Artificial Intelligence Simplified Understanding Basic Concepts

AI and Human Thought and Emotion

This textbook covers the broader field of artificial intelligence. The chapters for this textbook span within three categories: Deductive reasoning methods: These methods start with pre-defined hypotheses and reason with them in order to arrive at logically sound conclusions. The underlying methods include search and logic-based methods. These methods are discussed in Chapters 1 through 5. Inductive Learning Methods: These methods start with examples and use statistical methods in order to arrive at hypotheses. Examples include regression modeling, support vector machines, neural networks, reinforcement learning, unsupervised learning, and probabilistic graphical models. These methods are discussed in Chapters 6 through 11. Integrating Reasoning and Learning: Chapters 12 and 13 discuss techniques for integrating reasoning and learning. Examples include the use of knowledge graphs and neuro-symbolic artificial intelligence. The primary audience for this textbook are professors and advanced-level students in computer science. It is also possible to use this textbook for the mathematics requirements for an undergraduate data science course. Professionals working in this related field may also find this textbook useful as a reference.

Artificial Intelligence Simplified

A leading artificial intelligence researcher lays out a new approach to AI that will enable people to coexist successfully with increasingly intelligent machines.

Learn Computer Vision Using OpenCV

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

Demystifying Artificial intelligence

Do you want to discover what Artificial Intelligence is and how it will change our life, our business, our health in the 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 the time to be ready for this technological revolution and make the most of it. This bundle contains the following books: Artificial Intelligence for People and Business, Artificial Intelligence: The Quest for Artificial Intelligence, Artificial Intelligence: Human Compatible, Artificial Intelligence, and others with a mathematical background, these derivations provide a starting point to machine learning texts. For those learning the mathematics for the first time, the methods help build intuition and practical experience with applying mathematical concepts. Every chapter includes worked examples and exercises to test understanding. Programming tutorials are offered on the book’s web site.

Artificial Intelligence Simplified

Understanding Basic Concepts

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of Artificial Intelligence and Machine learning!! What are you waiting for? Buy now and get your copy!

Artificial Intelligence with Python Late in 2017, the global significance of the conversation about artificial intelligence (AI) changed forever. China put the world on alert when it released a plan to dominate all aspects of AI across the planet. Only weeks later, Vladimir Putin raised a Russian red flag in response by declaring AI the future for all humankind, and proclaiming that, “Whoever becomes the leader in this sphere will become the ruler of the world.” The race was on. Consistent with their unique national agendas, countries throughout the world began plotting their paths and hurrying their pace. Now, not long after, the race has become a sprint. Despite everything at stake, to most of us AI remains shrouded by a cloud of mystery and misunderstanding. Hidden behind complicated and technical jargon and confused by fantastical depictions of science fiction, the modern realities of AI and its profound implications are hard to decipher, but crucial to recognize. In T-Minus AI: Humanity’s Countdown to Artificial Intelligence and the New Pursuit of Global Power, author Michael Kanaan explains AI from a human-oriented perspective we can all finally understand. A recognized national expert and the U.S. Air Force’s first Chairperson for Artificial Intelligence, Kanaan weaves a compelling new view on our history of innovation and technology to masterfully explain what each of us should know about modern computing, AI, and machine learning. Kanaan also dives into the global implications of AI by illuminating the cultural and national vulnerabilities already exposed and the pressing issues now squarely on the table. AI has already become China’s all-purpose tool to impose its authoritarian influence around the world. Russia, playing catch up, is weaponizing AI through its military systems and now infamous, aggressive efforts to disrupt democracy by whatever disinformation means possible. America and like-minded nations are awakening to these new realities—and the paths they’re electing to follow echo loudly the political foundations and, in most cases, the moral imperatives upon which they were formed. As we march toward a future far different than ever imagined, T-Minus AI is fascinating and crucially well-timed. It leaves the fiction behind, paints the alarming implications of AI for what they actually are, and calls for unified action to protect fundamental human rights and dignities for all.

Artificial Intelligence This book is intended to be a comprehensive introduction to the field of artificial intelligence, written primarily for the student who has some knowledge of computers and mathematics (say, at the junior or senior levels of college). The subjects for discussion are machines that can solve problems, play games, recognize patterns, prove mathematical theorems, understand English, and even demonstrate learning, by changing their own behavior so as to perform such tasks more successfully. In general, this book is addressed to all persons who are interested in studying the nature of thought, and hopefully much of it can be read without previous, formal exposure to mathematics and computers.

T-Minus AI Introduces machine learning and its algorithmic paradigms, explaining the principles behind automated learning approaches and the considerations underlying their usage.

