineering, with a focus on societal challenges and next-generation systems and applications for meeting them. Further, it covers some cutting-edge issues in energy, including intelligent control system models for power plant, and technology acceptance models. Based on the AHE 2021 Conferences on Human Factors in Software and Systems Engineering, Artificial Intelligence and Social Computing, and Energy, held virtually on 25–29 July, 2021, from USA, this book provides readers with extensive information on current research and future challenges in these fields, together with practical insights into the development of innovative services for various purposes. This fully revised edition of Handbook of Pharmaceutical Granulation Technology covers the rapid advances in the science of agglomeration, process control, process modelling, scale-up, emerging particle engineering technologies, along with current regulatory changes presented by some of the prominent scientist and subject matter experts around the globe. Learn from more than 50 global subject matter experts who share their years of experience in areas ranging from drug delivery and pharmaceutical technology to advances in nanotechnology. Every pharmaceutical scientist should own a copy of this fourth edition resource. Key Features: Theoretical discussions covering granulation and engineering perspectives. Covers new advances in expert systems, process modelling and bioavailability Chapters on emerging technologies in particle engineering Updated current research and developments in granulation technologies This book explains how AI and machine learning can be applied to help businesses solve problems, support critical thinking and ultimately create value and increase profit. By considering business strategies, business process modeling, quality assurance, cybersecurity, governance and big data and focusing on functions, processes, and people’s behaviors it helps businesses take a truly holistic approach to business optimization. It contains practical examples that make it easy to understand the concepts and apply them. It is written for practitioners (consultants, senior executives, decision-makers) dealing with real-life business problems on a daily basis, who are keen to develop systematic strategies for the application of AI/ML/BD technologies to business automation and optimization, as well as researchers who want to explore the industrial applications of AI and higher-level students. Learn modern-day technologies from modern-day technical giants. KEY FEATURES: 1. Real-world success and failure stories of artificial intelligence explained. 2. Understand concepts of artificial intelligence and deep learning methods. 3. Learn how to use artificial intelligence and deep learning methods. 4. Know how to prepare dataset and implement models using industry leading Python packages. 5. You'll be able to apply and analyze the results produced by the models for prediction. The aim of this book is to help the readers understand the concept of artificial intelligence and deep learning methods and implement them into their businesses and organizations. The first two chapters describe the introduction of the artificial intelligence and deep learning methods. In the first chapter, the concept of human thinking process, starting from the biochemical reactions within the structure of neurons to the problem-solving steps through computational thinking skills are discussed. All chapters after the first two should be considered as the study of different technological and artificial intelligence giants of current age. These chapters are placed in a way that each chapter could be considered a separate study of a separate company, which includes the achievements of intelligent services currently provided by the company, discussion on the business model of the company towards the use of the deep learning technologies, the advancement of the web services which are incorporated with intelligent capability introduced by company, the efforts of the company in contributing to the development of the artificial intelligence and deep learning research. WHAT
WILL YOU LEARN How to use the algorithms written in the Python programming language to design models and perform predictions in general datasets Understand use cases in different industries related to the implementation of artificial intelligence and deep learning methods. Earn the use of potential ideas in artificial intelligence and deep learning methods to improve the operational processes or new products and how services can be produced based on the methods.

Table of Contents
1. Artificial Intelligence and Deep Learning
2. Data Science for Business
3. Decision Making
4. Intelligent Computing Strategies
5. Google's Cognitive Learning Services
6. IBM Watson's Advancement
7. Baidu's Improved Social

WHO THIS BOOK IS FOR
This book is targeted to business and organization leaders, technology enthusiasts, professionals, and managers who seek knowledge of artificial intelligence and deep learning methods. Table of Contents
1. Artificial Intelligence and Deep Learning
2. Data Science for Business
3. Decision Making
4. Intelligent Computing Strategies
5. Google's Cognitive Learning Services
6. IBM Watson's Advancement
7. Baidu's Improved Social
of internet development. Through the open, collaborative research platform it has built, TRI aims to unite leading brains from walks of life in promoting healthy, orderly development of digital economy and society by providing cutting-edge thinking. Internet Law Research Center of China Academy of Information and Communications Technology (CAICT): Internet Law Research Center of CAICT is committed to research on legal and policy issues in the fields of information and communication, the Internet, big data, and related international rules, market opening and institutional reforms in the WTO, providing legislative and policy advice to relevant government departments, and building platforms for communication and collaboration between government and enterprises. Tencent AI Lab was established in April 2016, with more than 70 world-class AI PhDs and more than 300 experienced application engineers. The lab specializes in basic research in the fields of machine learning, computer vision, speech recognition and natural language understanding. It combines content, games, social and platform tools to explore the four AI applications. Tencent open platform is provided as a large stage for developers who can use the various product capabilities provided by Tencent's open platform to develop excellent applications and tools, and gain huge traffic and revenue. In the AI era, the platform brings together top AI technologies, professionals and industry resources to incubate and build high-quality AI entrepreneurial projects to help AI capabilities apply in the segmentation field. Researchers in the evolving