Epub free Artificial intelligence for big data complete guide to automating big data solutions using artificial intelligence techniques (Read Only)

Artificial Intelligence for All Transforming Management Using Artificial Intelligence Techniques Python Artificial Intelligence Projects for Beginners Using Artificial Intelligence in Chemistry and Biology Artificial Intelligence for Robotics Artificial Intelligence in Banking Artificial Intelligence Applications in Information and Communication Technologies Machine Learning and Artificial Intelligence with Industrial Applications The AI Advantage The Artificial Intelligence Infrastructure Workshop Artificial Intelligence Readings in Artificial Intelligence Empowering Artificial Intelligence Through Machine Learning Systems Engineering and Artificial Intelligence Practical Artificial Intelligence Artificial Intelligence Applications for Smart Societies Artificial Intelligence and Machine Learning in Business Management Artificial Intelligence and Machine Learning in Healthcare The Application of Artificial Intelligence Artificial Intelligence: Concepts, Methodologies, Tools, and Applications Artificial Intelligence AI for Social Good Turning Point Artificial Intelligence with Python Applied Biomedical Engineering Using Artificial Intelligence and Cognitive Models Big Data and Artificial Intelligence in Digital Finance Medical Informatics and Bioimaging Using Artificial Intelligence Mobile Artificial Intelligence Projects Forecasting with Artificial Intelligence Artificial Intelligence and Deep Learning for Decision Makers Computer Science and Artificial Intelligence Handbook on Augmenting Telehealth Services Future Communication Systems Using Artificial Intelligence, Internet of Things and Data Science Artificial Intelligence Programming with Python Tools and Applications with Artificial Intelligence Arti

Artificial Intelligence for All 2020-02-18

artificial intelligence the revolutionary transformation that no one can escapeÊ descriptionÊÊ the book Ôartificial intelligence for allÕ is a snapshot of ai applications in different industries society and everyday life the book is written considering possibilities ai can bring in the indian context and considering indian industries and economy at the center stage Ê the book starts with describing the race for the supremacy of different countries in the field of artificial intelligence that has already taken a great momentum and how ai has managed to influence even mainstream politics and the world leaders Ê in the subsequent chapters the book brings in ai applications primarily in the banking and finance sectors like financial crime detection using ai credit risk assessment ai powered conversational banking predictive analytics and recommendations in banking and finance Ê in few of the chapters it goes deep into machine learning deep learning neural network and analogy with the human brain for readers who wants to go deeper into the subject at the same time the content and explanations remain very simple for non technical readers how ai is powering the self driving autonomous vehicles and its implication in the society job and the world economy and itOs transforming the world of home automation will be another area of interest in the book \hat{E} a full chapter is dedicated for cios and ctos to consider ai top in their priority list \hat{E} applications of ai in sports are going to be interesting for sports lovers as well as professionals working in the sports and computer games domain the book also gives special emphasis on conversational ai like virtual assistances and chatbots and their utility in different sectors a chapter dedicated for healthcare and medicine provides a complete overview of ai applications in the field and how itÕs transforming clinical imaging personalized medicines drug discovery and predictions and forecasting health related events and many more cognitive cyber security using ai and machine learning would be an area of interest for the readers in the field of cyber security the chapter talks about various modern cognitive cybersecurity tools and techniques to fight with the ever evolving cybercrime space Ôjourney of a digital travelerÕ describes how ai is transforming the travel and tourism industry the book also includes top 100 business use cases which illustrate possible applications in various fields key features provides perfect Oplayground for enterprises and institutions globally to develop artificial intelligence solutions the world has achieved an enormous amount of technological advancement and skyrocketing progress in mass digitization data science and fintech the gist of the golden era of ai and fintech ai powered autonomous vehicles are undoubtedly the future autonomous vehicles are the dawn of a whole new lifestyle using artificial intelligence to redefine their products processes and strategiesÊ providing banking and financial services to the customers through a variety of digital channels a preliminary guide for enterprises and businesses to revisit their ai strategyÊ Ê what will you learnÊ this book is for both technical and non technical readers a cutting edge technology like artificial intelligence is simplified for all and a genuine effort has been made to democratize it as much as

possible the book will provide insights into the real applications of ai in different industries like health care and medicine banking and finance manufacturing retail sports and many more including how itÕs transforming our life which probably many of us are not even aware of and most importantly how a country like india can be benefited by embracing this groundbreaking technology and the huge opportunities and economic impact that ai can bring also you will get to know how different countries like usa china uk europe russia including india is already in the race of being ai superpower because ai is the future and whoever becomes the leader in ai will become the ruler of the world Ê who this book is for ÊÊ this book is useful for ai professionals data scientists the content of the book is for both technical and non technical readers who wants to know the applications of ai in different industries no prior technical or programming experience is required to understand this book this book can be used as a hand book for data scientist and business smes who are in the process of identifying different use cases of artificial intelligence in their respective domains Ê table of contents 1 super powers of ai Đ the leaders and the contenders £ 2 ai Đ the core fabric for nextgen banking £ 3 how an ai framework can be a game changer in your ai journeyÊÊ 4 artificial neural networksÊ 5 the next wave of automation will transform our living experienceÊ 6 self driving cars Đ socio economic impact of autonomous vehicles \hat{E} 7 how artificial intelligence is transforming the bfsi sector 43 8 ai now is a race among startups and tech giantsÊÊ 9 ai in the top of priorities for cios and ctos 10 ai in sports 11 how a country can be transformed using artificial intelligence 12 donŌt underestimate the power of an ai chatbotÊ 13 industry adoption of cognitive and artificial intelligenceÊ 14 artificial intelligence D the biggest disruptor in the bfsi industry 15 ai in healthcare 16 ai in cyber security D cognitive cyber defense 17 be aware of cyber threatÊ 18 ai revolution in india Đ national strategy for ai 19 ai in tour and travels Đ journey of a digital travelerÊ 20 top 100 business use cases of artificial intelligence 21 t impact of modern automation on employment