Deep Medicine

Artificial Unintelligence Artificial Intelligence: A Modern Approach offers the most comprehensive, up-to-date introduction to the theory and practice of artificial intelligence. Number one in its field, this textbook is ideal for one or two-semester, undergraduate or graduate-level courses in Artificial Intelligence.

Understanding Artificial Intelligence If you’re an executive, manager, or anyone interested in leveraging AI within your organization, this is your guide. You’ll understand exactly what AI is, learn how to identify AI opportunities, and develop and execute a successful AI vision and strategy. Alex Castrounis, business consultant and former IndyCar engineer and race strategist, examines the value of AI and shows you how to develop an AI vision and strategy that benefits both people and business. AI is exciting, powerful, and game changing—but too many AI initiatives end in failure. With this book, you’ll explore the risks, considerations, trade-offs, and constraints for pursuing an AI initiative. You’ll learn how to create better human experiences and greater business success through winning AI solutions and human-centered products. Use the book’s AIPB Framework to conduct end-to-end, goal-driven innovation and value creation with AI Define a goal-aligned AI vision and strategy for stakeholders, including businesses, customers, and users Leverage AI successfully by focusing on concepts such as scientific innovation and AI readiness and maturity Understand the importance of executive leadership for pursuing AI initiatives “A must read for business executives and managers interested in learning about AI and unlocking its benefits. Alex Castrounis has simplified complex topics so that anyone can begin to leverage AI within their organization.” - Dan Park, GM & Director, Uber “Alex Castrounis has been at the forefront of helping organizations understand the promise of AI and leverage its benefits, while avoiding the many pitfalls that can derail success. In this essential book, he shares his expertise with the rest of us.” - Dean Wampler, Ph.D., VP, Fast Data Engineering at Lightbend.
Artificial Intelligence Simplified The field of artificial intelligence (AI) has grown dramatically in recent decades from niche expert systems to the current myriad of deep machine learning applications that include personal assistants, natural-language interfaces, and medical, financial, and traffic management systems. This boom in AI engineering masks the fact that all current AI systems are based on two fundamental ideas: mathematics (logic and statistics, from the 19th century), and a grossly simplified understanding of biology (mainly neurons, as understood in 1943). This book explores other fundamental ideas that have the potential to transform AI more dramatically. Most books on AI are technical and do not consider the humanities. Most books in the humanities treat technology in a similar manner. AI and Human Thought and Emotion, however, is about AI, how academics, researchers, scientists, and practitioners came to think about AI the way they do, and how they can think about it afresh with a humanities-based perspective. The book walks a middle line to share insights between the humanities and technology. It starts with philosophy and the history of ideas and goes all the way to usable algorithms. Central to this work are the concepts of introspection, which is how consciousness is viewed, and consciousness, which is accessible to humans as they reflect on their own experience. The main argument of this book is that AI based on introspection and emotion can produce more human-like AI. To discover the connections among emotion, introspection, and AI, the book travels far from technology into the humanities and then returns with concrete examples of new algorithms. At times philosophical, historical, and technical, this exploration of human emotion and thinking poses questions and provides answers about the future of AI.

Artificial Intelligence Melanie Mitchell separates science fact from science fiction in this sweeping examination of the current state of AI and how it is remaking our world. No recent scientific enterprise has proved as alluring, terrifying, and filled with extravagant promise and frustrating setbacks as artificial intelligence. The award-winning author Melanie Mitchell, a leading computer scientist, now reveals AI’s turbulent history and the recent spate of apparent successes, grand hopes, and emerging fears surrounding it. In Artificial Intelligence, Mitchell turns to the most urgent questions concerning AI today: How intelligent—really—are the best AI programs? How do they work? What can they actually do, and when do they fail? How humanlike do we expect them to become, and how soon do we need to worry about them surpassing us? Along the way, she introduces the dominant models of modern AI and machine learning, describing cutting-edge AI programs, their human inventors, and the historical lines of thought underpinning recent achievements. She meets with fellow experts such as Douglas Hofstadter, the cognitive scientist and Pulitzer Prize-winning author of the modern classic Gödel, Escher, Bach, who explains why he is “terrified” about the future of AI. She explores the profound disconnect between the hype and the actual achievements in AI, providing a clear sense of what the field has accomplished and how much further it has to go. Interweaving stories about the science of AI and the people behind it, Artificial Intelligence brims with clear-sighted, captivating, and accessible accounts of the most interesting and provocative modern work in the field, flavored with Mitchell’s humor and personal observations. This frank, lively book is an indispensable guide to understanding today’s AI, its quest for “human-level” intelligence, and its impact on the future for us all.