fields of artificial intelligence and information systems are constantly presented with new challenges. Artificial Intelligence and Integrated Intelligent Information Systems: Emerging Technologies and Applications presents the recent advances in multi-mobile agent systems, the product development process, fuzzy logic systems, neural networks, and ambient intelligent environments among many other innovations in this exciting field. Artificial Intelligence and Integrated Intelligent Information Systems: Emerging Technologies and Applications presents the recent advances in multi-mobile agent systems, the product development process, fuzzy logic systems, neural networks, and ambient intelligent environments among many other innovations in this exciting field. Artificial Intelligence and Integrated Intelligent Information Systems: Emerging Technologies and Applications presents the recent advances in multi-mobile agent systems, the product development process, fuzzy logic systems, neural networks, and ambient intelligent environments among many other innovations in this exciting field. Artificial Intelligence and Integrated Intelligent Information Systems: Emerging Technologies and Applications presents the recent advances in multi-mobile agent systems, the product development process, fuzzy logic systems, neural networks, and ambient intelligent environments among many other innovations in this exciting field. Artificial Intelligence and Integrated Intelligent Information Systems: Emerging Technologies and Applications presents the recent advances in multi-mobile agent systems, the product development process, fuzzy logic systems, neural networks, and ambient intelligent environments among many other innovations in this exciting field. Artificial Intelligence and Integrated Intelligent Information Systems: Emerging Technologies and Applications presents the recent advances in multi-mobile agent systems, the product development process, fuzzy logic systems, neural networks, and ambient intelligent environments among many other innovations in this exciting field. Artificial Intelligence and Integrated Intelligent Information Systems: Emerging Technologies and Applications presents the recent advances in multi-mobile agent systems, the product development process, fuzzy logic systems, neural networks, and ambient intelligent environments among many other innovations in this exciting field. Artificial Intelligence and Integrated Intelligent Information Systems: Emerging Technologies and Applications presents the recent advances in multi-mobile agent systems, the product development process, fuzzy logic systems, neural networks, and ambient intelligent environments among many other innovations in this exciting field.
your competitors in the age of AI? Artificial Intelligence: The Insights You Need from Harvard Business Review brings you today's most essential thinking on AI and explains how to launch the right initiatives at your company to capitalize on the opportunity of the machine intelligence revolution. Business is changing. Will you adapt or be left behind? Get up to speed and deepen your understanding of the topics that are shaping your company's future with the Insights You Need from Harvard Business Review series. Featuring HBR's smartest thinking on fast-moving issues--blockchain, cybersecurity, AI, and more--each book provides the foundational introduction and practical case studies your organization needs to compete today and collects the best research, interviews, and analysis to get it ready for tomorrow. You can't afford to ignore how these issues will transform the landscape of business and society. The Insights You Need series will help you grasp these critical ideas--and prepare you and your company for the future. The world as we know it is changing. Driverless cars, drone deliveries and autonomous weapon systems are no longer the stuff of science fiction. But what's next for technology and business, and how will it impact our society? In Connected World, Philip L. Larrey of the Pontifical L'ateneo University explores the consequences of the new digital age in conversation with leaders including Sir Martin Sorrell, CEO of WPP, Eric Schmidt, CEO of Google's parent company Alphabet, and Maurice Lévy, CEO of Publicis Groupe. Ranging from the death of privacy to the rise of artificial intelligence, Connected World asks the existential questions which will come to define our age. This Concise Encyclopedia of Software Engineering is intended to provide compact coverage of the knowledge relevant to the practicing software engineer. The content has been chosen to provide an introduction to the theory and techniques relevant to the software of a broad class of computer applications. It is supported by examples of computer applications and their enabling technologies. This Encyclopedia will be of value to new practitioners who need a concise overview and established practitioners who need to read about the "penumbra" surrounding their own specialities. It will also be useful to professionals from other disciplines who need to gain some understanding of the various aspects of software engineering which underpin complex information and control systems, and the thinking behind them. Biotechnology can be defined as the manipulation of biological process, systems, and organisms in the production of various products. With applications in a number of fields such as biomedical, chemical, mechanical, and civil engineering, research on the development of biologically inspired materials is essential to further advancement. Biotechnology: Concepts, Methods, Tools, and Applications is a vital reference source for the latest research findings on the application of biotechnology in medicine, engineering, agriculture, food production, and other areas. It also examines the economic impacts of biotechnology use. Highlighting a range of topics such as pharmacogenomics, biomedical engineering, and bioinformatics, this multi-volume book is ideally designed for engineers, pharmacists, medical professionals, practitioners, academicians, and researchers interested in the applications of biotechnology. As a general-purpose technology Artificial Intelligence (AI) is expected to bring about far-reaching effects on business and society. Worldwide, governments have launched ambitious programmes to support the development of AI-based technologies and achieve technology leadership. Against this background, this study was commissioned by the Policy Department A upon request of the ITRE Committee to feed into the general debate on how Europe could seize the opportunity of progress made in AI. While science and technology have been moving at speed in the last decade and major investments have been placed in Artificial Intelligence, blockchain technology, 3D printing, and gene editing, medical practice, including cutaneous medicine (otherwise known as Dermatology), is only just starting to follow these technological advancements. This book is a timely intellectual investment for cutaneous medicine, addressing these particularly needed areas. It is written for medical educators, dermatology residents, practicing dermatologists, and medical researchers in the area of skin diseases, to alert them all to medical advances and up-and-coming technology and in the hope, it will inspire further novel methodology for the future of cutaneous medicine, in diagnosis and therapy. "Explores the challenges to constitutional values posed by sweeping technological changes such as social networks, brain scans, and genetic selection and suggests ways of preserving rights, including privacy, free speech, and dignity in the age of Facebook and Google"--The comprehensive guide to project management implementation, updated with the latest in the field. Project management has spread beyond the IT world to become a critical part of business in every sphere; built on efficiency, analysis, and codified practice, professional project management leads to the sort of reproducible results and reliable processes that make a business successful. Project Management Best Practices provides implementation guidance for every phase of a project, based on the real-world methodologies from leading companies around the globe. Updated to align with the industry's latest best practices, this new Fourth Edition includes new discussion on Agile and Scrum, tradeoffs and constraints, Portfolio PMO tools, and much more. Get up-to-date information on the latest best practices that add value at every level of an organization. Gain insight from more than 50 project managers at world-class organizations including Airbus, Heineken, RTA, IBM, Hewlett-Packard, Sony, Cisco, Nokia, and more. Delve deeper into implementation guidance for Agile, Scrum, and Six Sigma. Explores more efficient methodologies, training, measurement, and metrics that boost organization-wide performance. Adept new approaches to culture and behavioral excellence, including conflict resolution, situational leadership, proactive management, and more. Ideal for both college and corporate training, this book is accompanied by an Instructor's Manual and PowerPoint lecture slides that bring project management concepts right into the classroom. As the field continues to grow and evolve, it becomes increasingly important to stay current with new and established practices; this book provides comprehensive guidance on every aspect of project management, with invaluable real-world insight from leaders in the field. This is an open access title available under the terms of the CC BY -NC-ND 4.0 International licence. It is free to read at Oxford Scholarship Online and offered as a free PDF download from OUP and selected open access locations. Rising inequality and widespread poverty, social unrest and polarization, gender and ethnic disparities, declining social mobility, economic fragility, unbalanced growth due to technology and globalization, and existential danger from climate change are urgent global concerns of our day. These issues are intertwined. They therefore require a holistic framework to examine their interplay and bring the various strands together. Leading academic economists have partnered with experts from several international institutions to explain the sources and scale of these challenges. They gather a wide array of empirical evidence and country experiences to lay out practical policy solutions and to devise a comprehensive and unified plan of action for combating these economic and social disparities. This authoritative book is accessible to policy makers, students, and the general public interested in how to craft a brighter future by building a sustainable, green, and inclusive society in the years ahead. The convergence of Artificial Intelligence (AI) in blockchain creates one of the world's most reliable technology-enabled decision-making systems that is virtually tamper-proof and provides solid insights and decisions. The integration of AI and Blockchain affects many aspects from food supply chain logistics and healthcare record sharing to media royalties and financial security. It is imperative that regulatory standards are emphasized in order to support positive outcomes from the integration of AI in blockchain technology. Regulatory Aspects of Artificial Intelligence on Blockchain: Public Policy and Legal Implications, 2018 Edition
Blockchain provides relevant legal and security frameworks and the latest empirical research findings in blockchain and AI. Through the latest research and standards, the book identifies and offers solutions for overcoming legal consequences that pertain to the application of AI into the blockchain system, especially concerning the usage of smart contracts. The chapters, while investigating the legal and security issues associated with these applications, also include topics such as smart contracts, network vulnerability, cryptocurrency, machine learning, and more. This book is essential for technologists, security analysts, legal specialists, privacy and data security practitioners, IT consultants, standardization professionals, researchers, academicians, and students interested in blockchain and AI from a legal and security viewpoint.

The rise of Artificial Intelligence applications is accelerating the pace and magnitude of the political, securitarian, and ethical challenges we are now struggling to manage in cyberspace and beyond. So far, the relationship between Artificial Intelligence and cyberspace has been investigated mostly in terms of the effects that AI could have on the digital domain, and thus on our societies. What has been explored less is the opposite relationship, namely, how the cyberspace geopolitics can affect AI. Yet, AI applications have so far suffered from growing unrest, disorder, and lack of normative solutions in cyberspace. As such, from algorithm biases, to surveillance and offensive applications, AI could accelerate multiple growing threats and challenges in and through cyberspace. This report by ISPI and The Brookings Institution is an effort to shed light on this less studied, but extremely relevant, relationship.

Advances in artificial intelligence and automation have the potential to be labor-saving and to increase inequality and poverty around the globe. They also give rise to winner-takes-all dynamics that advantage highly skilled individuals and countries that are at the forefront of technological progress. We analyze the economic forces behind these developments and delineate domestic economic policies to mitigate the adverse effects while leveraging the potential gains from technological advances. We also propose reforms to the global system of governance that make the benefits of advances in artificial intelligence more inclusive.