Transforming Management Using Artificial Intelligence Techniques 2020-11-09

transforming management using artificial intelligence techniques redefines management practices using artificial intelligence ai by providing a new approach it offers a detailed well illustrated treatment of each topic with examples and case studies and brings the exciting field to life by presenting a substantial and robust introduction to ai in a clear and concise manner it provides a deeper understanding of how the relevant aspects of ai impact each other s efficacy for better output it s a reliable and accessible one step resource that introduces ai presents a full examination of applications provides an understanding of the foundations examines education powered by ai entertainment home and service robots healthcare re imagined predictive policing space exploration and so much more all within the realm of ai this book will feature uncovering new and innovative features of ai and how it can help in raising economic

efficiency at both micro and macro levels both the literature and practical aspects of ai and its uses this book summarizing key concepts at the end of each chapter to assist reader comprehension case studies of tried and tested approaches to resolutions of typical problems ideal for both teaching and general knowledge purposes this book will also simply provide the topic of ai for the readers aspiring researchers and practitioners involved in management and computer science so they can obtain a high level of understanding of ai and managerial applications

Python Artificial Intelligence Projects for Beginners 2018-07-31

build smart applications by implementing real world artificial intelligence projects key features explore a variety of ai projects with python get well versed with different types of neural networks and popular deep learning algorithms leverage popular python deep learning libraries for your ai projects book description artificial intelligence ai is the newest technology that s being employed among varied businesses industries and sectors python artificial intelligence projects for beginners demonstrates ai projects in python covering modern techniques that make up the world of artificial intelligence this book begins with helping you to build your first prediction model using the popular python library scikit learn you will understand how to build a classifier using an effective machine learning technique random forest and decision trees with exciting projects on predicting bird species analyzing student performance data song genre identification and spam detection you will learn the fundamentals and various algorithms and techniques that foster the development of these smart applications in the concluding chapters you will also understand deep learning and neural network mechanisms through these projects with the help of the keras library by the end of this book you will be confident in building your own ai projects with python and be ready to take on more advanced projects as you progress what you will learn build a prediction model using decision trees and random forest use neural networks decision trees and random forests for classification detect youtube comment spam with a bag of words and random forests identify handwritten mathematical symbols with convolutional neural networks revise the bird species identifier to use images learn to detect positive and negative sentiment in user reviews who this book is for python artificial intelligence projects for beginners is for python developers who want to take their first step into the world of artificial intelligence using easy to follow projects basic working knowledge of python programming is expected so that you re able to play around with code

Using Artificial Intelligence in Chemistry and Biology 2008-05-05

possessing great potential power for gathering and managing data in chemistry biology and other sciences artificial intelligence ai methods are prompting increased exploration into the most effective areas for implementation a comprehensive resource documenting the current state of the science and future directions of the field is required to

Artificial Intelligence for Robotics 2018-08-30

bring a new degree of interconnectivity to your world by building your own intelligent robots key features leverage fundamentals of ai and robotics work through use cases to implement various machine learning algorithms explore natural language processing nlp concepts for efficient decision making in robots book descriptionartificial intelligence for robotics starts with an introduction to robot operating systems ros python robotic fundamentals and the software and tools that are required to start out with robotics you will learn robotics concepts that will be useful for making decisions along with basic navigation skills as you make your way through the chapters you will learn about object recognition and genetic algorithms which will teach your robot to identify and pick up an irregular object with plenty of use cases throughout you will explore natural language processing nlp and machine learning techniques to further enhance your robot in the concluding chapters you will learn about path planning and goal oriented programming which will help your robot prioritize tasks by the end of this book you will have learned to give your robot an artificial personality using simulated intelligence what you will learn get started with robotics and artificial intelligence apply simulation techniques to give your robot an artificial personality understand object recognition using neural networks and supervised learning techniques pick up objects using genetic algorithms for manipulation teach your robot to listen using nlp via an expert system use machine learning and computer vision to teach your robot how to avoid obstacles understand path planning decision trees and search algorithms in order to enhance your robot who this book is for if you have basic knowledge about robotics and want to build or enhance your existing robot s intelligence then artificial intelligence for robotics is for you this book is also for enthusiasts who want to gain knowledge of ai and robotics

Artificial Intelligence in Banking 2015-07-04

in these highly competitive times and with so many technological advancements it is impossible for any industry to remain isolated and

untouched by innovations in this era of digital economy the banking sector cannot exist and operate without the various digital tools offered by the ever new innovations happening in the field of artificial intelligence ai and its sub set technologies new technologies have enabled incredible progression in the finance industry artificial intelligence ai and machine learning ml have provided investors and customers with more innovative tools new types of financial products and a new potential for growth according to cathy bessant the chief operations and technology officer bank of america ai is not just a technology discussion it is also a discussion about data and how it is used and protected she says in a world focused on using ai in new ways we re focused on using it wisely and responsibly

Artificial Intelligence Applications in Information and Communication Technologies 2022-03-11

this book presents various recent applications of artificial intelligence in information and communication technologies such as search and optimization methods machine learning data representation and ontologies and multi agent systems the main aim of this book is to help information and communication technologies ict practitioners in managing efficiently their platforms using ai tools and methods and to provide them with sufficient artificial intelligence background to deal with real life problems