Deep Learning The book introduces key Artificial Intelligence (AI) concepts in an easy-to-read format with examples and illustrations. Someone with basic knowledge in Computer Science can have a quick overview of AI heuristic searches, genetic algorithms, expert systems, game trees, fuzzy expert systems, natural language processing, superintelligence, etc. with everyday examples. The second edition includes more in-depth technical content and covers recent topics in AI.

Artificial Intelligence Crash Course Six classic science fiction stories and commentary that illustrate and explain key algorithms or principles of artificial intelligence. This book presents six classic science fiction stories and commentary that illustrate and explain key algorithms or principles of artificial intelligence. Even though all the stories were originally published before 1973, they help readers grapple with two questions that stir debate even today: how are intelligent robots programmed? and what are the limits of autonomous robots? The stories—by Isaac Asimov, Vernor Vinge, Brian Aldiss, and Philip K. Dick—cover telepresence, behavior-based robotics, deliberation, testing, human-robot interaction, the “uncanny valley,” natural language understanding, machine learning, and ethics. Each story is preceded by an introductory note, “As You Read the Story,” and followed by a discussion of its implications, “After You Have Read the Story.” Together with the commentary, the stories offer a nontechnical introduction to robotics. The stories can also be considered as a set of admittedly fanciful-case studies to be read in conjunction with more serious study. Contents “Stranger in Paradise” by Isaac Asimov, 1973 “Runaround” by Isaac Asimov, 1942 “Long Shot” by Vernor Vinge, 1972 “Catch That Rabbit” by Isaac Asimov, 1944 “Super-Toys Last All Summer Long” by Brian Aldiss, 1969 “Second Variety” by Philip K. Dick, 1953

Artificial Intelligence: The Citizen’s Guide to Artificial Intelligence Build practical applications of computer vision using the OpenCV library with Python. This book discusses different facets of computer vision such as image and object detection, tracking and motion analysis and their applications with examples. The author starts with an introduction to computer vision followed by setting up OpenCV from scratch using Python. The next section discusses specialized image processing and segmentation and how images are stored and processed by a computer. This involves pattern recognition and image tagging using the OpenCV library. Next, you’ll work with object detection, video storage and interpretation, and human detection using OpenCV. Tracking and motion is also discussed in detail. The book also discusses creating complex deep learning models with CNN and RNN. The author finally concludes with recent applications and trends in computer vision. After reading this book, you will be able to understand and implement computer vision and its applications with OpenCV using Python.
You will also be able to create deep learning models with CNN and RNN and understand how these cutting-edge deep learning architectures work. What You Will Learn Understand what computer vision is, and its overall application in intelligent automation systems Discover the deep learning techniques required to build computer vision applications Build complex computer vision applications using the latest techniques in OpenCV, Python, and Numpy Create practical applications and implementations such as face detection and recognition, handwriting recognition, object detection, and tracking and motion analysis Who This Book Is For Those who have a basic understanding of machine learning and Python and are looking to learn computer vision and its applications.

Rebooting AI Artificial intelligence (AI) is a field within computer science that is attempting to build enhanced intelligence into computer systems. This book traces the history of the subject, from the early dreams of eighteenth-century (and earlier) pioneers to the more successful work of today's AI engineers. AI is becoming more and more a part of everyone's life. The technology is already embedded in face-recognizing cameras, speech-recognition software, Internet search engines, and health-care robots, among other applications. The book's many diagrams and easy-to-understand descriptions of AI programs will help the casual reader gain an understanding of how these and other AI systems actually work. Its thorough (but unobtrusive) end-of-chapter notes containing citations to important source materials will be of great use to AI scholars and researchers. This book promises to be the definitive history of a field that has captivated the imaginations of scientists, philosophers, and writers for centuries.

Mathematics for Machine Learning This friendly and accessible guide to AI theory and programming in Python requires no maths or data science background. Key Features Roll up your sleeves and start programming AI models No math, data science, or machine learning background required Packed with hands-on examples, illustrations, and clear step-by-step instructions 5 hands-on working projects put ideas into action and show step-by-step how to build intelligent software Book Description AI is changing the world – and with this book, anyone can start building intelligent software! Through his best-selling video courses, Hadelin de Ponteves has taught hundreds of thousands of people to write AI software. Now, for the first time, his hands-on, energetic approach is available as a book. Taking a graduated approach that starts with the basics before easing readers into more complicated formulas and notation, Hadelin helps you understand what you really need to build AI systems with reinforcement learning and deep learning. Five full working projects put the ideas into action, showing step-by-step how to build intelligent software using the best and easiest tools for AI programming: Google Colab Python TensorFlow Keras PyTorch AI Crash Course teaches everyone to build an AI to work in their applications. Once you've read this book, you’re only limited by your imagination. What you will learn Master the key skills of deep learning, reinforcement learning, and deep reinforcement learning Understanding Q-learning and deep Q-learning Learn from friendly, plain English explanations and practical activities Build fun projects, including a virtual-self-driving car Use AI to solve real-world business problems and win classic video games Build an intelligent, virtual robot warehouse worker Who this book is for If you want to add AI to your skillset, this book is for you. It doesn’t require data science or machine learning knowledge. Just maths basics (high school level).

AI for People and Business In the chapters in Part I of this textbook the author introduces the fundamental ideas of artificial intelligence and computational intelligence. In Part II he explains key AI methods such as search, evolutionary computing, logic-based reasoning, knowledge representation, rule-based systems, pattern recognition, neural networks, and cognitive architectures. Finally, in Part III, he expands the context to discuss theories of intelligence in philosophy and psychology, key applications of AI systems, and the likely future of artificial intelligence. A key feature of the author's approach is historical and biographical footnotes, stressing the multidisciplinary character of the field and its pioneers. The book is appropriate for advanced undergraduate and graduate courses in computer science, engineering, and other applied sciences, and the appendices offer short formal, mathematical models and notes to support the reader.

The Myth of Artificial Intelligence A guide to understanding the inner workings and outer limits of technology and why we should never assume that computers always get it right. In Artificial Unintelligence, Meredith Broussard argues that our collective enthusiasm for applying computer technology to every aspect of life has resulted in a tremendous amount of poorly designed systems. We are so eager to do everything digitally—hiring, driving, paying bills, even choosing romantic partners—that we have stopped demanding that our technology actually work. Broussard, a software developer and journalist, reminds us that there are fundamental limits to what we can (and should) do with technology. With this book, she offers a guide to understanding the inner workings and outer limits of technology—and issues a warning that we should never assume that computers always get things right. Making a case against technochaunvinism—the belief that technology is always the solution—Broussard argues that it's just not true that social problems would inevitably retreat before a digitally enabled Utopia. To prove her point, she undertakes a series of adventures in computer programming. She goes for an alarming ride in a driverless car, concluding “the cyborg future is not coming any time soon”; uses artificial intelligence to investigate why students can't pass standardized tests; deploys machine learning to predict which passengers survived the Titanic disaster; and attempts to repair the U.S. campaign finance system by building AI software. If we understand the limits of what we can do with technology, Broussard tells us, we can make better choices about what we should do with it to make the world better for everyone.

Understanding Machine Learning Build real-world Artificial Intelligence applications with Python to intelligently interact with the world around you About This Book Step into the amazing world of intelligent apps using this comprehensive guide Enter the world of Artificial Intelligence, explore it, and create
your own applications. Work through simple yet insightful examples that will get you up and running with Artificial Intelligence in no time. Who This Book Is For This book is for Python developers who want to build real-world Artificial Intelligence applications. This book is friendly to Python beginners, but being familiar with Python would be useful to play around with the code. It will also be useful for experienced Python programmers who are looking to use Artificial Intelligence techniques in their existing technology stacks. What You Will Learn Realize different classification and regression techniques Understand the concept of clustering and how to use it to automatically segment data See how to build an intelligent recommender system Understand logic programming and how to use it. Build automatic speech recognition systems. Understand the basics of heuristic search and genetic programming. Develop games using Artificial Intelligence. Learn how reinforcement learning works. Discover how to build intelligent applications centered on images, text, and time series data. See how to use deep learning algorithms and build applications based on it. In Detail Artificial Intelligence is becoming increasingly relevant in the modern world where everything is driven by technology and data. It is used extensively across many fields such as search engines, image recognition, robotics, finance, and so on. We will explore various real-world scenarios in this book and you’ll learn about various algorithms that can be used to build Artificial Intelligence applications. During the course of this book, you will find out how to make informed decisions about what algorithms to use in a given context. Starting from the basics of Artificial Intelligence, you will learn how to develop various building blocks using different data mining techniques. You will see how to implement different algorithms and apply them to real-world scenarios. If you want to add an intelligence layer to any application that’s based on images, text, stock market, or some other form of data, this exciting book on Artificial Intelligence will definitely be your guide. Style and approach This highly practical book will show you how to implement Artificial Intelligence. The book provides multiple examples enabling you to create smart applications to meet the needs of your organization. In every chapter, we explain an algorithm, implement it, and then build a smart application.