Machine Learning and Artificial Intelligence with Industrial Applications 2018-10-16

this book presents the tools used in machine learning ml and the benefits of using such tools in facilities it focus on real life business applications explaining the most popular algorithms easily and clearly without the use of calculus or matrix vector algebra replete with case studies this book provides a working knowledge of ml current and future capabilities and the impact it will have on every business it demonstrates that it is also possible to carry out successful ml and ai projects in any manufacturing plant even without fully fulfilling the five v volume velocity variety veracity and value usually associated with big data this book takes a closer look at how ai and ml are also able to work for industrial area as well as how you could adapt some of the standard tips and techniques usually for big data for your own needs in your sme organizations which first understand these tools and know how to use them will benefit at the expense of their rivals

The AI Advantage 2020-08-17

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

The Artificial Intelligence Infrastructure Workshop 2016

explore how a data storage system works from data ingestion to representation key featuresunderstand how artificial intelligence machine learning and deep learning are different from one another discover the data storage requirements of different ai apps using case studies explore popular data solutions such as hadoop distributed file system hdfs and amazon simple storage service s3 book description social networking sites see an average of 350 million uploads daily a quantity impossible for humans to scan and analyze only ai can do this job at the required speed and to leverage an ai application at its full potential you need an efficient and scalable data storage pipeline the artificial intelligence infrastructure workshop will teach you how to build and manage one the artificial intelligence infrastructure workshop begins taking you through some real world applications of ai you ll explore the layers of a data lake and get to grips with security scalability and maintainability with the help of hands on exercises you ll learn how to define the requirements for ai

applications in your organization this ai book will show you how to select a database for your system and run common queries on databases such as mysql mongodb and cassandra you ll also design your own ai trading system to get a feel of the pipeline based architecture as you learn to implement a deep q learning algorithm to play the cartpole game you ll gain hands on experience with pytorch finally you ll explore ways to run machine learning models in production as part of an ai application by the end of the book you ll have learned how to build and deploy your own ai software at scale using various tools api frameworks and serialization methods what you will learnget to grips with the fundamentals of artificial intelligenceunderstand the importance of data storage and architecture in ai applicationsbuild data storage and workflow management systems with open source toolscontainerize your ai applications with tools such as dockerdiscover commonly used data storage solutions and best practices for ai on amazon services aws use the aws cli and aws sdk to perform common data taskswho this book is for if you are looking to develop the data storage skills needed for machine learning and ai and want to learn ai best practices in data engineering this workshop is for you experienced programmers can use this book to advance their career in ai familiarity with programming along with knowledge of exploratory data analysis and reading and writing files using python will help you to understand the key concepts covered

Artificial Intelligence 2014-05-12

over the coming decades artificial intelligence will profoundly impact the way we live work wage war play seek a mate educate our young and care for our elderly it is likely to greatly increase our aggregate wealth but it will also upend our labor markets reshuffle our social order and strain our private and public institutions eventually it may alter how we see our place in the universe as machines pursue goals independent of their creators and outperform us in domains previously believed to be the sole dominion of humans whether we regard them as conscious or unwitting revere them as a new form of life or dismiss them as mere clever appliances is beside the point they are likely to play an increasingly critical and intimate role in many aspects of our lives the emergence of systems capable of independent reasoning and action raises serious questions about just whose interests they are permitted to serve and what limits our society should place on their creation and use deep ethical questions that have bedeviled philosophers for ages will suddenly arrive on the steps of our courthouses can a machine be held accountable for its actions should intelligent systems enjoy independent rights and responsibilities or are they simple property who should be held responsible when a self driving car kills a pedestrian can your personal robot hold your place in line or be compelled to testify against you if it turns out to be possible to upload your mind into a machine is that still you the answers may surprise you

Readings in Artificial Intelligence 2022

readings in artificial intelligence focuses on the principles methodologies advancements and approaches involved in artificial intelligence the selection first elaborates on representations of problems of reasoning about actions a problem similarity approach to devising heuristics and optimal search strategies for speech understanding control discussions focus on comparison with existing speech understanding systems empirical comparisons of the different strategies analysis of distance function approximation problem similarity problems of reasoning about action search for solution in the reduction system and relationship between the initial search space and the higher level search space the book then examines consistency in networks of relations non resolution theorem proving using rewriting rules for connection graphs to prove theorems and closed world data bases the manuscript tackles a truth maintenance system elements of a plan based theory of speech acts and reasoning about knowledge and action topics include problems in reasoning about knowledge integration knowledge and action models of plans compositional adequacy truth maintenance mechanisms dialectical arguments and assumptions and the problem of control the selection is a valuable reference for researchers wanting to explore the field of artificial intelligence

Empowering Artificial Intelligence Through Machine Learning 2021-11-02

this new volume empowering artificial intelligence through machine learning new advances and applications discusses various new applications of machine learning a subset of the field of artificial intelligence artificial intelligence is considered to be the next big game changer in research and technology the volume looks at how computing has enabled machines to learn making machine and tools become smarter in many sectors including science and engineering healthcare finance education gaming security and even agriculture plus many more areas topics include techniques and methods in artificial intelligence for making machines intelligent machine learning in healthcare using machine learning for credit card fraud detection using artificial intelligence in education using gaming and automatization with courses and outcomes mapping and much more the book will be valuable to professionals faculty and students in electronics and communication engineering telecommunication engineering network engineering computer science and information technology