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

Introduction to Artificial Intelligence Artificial Intelligence (AI) fascinates, challenges and disturbs us. There are many voices in society that predict drastic changes that may come as a consequence of AI—a possible apocalypse or Eden on earth. However, only a few people truly understand what AI is, what it can do and what its limitations are. Understanding Artificial Intelligence explains, through a straightforward narrative and amusing illustrations, how AI works. It is written for a non-specialist reader, adult or adolescent, who is interested in AI but is missing the key to understanding how it works. The author demystifies the creation of the so-called “intelligent” machine and explains the different methods that are used in AI. It presents new possibilities offered by algorithms and the difficulties that researchers, engineers and users face when building and using such algorithms. Each chapter allows the reader to discover a new aspect of AI and to become fully aware of the possibilities offered by this rich field.

Artificial Intelligence: A Very Short Introduction Futurists are certain that humanlike AI is on the horizon, but in fact engineers have no idea how to program human reasoning. AI reasons from statistical correlations across data sets, while common sense is based heavily on conjecture. Erik Larson argues that hyping existing methods will only hold us back from developing truly humanlike AI.

Artificial Intelligence Basics 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.
Guide to Deep Learning Basics The concept of Artificial Intelligence (AI) & Machine Learning (ML) has been in practice for over years with the advent of technological progress. Over time, it has blended our lives through nearly every narration of learning, teaching, enjoyment, normal routine operations and what not. The aspect delivers a common understanding of the topics with reference to it making an impact on our lives, with a better framework of technology affecting our lives in particular. Let us look up to science for a change to be brought about in us. Let us create awareness of making technology available to people, in a broader sense. As that happens, people who are responsible need to be told about the use and misuse of the same. As we lead our lives, we come across the fact that AI, Robotics and Learning Machines seem to be the household topic of discussion. Earlier, AI was perceived to be reserved for only ‘Geniuses’ or ‘Researchers’ or the ‘computer’ community, but it very aptly integrates and impacts each and every aspect of our lives. Knowingly or unknowingly, it has become intellectually influential in shaping our thoughts, actions and the day-to-day chores.

Artificial Intelligence

Human Compatible An introduction to a broad range of topics in deep learning, covering mathematical and conceptual background, deep learning techniques used in industry, and research perspectives. “Written by three experts in the field, Deep Learning is the only comprehensive book on the subject...” —Elon Musk, cochair of OpenAI; cofounder and CEO of Tesla and SpaceX Deep learning is a form of machine learning that enables computers to learn from experience and understand the world in terms of a hierarchy of concepts. Because the computer gathers knowledge from experience, there is no need for a human computer operator to formally specify all the knowledge that the computer needs. The hierarchy of concepts allows the computer to learn complicated concepts by building them out of simpler ones; a graph of these hierarchies would be many layers deep. This book introduces a broad range of topics in deep learning. The text offers mathematical and conceptual background, covering relevant concepts in linear algebra, probability theory and information theory, numerical computation, and machine learning. It describes deep learning techniques used by practitioners in industry, including deep feedforward networks, regularization, optimization algorithms, convolutional networks, sequence modeling, and practical methodology; and it surveys such applications as natural language processing, speech recognition, computer vision, online recommendation systems, bioinformatics, and videogames. Finally, the book offers research perspectives, covering such theoretical topics as linear factor models, autoencoders, representation learning, structured probabilistic models, Monte Carlo methods, the partition function, approximate inference, and deep generative models. Deep Learning can be used by undergraduate or graduate students planning careers in either industry or research, and by software engineers who want to begin using deep learning in their products or platforms. A website offers supplementary material for both readers and instructors.

Artificial Intelligence: The Basics One of America's top doctors reveals how AI will empower physicians and revolutionize patient care Medicine has become inhuman, to disastrous effect. The doctor-patient relationship—the heart of medicine—is broken: doctors are too distracted and overwhelmed to truly connect with their patients, and medical errors and misdiagnoses abound. In Deep Medicine, leading physician Eric Topol reveals how artificial intelligence can help. AI has the potential to transform everything doctors do, from notetaking and medical scans to diagnosis and treatment, greatly cutting down the cost of medicine and reducing human mortality. By freeing physicians from the tasks that interfere with human connection, AI will create space for the real healing that takes place between a doctor who can listen and a patient who needs to be heard. Innovative, provocative, and hopeful, Deep Medicine shows us how the awesome power of AI can make medicine better, for all the humans involved.

Robotics Through Science Fiction The book introduces key Artificial Intelligence (AI) concepts in an easy-to-read format with examples and illustrations. A complex, long, overly mathematical textbook does not always serve the purpose of conveying the basic AI concepts to most people. Someone with basic knowledge in Computer Science can have a quick overview of AI (heuristic searches, genetic algorithms, expert systems, game trees, fuzzy expert systems, natural language processing, super intelligence, etc.) with everyday examples. If you are taking a basic AI course and find the traditional AI textbooks intimidating, you may choose this as a “bridge” book, or as an introductory textbook. For students, there is a lower priced edition (ISBN 978-1944708016) of the same book. Published by CSTrends LLP.

Life 3.0 The applications of Artificial Intelligence lie all around us; in our homes, schools and offices, in our cinemas, in art galleries and - not least - on the Internet. The results of Artificial Intelligence have been invaluable to biologists, psychologists, and linguists in helping to understand the processes of memory, learning, and language from a fresh angle. As a concept, Artificial Intelligence has fuelled and sharpened the philosophical debates concerning the nature of the mind, intelligence, and the uniqueness of human beings. In this Very Short Introduction, Margaret A. Boden reviews the philosophical and technological challenges raised by Artificial Intelligence, considering whether programs could ever be really intelligent, creative or even conscious, and shows how the pursuit of Artificial Intelligence has helped us to appreciate how human and animal minds are possible. ABOUT THE SERIES: The Very Short Introductions series from Oxford University Press contains hundreds of titles in almost every subject area. These pocket-sized books are the perfect way to get ahead in a new subject quickly. Our expert authors combine facts, analysis, perspective, new ideas, and enthusiasm to make interesting and challenging topics highly readable.
Introducing Artificial Intelligence This stimulating text/reference presents a philosophical exploration of the conceptual foundations of deep learning, presenting enlightening perspectives that encompass such diverse disciplines as computer science, mathematics, logic, psychology, and cognitive science. The text also highlights select topics from the fascinating history of this exciting field, including the pioneering work of Rudolf Carnap, Warren McCulloch, Walter Pitts, Búcsú László, and Geoffrey Hinton. Topics and features: Provides a brief history of mathematical logic, and discusses the critical role of philosophy, psychology, and neuroscience in the history of AI. Presents a philosophical case for the use of fuzzy logic approaches in AI. Investigates the similarities and differences between the Word2vec word embedding algorithm, and the ideas of Wittgenstein and Firth on linguistics. Examines how developments in machine learning provide insights into the philosophical challenge of justifying inductive inferences. Debates, with reference to philosophical anthropology, whether an advanced general artificial intelligence might be considered as a living being. Investigates the issue of computational complexity through deep-learning strategies for understanding AI-complete problems and developing strong AI. Explores philosophical questions at the intersection of AI and transhumanism. This inspirational volume will rekindle a passion for deep learning in those already experienced in coding and studying this discipline, and provide a philosophical big-picture perspective for those new to the field.

The Quest for Artificial Intelligence Designed as a self-teaching introduction to the fundamental concepts of artificial intelligence, the book begins with its history, the Turing test, and early applications. Later chapters cover the basics of searching, game playing, and knowledge representation. Expert systems and machine learning are covered in detail, followed by separate programming chapters on Prolog and Python. The concluding chapter on artificial intelligence machines and robotics is comprehensive with numerous modern applications. Features: Covers an introduction to concepts related to AI, including searching processes, knowledge representation, machine learning, expert systems, programming, and robotics. Includes separate chapters on Prolog and Python to introduce basic programming techniques in AI.

Introduction to Artificial Intelligence 'if AI is outside your field, or you know something of the subject and would like to know more then Artificial Intelligence: The Basics is a brilliant primer.' - Nick Smith, Engineering and Technology Magazine November 2011 Artificial Intelligence: The Basics is a concise and cutting-edge introduction to the fast moving world of AI. The author Kevin Warwick, a pioneer in the field, examines issues of what it means to be man or machine and looks at advances in robotics which have blurred the boundaries. Topics covered include: how intelligence can be defined whether machines can think sensory input in machine systems the nature of consciousness the controversial culturing of human neurons. Exploring issues at the heart of the subject, this book is suitable for anyone interested in AI, and provides an illuminating and accessible introduction to this fascinating subject.

BASICS OF ARTIFICIAL INTELLIGENCE & MACHINE LEARNING A concise but informative overview of AI ethics and policy. Artificial intelligence, or AI for short, has generated a staggering amount of hype in the past several years. Is it the game-changer it's been cracked up to be? If so, how is it changing the game? How is it likely to affect us as customers, tenants, aspiring home-owners, students, educators, patients, clients, prison inmates, members of ethnic and sexual minorities, voters in liberal democracies? This book offers a concise overview of moral, political, legal and economic implications of AI. It covers the basics of AI's latest permutation, machine learning, and considers issues including transparency, bias, liability, privacy, and regulation.