Systems Engineering and Artificial Intelligence 2018-05-23

this book provides a broad overview of the benefits from a systems engineering design philosophy in architecting complex systems composed of artificial intelligence ai machine learning ml and humans situated in chaotic environments the major topics include emergence verification and validation of systems using ai ml and human systems integration to develop robust and effective human machine teams where the machines may have varying degrees of autonomy due to the sophistication of their embedded ai ml the chapters not only describe what has been learned but also raise questions that must be answered to further advance the general science of autonomy the science of how humans and machines operate as a team requires insights from among others disciplines such as the social sciences national and international jurisprudence ethics and policy and sociology and psychology the social sciences inform how context is constructed how trust is affected when humans and machines depend upon each other and how human machine teams need a shared language of explanation national and international jurisprudence determine legal responsibilities of non trivial human machine failures ethical standards shape global policy and sociology provides a basis for understanding team norms across cultures insights from psychology may help us to understand the negative impact on humans if ai ml based machines begin to outperform their human teammates and consequently diminish their value or importance this book invites professionals and the curious alike to witness a new frontier open as the science of autonomy emerges

Practical Artificial Intelligence 2021-04-27

discover how all levels artificial intelligence ai can be present in the most unimaginable scenarios of ordinary lives this book explores subjects such as neural networks agents multi agent systems supervised learning and unsupervised learning these and other topics will be addressed with real world examples so you can learn fundamental concepts with ai solutions and apply them to your own projects people tend to talk about ai as something mystical and unrelated to their ordinary life practical artificial intelligence provides simple explanations and hands on instructions rather than focusing on theory and overly scientific language this book will enable practitioners of all levels to not only learn about ai but implement its practical uses what you ll learn understand agents and multi agents and how they are incorporated relate machine learning to real world problems and see what it means to you apply supervised and unsupervised learning techniques and methods in the real world implement reinforcement learning game programming simulation and neural networks who this book is for computer science students professionals and hobbyists interested in ai and its applications

Artificial Intelligence Applications for Smart Societies 2021-11-05

this volume discusses recent advances in artificial intelligence ai applications in smart internet connected societies highlighting three key focus areas the first focus is on intelligent sensing applications this section details the integration of wireless sensing networks wsn and the use of intelligent platforms for wsn applications in urban infrastructures and discusses ai techniques on hardware and software systems such as machine learning pattern recognition expert systems neural networks genetic algorithms and intelligent control in transportation and communications systems the second focus is on ai based internet of things iot systems which addresses applications in traffic management medical health smart homes and energy readers will also learn about how ai can extract useful information from big data in iot systems the third focus is on crowdsourcing cs and computing for smart cities this section discusses how cs via gps devices gis tools traffic cameras smart cards smart phones and road deceleration devices enables citizens to collect and share data to make cities smart and how these data can be applied to address urban issues including pollution traffic congestion public safety and increased energy consumption this book will of interest to academics researchers and students studying ai cloud computing iot and crowdsourcing in urban applications

Artificial Intelligence and Machine Learning in Business Management 2021-05-06

artificial intelligence and machine learning in business management the focus of this book is to introduce artificial intelligence ai and machine learning ml technologies into the context of business management the book gives insights into the implementation and impact of ai and ml to business leaders managers technology developers and implementers with the maturing use of ai or ml in the field of business intelligence this book examines several projects with innovative uses of ai beyond data organization and access it follows the predictive modeling toolkit for providing new insight on how to use improved ai tools in the field of business it explores cultural heritage values and risk assessments for mitigation and conservation and discusses on shore and off shore technological capabilities with spatial tools for addressing marketing and retail strategies and insurance and healthcare systems taking a multidisciplinary approach for using ai this book provides a single comprehensive reference resource for undergraduate graduate business professionals and related disciplines

Artificial Intelligence and Machine Learning in Healthcare 2021-03-11

this book reviews the application of artificial intelligence and machine learning in healthcare it discusses integrating the principles of computer science life science and statistics incorporated into statistical models using existing data discovering patterns in data to extract the information and predicting the changes and diseases based on this data and models the initial chapters of the book cover the practical applications of artificial intelligence for disease prognosis management further the role of artificial intelligence and machine learning is discussed with reference to specific diseases like diabetes mellitus cancer mycobacterium tuberculosis and covid 19 the chapters provide working examples on how different types of healthcare data can be used to develop models and predict diseases using machine learning and artificial intelligence the book also touches upon precision medicine personalized medicine and transfer learning with the real examples further it also discusses the use of machine learning and artificial intelligence for visualization prediction detection and diagnosis of covid 19 this book is a valuable source of information for programmers healthcare professionals and researchers interested in understanding the applications of artificial intelligence and machine learning in healthcare

The Application of Artificial Intelligence 2016-12-12

this book presents a unique understandable view of machine learning using many practical examples and access to free professional software and open source code the user friendly software can immediately be used to apply everything you learn in the book without the need for programming after an introduction to machine learning and artificial intelligence the chapters in part ii present deeper explanations of machine learning algorithms performance evaluation of machine learning models and how to consider data in machine learning environments in part iii the author explains automatic speech recognition and in part iv biometrics recognition face and speaker recognition by part v the author can then explain machine learning by example he offers cases from real world applications problems and techniques such as anomaly detection and root cause analyses business process improvement detecting and predicting diseases recommendation ai several engineering applications predictive maintenance automatically classifying datasets dimensionality reduction and image recognition finally in part vi he offers a detailed explanation of the ai toolkit software he developed that allows the reader to test and study the examples in the book and the application of machine learning in professional environments the author introduces core machine learning concepts and supports these with practical examples of their use so professionals will appreciate his approach and use the book for self study it will also be useful as a supplementary resource for advanced undergraduate and graduate courses on machine

Artificial Intelligence: Concepts, Methodologies, Tools, and Applications 2020-04-08

ongoing advancements in modern technology have led to significant developments in artificial intelligence with the numerous applications available it becomes imperative to conduct research and make further progress in this field artificial intelligence concepts methodologies tools and applications provides a comprehensive overview of the latest breakthroughs and recent progress in artificial intelligence highlighting relevant technologies uses and techniques across various industries and settings this publication is a pivotal reference source for researchers professionals academics upper level students and practitioners interested in emerging perspectives in the field of artificial intelligence

Artificial Intelligence 2024-03-06

do you want to discover what artificial intelligence is and how it will change our life our business our health in future if yes keep reading what comes to your mind when you hear the word artificial intelligence ai perhaps you think of a science fiction film by the likes of orson scott card or other famous authors maybe you re thinking of disney's transformers or wall e the disneyization of ai made it seem like it was a world of pure fantasy that exists only in the human imagination however the reality is that we are not far from using ai in everyday life our use of ai continues to increase over the years as we use amazon streaming music devices and other ai that predict our choices we realize that machines and technology are starting to permeate every aspect of our existence basically artificial intelligence is totally changing our lives and this is the time to be ready for this technological revolution and make the most of it this bundle contains the following books artificial intelligence for beginners you will learn a modern approach to artificial intelligence the basics of ai and how to put it into practice in your everyday life artificial intelligence for business you will find helpful and concise chapters on ai topics which can be applied to the business the chapters draw upon real life experiences and sources that can help you to grow your business machine learning for beginners you will understand what machine learning is how it works and how is correlated to artificial intelligence and deep learning machine learning and artificial intelligence in this final part you will find a broad overview of these technologies and the answers to the most frequently asked questions will artificial intelligence change our privacy is artificial intelligence dangerous will humans and artificial intelligence live together in future this 4 books in 1 bundle is all you need to discover

the world of artificial intelligence and machine learning what are you waiting for buy now and get your copy

AI for Social Good 2020-07-28

understand the real power of ai and and its ability to shape the future for the better ai for social good using artificial intelligence to save the world bridges the gap between the current state of reality and the incredible potential of ai to change the world from humanitarian and environmental concerns to advances in art and science every area of life stands poised to make a quantum leap into the future the problem too few of us really understand how ai works and how to integrate it into our policies and projects in this book rahul dodhia deputy director of microsofts ai for good research lab offers a nontechnical exploration of artificial intelligence tools how they re built what they can and can t do and the raw material that teaches them what they know readers will also find an inventory of common challenges they might face when integrating ai into their work you ll also read more on the potential for ai to solve longstanding issues and improve lives learn how you can tap into the power of ai regardless of the size of your organization gain an understanding of how ai works and how to communicate with ai scientists to create new solutions understand the real risks of implementing ai and how to avoid potential pitfalls real life examples and stories that demonstrate how teams of ai specialists project managers and subject matter experts can achieve remarkable products written for anyone who is curious about ai and especially useful for policymakers project managers and leaders who work alongside ai ai for social good provides discussions of how ai scientists create artificially intelligent systems and how ai can be used ethically or unethically to transform society you ll also find a discussion of how governments can become more flexible helping regulations keep up with the fast pace of change in technology

<u>Turning Point</u> 2020-01-31

artificial intelligence is here today how can society make the best use of it until recently artificial intelligence sounded like something out of science fiction but the technology of artificial intelligence ai is becoming increasingly common from self driving cars to e commerce algorithms that seem to know what you want to buy before you do throughout the economy and many aspects of daily life artificial intelligence has become the transformative technology of our time despite its current and potential benefits ai is little understood by the larger public and widely feared the rapid growth of artificial intelligence has given rise to concerns that hidden technology will create a dystopian world of increased income inequality a total lack of privacy and perhaps a broad threat to humanity

itself in their compelling and readable book two experts at brookings discuss both the opportunities and risks posed by artificial intelligence and how near term policy decisions could determine whether the technology leads to utopia or dystopia drawing on in depth studies of major uses of ai the authors detail how the technology actually works they outline a policy and governance blueprint for gaining the benefits of artificial intelligence while minimizing its potential downsides the book offers major recommendations for actions that governments businesses and individuals can take to promote trustworthy and responsible artificial intelligence their recommendations include creation of ethical principles strengthening government oversight defining corporate culpability establishment of advisory boards at federal agencies using third party audits to reduce biases inherent in algorithms tightening personal privacy requirements using insurance to mitigate exposure to ai risks broadening decision making about ai uses and procedures penalizing malicious uses of new technologies and taking pro active steps to address how artificial intelligence affects the workforce turning point is essential reading for anyone concerned about how artificial intelligence works and what can be done to ensure its benefits outweigh its harm

Artificial Intelligence with Python 2021-11-30

new edition of the bestselling guide to artificial intelligence with python updated to python 3 x with seven new chapters that cover rnns ai and big data fundamental use cases chatbots and more key featurescompletely updated and revised to python 3 xnew chapters for ai on the cloud recurrent neural networks deep learning models and feature selection and engineeringlearn more about deep learning algorithms machine learning data pipelines and chatbotsbook description artificial intelligence with python second edition is an updated and expanded version of the bestselling guide to artificial intelligence using the latest version of python 3 x not only does it provide you an introduction to artificial intelligence this new edition goes further by giving you the tools you need to explore the amazing world of intelligent apps and create your own applications this edition also includes seven new chapters on more advanced concepts of artificial intelligence including fundamental use cases of ai machine learning data pipelines feature selection and feature engineering ai on the cloud the basics of chatbots rnns and dl models and ai and big data finally this new edition explores various real world scenarios and teaches you how to apply relevant ai algorithms to a wide swath of problems starting with the most basic ai concepts and progressively building from there to solve more difficult challenges so that by the end you will have gained a solid understanding of and when best to use these many artificial intelligence techniques what you will learnunderstand what artificial intelligence machine learning and data science are explore the most common artificial intelligence use caseslearn how to build a machine learning pipelineassimilate the basics of

feature selection and feature engineeringidentify the differences between supervised and unsupervised learningdiscover the most recent advances and tools offered for ai development in the clouddevelop automatic speech recognition systems and chatbotsapply ai algorithms to time series datawho this book is for the intended audience for this book is python developers who want to build real world artificial intelligence applications basic python programming experience and awareness of machine learning concepts and techniques is mandatory