Artificial Intelligence for Business Leaders "Embrace artificial intelligence or be replaced by it." "AI is a new electricity." Andrew Ng Have you ever thought that if AI is the new electricity, why does it not quickly inspire Managers/Leaders/C-Suites? If business leaders do not act, they must be prepared to lag behind competitors who adopt new technologies. Managers/Leaders/C-Suites and others who are willing to feel the spark of AI, should learn and understand AI immediately to know what AI can do and what it cannot. Did you know that AI is changing our world faster than we think? Artificial intelligence will affect all areas of life in ways we cannot even predict, whether we like it or not. According to research done by PricewaterhouseCoopers (PwC), by 2030, artificial intelligence can contribute up to US$15.7 trillion to the global economy, so the opportunities for implementing and learning AI are huge. Companies that do not use AI will soon become obsolete. From making faster and better decisions to automating rote memorization to enabling robots to respond to emotions, artificial intelligence and machine learning have been reshaping business and society. Not investing in the organizational and technical requirements of adopting AI may mean that they are far behind and unable to compete in the future. Business is changing. Will you adapt or fall behind? Accelerate and deepen your understanding of the themes that shape the company’s future. This book is suitable for business executives, business managers, business leaders, senior managers, technical leaders, students, and many people who want to understand and artificial intelligence. It will take you to learn the concepts of machine learning, artificial intelligence and deep learning, more and how to use them to influence your business. Even if you do not have technical knowledge, you will understand AI, ML and its implementation. Key features nbsp; A must book for the business leader to understand AI and its application. Understand strategy behind AI implementation. Zero coding with simple explanation. A straightforward explanation for important algorithms like TensorFlow, NLP, K-Means, Support Vector Machine, Supervised Learning, Unsupervised Learning, Ensemble Techniques, Regression, Clustering, and many more. Grab your copy of this book to build artificial intelligence for business and stand to the best of times!
Interpretable Machine Learning

Two leaders in the field offer a compelling analysis of the current state of the art and reveal the steps we must take to achieve a truly robust artificial intelligence. Despite the hype surrounding AI, creating an intelligent machine that rivals or exceeds human levels is far more complex. To achieve this, we must bridge the gap between AI researchers and those who want to use AI in their work. The authors examine the most critical issues facing the field and offer a roadmap for progress. They explore the latest research and technology, and provide a comprehensive overview of the current state of the art in AI. Whether you are a researcher, a practitioner, or simply interested in the future of artificial intelligence, this book is essential reading. AI is rapidly becoming a general-purpose technology, reverberating across industries including transportation, healthcare, financial services, and many more. In our modern era, understanding the potential and implications of AI for your organization is essential for growth and success. Artificial Intelligence Basics has arrived to equip you with a fundamental, timely grasp of AI and its impact. Author Tom Taulli provides an engaging, non-technical introduction to important concepts such as machine learning, deep learning, natural language processing (NLP), robotics, and more. In addition to guiding you through real-world case studies and practical implementation steps, Taulli uses his expertise to expand on the bigger questions that surround AI. These include societal trends, ethics, and future impact AI will have on world governments, company structures, and daily life. Google, Amazon, Facebook, and similar tech giants are far from the only organizations on which artificial intelligence has had—and will continue to have—an incredibly significant result. AI is the present and the future of your business as well as your home life. Strengthening your prowess on the subject will prove invaluable to your preparation for the future of tech, and Artificial Intelligence Basics is the indispensable guide that you've been waiting for. What You Will Learn: Study the core principles for AI approaches such as machine learning, deep learning, and NLP (Natural Language Processing). Discover the best practices to successfully implement AI by examining case studies including Uber, Facebook, Waymo, UiPath, and Stitch Fix. Understand how AI capabilities for robots can improve business Deploy chatbots and Robotic Processing Automation (RPA) to save costs and improve customer service. Avoid costly gotchas Recognize ethical concerns and other risk factors of using artificial intelligence and how they may impact your business.