Applied Biomedical Engineering Using Artificial Intelligence and Cognitive Models 2022

applied biomedical engineering using artificial intelligence and cognitive models focuses on the relationship between three different multidisciplinary branches of engineering biomedical engineering cognitive science and computer science through artificial intelligence models these models will be used to study how the nervous system and musculoskeletal system obey movement orders from the brain as well as the mental processes of the information during cognition when injuries and neurologic diseases are present in the human body the interaction between these three areas are studied in this book with the objective of obtaining ai models on injuries and neurologic diseases of the human body studying diseases of the brain spine and the nerves that connect them with the musculoskeletal system there are more than 600 diseases of the nervous system including brain tumors epilepsy parkinson s disease stroke and many others these diseases affect the human cognitive system that sends orders from the central nervous system cns through the peripheral nervous systems pns to do tasks using the musculoskeletal system these actions can be detected by many bioinstruments biomedical instruments and cognitive device data allowing us to apply ai using machine learning deep learning cognitive computing models through algorithms to analyze detect classify and forecast the process of various illnesses diseases and injuries of the human body applied biomedical engineering using artificial intelligence and cognitive models provides readers with the study of injuries illness and neurological diseases of the human body through artificial intelligence using machine learning ml deep learning dl and cognitive computing co models based on algorithms developed with matlab and ibm watson provides an introduction to cognitive science cognitive computing and human cognitive relation to help in the solution of ai biomedical engineering problems explain different artificial intelligence ai including evolutionary algorithms to emulate natural evolution reinforced learning artificial neural network ann type and cognitive learning and to obtain many ai models for biomedical engineering problems includes coverage of the evolution artificial intelligence through machine learning ml deep learning dl cognitive computing cc using matlab as a programming language with many add on matlab toolboxes and ai based commercial products cloud services as ibm cognitive computing ibm watson ibm watson studio ibm watson

studio visual recognition and others provides the necessary tools to accelerate obtaining results for the analysis of injuries illness and neurologic diseases that can be detected through the static kinetics and kinematics and natural body language data and medical imaging techniques applying ai using ml dl cc algorithms with the objective of obtaining appropriate conclusions to create solutions that improve the quality of life of patients

Big Data and Artificial Intelligence in Digital Finance 2021-12-15

this open access book presents how cutting edge digital technologies like machine learning artificial intelligence ai and blockchain are set to disrupt the financial sector the book illustrates how recent advances in these technologies facilitate banks fintechs and financial institutions to collect process analyze and fully leverage the very large amounts of data that are nowadays produced and exchanged in the sector to this end the book also introduces some of the most popular big data ai and blockchain applications in the sector including novel applications in the areas of know your customer kyc personalized wealth management and asset management portfolio risk assessment as well as variety of novel usage based insurance applications based on internet of things data most of the presented applications have been developed deployed and validated in real life digital finance settings in the context of the european commission funded infinitech project which is a flagship innovation initiative for big data and ai in digital finance this book is ideal for researchers and practitioners in big data ai banking and digital finance introduces the latest advances in big data and ai in digital finance that enable scalable effective and real time analytics explains the merits of blockchain technology in digital finance including applications beyond the blockbuster cryptocurrencies presents practical applications of cutting edge digital technologies in the digital finance sector illustrates the regulatory environment of the financial sector and presents technical solutions that boost compliance to applicable regulations this book is open access which means that you have free and unlimited access

Medical Informatics and Bioimaging Using Artificial Intelligence 2019-03-30

this book emphasizes the latest developments and achievements in artificial intelligence and related technologies focusing on the applications of artificial intelligence and medical diagnosis the book describes the theory applications concept visualization and critical surveys covering most aspects of ai for medical informatics

Mobile Artificial Intelligence Projects 2023-10-22

learn to build end to end ai apps from scratch for android and ios using tensorflow lite coreml and pytorch key featuresbuild practical real world ai projects on android and iosimplement tasks such as recognizing handwritten digits sentiment analysis and more explore the core functions of machine learning deep learning and mobile visionbook description we re witnessing a revolution in artificial intelligence thanks to breakthroughs in deep learning mobile artificial intelligence projects empowers you to take part in this revolution by applying artificial intelligence ai techniques to design applications for natural language processing nlp robotics and computer vision this book teaches you to harness the power of ai in mobile applications along with learning the core functions of nlp neural networks deep learning and mobile vision it features a range of projects covering tasks such as real estate price prediction recognizing hand written digits predicting car damage and sentiment analysis you will learn to utilize nlp and machine learning algorithms to make applications more predictive proactive and capable of making autonomous decisions with less human input in the concluding chapters you will work with popular libraries such as tensorflow lite coreml and pytorch across android and ios platforms by the end of this book you will have developed exciting and more intuitive mobile applications that deliver a customized and more personalized experience to users what you will learnexplore the concepts and fundamentals of ai deep learning and neural networksimplement use cases for machine vision and natural language processingbuild an ml model to predict car damage using tensorflowdeploy tensorflow on mobile to convert speech to textimplement gan to recognize hand written digitsdevelop end to end mobile applications that use ai principleswork with popular libraries such as tensorflow lite coreml and pytorchwho this book is for mobile artificial intelligence projects is for machine learning professionals deep learning engineers ai engineers and software engineers who want to integrate ai technology into mobile based platforms and applications sound knowledge of machine learning and experience with any programming language is all you need to get started with this book

Forecasting with Artificial Intelligence 2019-12-28

this book is a comprehensive guide that explores the intersection of artificial intelligence and forecasting providing the latest insights and trends in this rapidly evolving field the book contains fourteen chapters covering a wide range of topics including the concept of ai its impact on economic decision making traditional and machine learning based forecasting methods challenges in demand forecasting global forecasting models meta learning and feature based forecasting ensembling deep learning scalability in industrial and optimization

applications and forecasting performance evaluation with key illustrations state of the art implementations best practices and notable advances this book offers practical insights into the theory and practice of ai based forecasting this book is a valuable resource for anyone involved in forecasting including forecasters statisticians data scientists business analysts or decision makers

Artificial Intelligence and Deep Learning for Decision Makers 1997-06-24

learn modern day technologies from modern day technical giants description Ê 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 Ê 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 responses 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 key features real world success and failure stories of artificial intelligence explained understand concepts of artificial intelligence and deep learning methods E learn how to use artificial intelligence and deep learning methods know how to prepare dataset and implement models using industry leading python packagesÊ youÕll be able to apply and analyze the results produced by the models for prediction 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 learn 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 $who \ this \ book \ is \ for \hat{E} \ this \ book \ is \ targeted \ to \ business \ and \ organization \ leaders \ technology \ enthusiasts \ professionals \ and \ managers \ who \ and \ respectively. \\$ seek knowledge of artificial intelligence and deep learning methods table of contents artificial intelligence and deep learning data science for business analysis decision making intelligent computing strategies by googleÊ cognitive learning services in ibm watson advancement web services by baiduÊ improved social business by facebook personalized intelligent computing by apple cloud computing intelligent by microsoft

Computer Science and Artificial Intelligence 2024-01-26

the focus of this report is on artificial intelligence ai and human computer interface hei technology observations conclusions and recommendations regarding ai and hei are presented in terms of six grand challenge areas which serve to identify key scientific and engineering issues and opportunities chapter 1 presents the panel s definitions of these and related terms chapter 2 presents the panel s general observations and recommendations regarding ai and hei finally chapter 3 discusses computer science ai and hei in terms of the six selected grand challenge areas and three time horizons that is short term within the next 2 years midterm 2 to 6 years and long term more than 6 years from now and presents additional recommendations in these areas

Handbook on Augmenting Telehealth Services 2024-06-14

handbook on augmenting telehealth services using artificial intelligence provides knowledge of ai empowered telehealth systems for efficient healthcare services the handbook discusses novel innovations in telehealth using ai techniques and also focuses on emerging tools and techniques in smart health systems the book highlights important topics such as remote diagnosis of patients and presents e health data management showcasing smart methods that can be used to improvise healthcare support and services the handbook also shines a light on future trends in ai enabled telehealth systems features provides knowledge of ai empowered telehealth systems for efficient healthcare services discusses novel innovations in telehealth using ai techniques covers emerging tools and techniques in smart health systems highlights remote diagnosis of patients focuses on e health data management and showcases smart methods used to improvise healthcare support and services shines a light on future trends in ai enabled telehealth systems every individual patients doctors healthcare staff etc is currently getting adapted to this new evolution of healthcare this handbook is a must read for students researchers academicians and industry professionals working in the field of artificial intelligence and its uses in the healthcare sector

Future Communication Systems Using Artificial Intelligence, Internet of Things and Data Science 2022-02-21

this book covers topics related to artificial intelligence internet of things iot and data science for future communications systems it is beneficial for undergraduate graduate postgraduate students researchers academicians institutions engineers professionals

Artificial Intelligence Programming with Python 2009-01-17

a hands on roadmap to using python for artificial intelligence programming in practical artificial intelligence programming with python from zero to hero veteran educator and photophysicist dr perry xiao delivers a thorough introduction to one of the most exciting areas of computer science in modern history the book demystifies artificial intelligence and teaches readers its fundamentals from scratch in simple and plain language and with illustrative code examples divided into three parts the author explains artificial intelligence generally machine learning and deep learning it tackles a wide variety of useful topics from classification and regression in machine learning to generative adversarial networks he also includes fulsome introductions to matlab python ai machine learning and deep learning expansive discussions on supervised and unsupervised machine learning as well as semi supervised learning practical ai and python cheat sheet quick references this hands on ai programming guide is perfect for anyone with a basic knowledge of programming including familiarity with variables arrays loops if else statements and file input and output who seeks to understand foundational concepts in ai and ai development

Tools and Applications with Artificial Intelligence 2019-02-02

in recent years the use of artificial intelligence ai techniques has been greatly increased the term intelligence seems to be a must in a large number of european and international project calls ai techniques have been used in almost any domain application oriented systems usually incorporate some kind of intelligence by using techniques stemming from intelligent search knowledge representation machine learning knowledge discovery intelligent agents computational intelligence etc the workshop on applications with artificial intelligence seeks for quality papers on computer applications that incorporate some kind of ai technique the objective of the workshop was to bring together scientists engineers and practitioners who work on designing or developing applications that use intelligent techniques or work on intelligent techniques and apply them to application domains like medicine biology education etc to present and discuss their research works and exchange ideas in this book