Artificial Intelligence Basics

Artificial intelligence touches nearly every part of your day. While you may initially assume that technology such as smart speakers and digital assistants are the extent of it, AI has in fact rapidly become a general-purpose technology, reverberating across industries including transportation, healthcare, financial services, and many more. In our modern era, an understanding of AI and its possibilities for your organization is essential for growth and success. Artificial Intelligence Basics has arrived to equip you with a fundamental, timely grasp of AI and its impact. Author Tom Taulli provides an engaging, non-technical introduction to important concepts such as machine learning, deep learning, natural language processing (NLP), robotics, and more. In addition to guiding you through real-world case studies and practical implementation steps, Taulli uses his expertise to expand on the bigger questions that surround AI. These include societal trends, ethics, and future impact AI will have on world governments, company structures, and daily life. Google, Amazon, Facebook, and similar tech giants are far from the only organizations on which artificial intelligence has had—and will continue to have—an incredibly significant result. AI is the present and the future of your business as well as your home life. Strengthening your prowess on the subject will prove invaluable to your preparation for the future of tech, and Artificial Intelligence Basics is the indispensable guide that you’ve been waiting for. What You Will Learn: Study the core principles for AI approaches such as machine learning, deep learning, and NLP (Natural Language Processing). Discover the best practices to successfully implement AI by examining case studies including Uber, Facebook, Waymo, UiPath, and Stitch Fix. Understand how AI capabilities for robots can improve business Deploy chatbots and Robotic Processing Automation (RPA) to save costs and improve customer service. Avoid costly gotchas Recognize ethical concerns and other risk factors of using artificial intelligence and how they may impact your business. Who This Book Is For: Readers without a technical background, such as managers, looking to understand AI to evaluate solutions.

Artificial Intelligence Simplified

In recent years, our world has experienced a profound shift and progression in available computing and knowledge sharing innovations. These emerging advancements have developed at a rapid pace, disseminating into and affecting numerous aspects of contemporary society. This has created a pivotal need for an innovative compendium encompassing the latest trends, concepts, and issues surrounding this relevant discipline area. During the past 15 years, the Encyclopedia of Information Science and Technology has become recognized as one of the landmark sources of the latest knowledge and discoveries in this discipline. The Encyclopedia of Information Science and Technology, Fourth Edition is a 10-volume set which includes 705 original and previously unpublished research articles covering a full range of perspectives, applications, and techniques contributed by thousands of experts and researchers from around the globe. This authoritative encyclopedia is an all-encompassing, well-established reference source that is ideally designed to disseminate the most forward-thinking and diverse research findings. With critical perspectives on the impact of information science management and new technologies in modern settings, including but not limited to computer science, education, healthcare, government, engineering, business, and natural and physical sciences, it is a pivotal and relevant source of knowledge that will benefit every professional within the field of information science and technology and is an invaluable addition to every academic and corporate library.

Artificial Intelligence Learn AI & Machine Learning from the first principles. KEY FEATURES: ● Explore how different industries are using AI and ML for diverse use-cases. ● Learn core concepts of Data Science, Machine Learning, Deep Learning and NLP in an easy and intuitive manner. ● Cutting-edge coverage on use of ML for business products and services. ● Explore how different companies are monetizing AI and ML technologies. ● Learn how you can start your own journey in the AI field from scratch. DESCRIPTION: AI and machine learning (ML) are probably the most fascinating technologies of the 21st century. AI is literally in every industry now. From medical to climate change, education to sport, finance to entertainment, AI is disrupting every industry as we know. So, the basic knowledge of AI/ML becomes mandatory for everyone. This book is your first step to start the journey in this field. Along with basic concepts of fields, like machine learning, deep learning and NLP, we will also explore how big companies are using these technologies to deliver greater user experience and earning millions of dollars in profit. Also, we will see how the owners of small- or medium-sized businesses can leverage and integrate these technologies with their products and services. Leveraging AI and ML can become that competitive moat which can differentiate the product from others. In this book, you will learn the root concepts of AI/ML and how these inanimate machines can actually become smarter than the humans at a few tasks, and how companies are using AI and how you can leverage AI to earn profits. WHAT YOU WILL LEARN: ● Core concepts of data science, machine learning, deep
learning and NLP in simple and intuitive words. ● How you can leverage and integrate AI technologies in your business to differentiate your product in the market. ● The limitations of traditional non-tech businesses and how AI can bridge those gaps to increase revenues and decrease costs. ● How AI can help companies in launching new products, improving existing ones and automating mundane processes. ● Explore how big tech companies are using AI to automate different tasks and providing unique product experiences to their users. WHO THIS BOOK IS FOR This book is for anyone who is curious about this fascinating technology and how it really works at its core. It is also beneficial to those who want to start their career in AI/ML. TABLE OF CONTENTS 1. Introduction 2. Going deeper in ML concepts 3. Business perspective of AI 4. How to get started and pitfalls to avoid