Artificial Intelligence Accelerates Human Learning 2023-02-04

focusing on students presentations and discussions in laboratory seminars this book presents case studies on evidence based education

using artificial intelligence ai technologies it proposes a system to help users complete research activities and a machine learning method that makes the system suitable for long term operation by performing data mining for discussions and automatically extracting essential tasks by illustrating the complete process proposal implementation and operation of applying machine learning techniques to real world situations the book will inspire researchers and professionals to develop innovative new applications for education the book is divided into six chapters the first of which provides an overview of ai research and practice in education in turn chapter 2 describes a mechanism for applying data analytics to student discussions and utilizing the results for knowledge creation activities such as research based on discussion data analytics chapter 3 describes a creative activity support system that effectively utilizes the analytical results of the discussion for subsequent activities chapter 4 discusses the incorporation of a gamification method to evaluate and improve discussion skills while maintaining the motivation to participate in the discussion chapters 5 and 6 describe an advanced learning environment for honing students discussion and presentation skills two important systems proposed here are a presentation training system using virtual reality technologies and an interactive presentation discussion training system using a humanoid robot in the former the virtual space is constructed by measuring the three dimensional shape of the actual auditorium presentations are performed in the same way as in the real world and the ai as audience automatically evaluates the presentation and provides feedback in the latter a humanoid robot makes some remarks on and asks questions about students presentations and the students practice responding to it

AI for Beginners 2019-11-30

ai for beginners using artificial intelligence for good essential basics creative ideas and side hustles is a comprehensive guide that covers the basics of ai and provides practical hands on tips for getting started with ai projects the book is written for people with no prior knowledge of ai and is designed to help you have an ah hah moment of your own the first chapter of the book supplies a broad overview of ai and explains what it is why it s important and what it can be used for chapter 2 covers the basics of machine learning and deep learning chapter 3 gives you information about ai models and discusses improving them with data preprocessing and feature engineering and why that is important in chapter 4 the book explores interacting with ai through natural language processing and computer vision and chapter 5 delves into creating with ai through generative models and their applications chapter 6 explores the creative potential of ai from art to music to writing and chapter 7 covers monetizing ai by finding business opportunities and revenue stream options chapter 8 covers ai in various industries such as healthcare finance and more in chapter 9 we talk about ethical considerations and responsible ai practices chapter 10 explores building your own ai test lab project chapter 11 looks at the future of ai

and its potential impact on society chapter 12 concludes with the next steps for entrepreneurs and businesses in the ai space with a view of what is on the horizon and coming soon overall this book is aimed at ai beginners to help wrap their heads around some of the excitement and technology being produced by advancements in the ai field it is meant to help simplify and help you harness the power of ai for creativity and innovation it is meant to stimulate ideas to start your own side hustle it supplies a comprehensive overview of the technology its capabilities and its potential applications as well as real world examples and practical advice for using ai for the betterment of all of us

Industrial Machine Learning 2020-08-31

understand the industrialization of machine learning ml and take the first steps toward identifying and generating the transformational disruptors of artificial intelligence ai you will learn to apply ml to data lakes in various industries supplying data professionals with the advanced skills required to handle the future of data engineering and data science data lakes currently generated by worldwide industrialized business activities are projected to reach 35 zettabytes zb as the fourth industrial revolution produces an exponential increase of volume velocity variety variability veracity visualization and value industrialization of ml evolves from ai and studying pattern recognition against the increasingly unstructured resource stored in data lakes industrial machine learning supplies advanced yet practical examples in different industries including finance public safety health care transportation manufactory supply chain 3d printing education research and data science the book covers supervised learning unsupervised learning reinforcement learning evolutionary computing principles soft robotics disruptors and hard robotics disruptors what you will learn generate and identify transformational disruptors of artificial intelligence ai understand the field of machine learning ml and apply it to handle big data and process the data lakes in your environment hone the skills required to handle the future of data engineering and data science who this book is for intermediate to expert level professionals in the fields of data science data engineering machine learning and data management

Edge AI 2020-12-20

as an important enabler for changing people s lives advances in artificial intelligence ai based applications and services are on the rise despite being hindered by efficiency and latency issues by focusing on deep learning as the most representative technique of ai this book provides a comprehensive overview of how ai services are being applied to the network edge near the data sources and demonstrates

how ai and edge computing can be mutually beneficial to do so it introduces and discusses 1 edge intelligence and intelligent edge and 2 their implementation methods and enabling technologies namely ai training and inference in the customized edge computing framework gathering essential information previously scattered across the communication networking and ai areas the book can help readers to understand the connections between key enabling technologies e g a ai applications in edge b ai inference in edge c ai training for edge d edge computing for ai and e using ai to optimize edge after identifying these five aspects which are essential for the fusion of edge computing and ai it discusses current challenges and outlines future trends in achieving more pervasive and fine grained intelligence with the aid of edge computing

Malware Analysis Using Artificial Intelligence and Deep Learning

this book is focused on the use of deep learning dl and artificial intelligence ai as tools to advance the fields of malware detection and analysis the individual chapters of the book deal with a wide variety of state of the art ai and dl techniques which are applied to a number of challenging malware related problems dl and ai based approaches to malware detection and analysis are largely data driven and hence minimal expert domain knowledge of malware is needed this book fills a gap between the emerging fields of dl ai and malware analysis it covers a broad range of modern and practical dl and ai techniques including frameworks and development tools enabling the audience to innovate with cutting edge research advancements in a multitude of malware and closely related use cases

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