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Javascript Artificial Intelligence-Code Well Academy 2016-04-15 Design the MIND of a Robotic Thinker! " This book will help you get started with this exciting language and gives you an idea of what is possible. " - Melchizedek B, from Amazon.com " The examples it uses are easy to follow and the illustrations bring out the more complex aspects while making them simple. " - C. Brant, from Amazon.com " Such a cool book that covers basic Javascript programming then incorporates tools and components to explore Artificial Intelligence. " - M. Gavel, from Amazon.com \*\* INCLUDED BONUS: a Quick-start guide to Learning Javascript in less than a Day! \*\* How would you like to Create the Next SIRI? Artificial Intelligence. One of the most brilliant creations of mankind. No longer a sci-fi fantasy, but a realistic approach to making work more efficient and lives easier. And the best news? It's not that complicated after all Does it require THAT much advanced math? NO! And are you paying THOUSANDS of dollars just to learn this information? NO! Hundreds? Not even close. Within this book's pages, you'll find GREAT coding skills to learn - and more. Just some of the questions and topics include: - Complicated scheduling problem? Here's how to solve it. - How good are your AI algorithms? Analysis for Efficiency- How to interpret a system into logical code for the AI- How would an AI system would diagnose a system? We show you...- Getting an AI agent to solve problems for you and Much, much more! World-Class Training This book breaks your training down into easy-to-understand modules. It starts from the very essentials of algorithms and program procedures, so you can write great code - even as a beginner!

Hands-On Artificial Intelligence with Java for Beginners-Nisheeth Joshi 2018-08-31 Build, train, and deploy intelligent applications using Java libraries Key Features Leverage the power of Java libraries to build smart applications Build and train deep learning models for implementing artificial intelligence Learn various algorithms to automate complex tasks Book Description Artificial intelligence (AI) is increasingly in demand as well as relevant in the modern world, where everything is driven by technology and data. AI can be used for automating systems or processes to carry out complex tasks and functions in order to achieve optimal performance and productivity. Hands-On Artificial Intelligence with Java for Beginners begins by introducing you to AI concepts and algorithms. You will learn about various Java-based libraries and frameworks that can be used in implementing AI to build smart applications. In addition to this, the book teaches you how to implement easy to complex AI tasks, such as genetic programming, heuristic searches, reinforcement learning, neural networks, and segmentation, all with a practical approach. By the end of this book, you will not only have a solid grasp of AI concepts, but you'll also be able to build

your own smart applications for multiple domains. What you will learn Leverage different Java packages and tools such as Weka, RapidMiner, and Deeplearning4j, among others Build machine learning models using supervised and unsupervised machine learning techniques Implement different deep learning algorithms in Deeplearning4j and build applications based on them Study the basics of heuristic searching and genetic programming Differentiate between syntactic and semantic similarity among texts Perform sentiment analysis for effective decision making with LingPipe Who this book is for Hands-On Artificial Intelligence with Java for Beginners is for Java developers who want to learn the fundamentals of artificial intelligence and extend their programming knowledge to build smarter applications.

Artificial Intelligence-Code Well Academy 2016-04-10 Design the MIND of a Robotic Thinker! " Every chapter is very clearly described and all of the information was presented consistently. " - Amazon Customer " Within this book you'll find GREAT coding skills to learn. Here I've learned so much from reading this book. " - Stella Mill, from Amazon.com " This is the most complete and comprehensive book I read on a subject of Artificial Intelligence so far and it's very well written as well. " - Falli Conna, from Amazon.com \*\* INCLUDED BONUS: a Quick-start guide to Learning Ruby in less than a Day! \*\* How would you like to Create the Next AI bot? Artificial Intelligence. One of the most brilliant creations of mankind. No longer a sci-fi fantasy, but a realistic approach to making work more efficient and lives easier. And the best news? It's not that complicated after all Does it require THAT much advanced math? NO! And are you paying THOUSANDS of dollars just to learn this information? NO! Hundreds? Not even close. Within this book's pages, you'll find GREAT coding skills to learn - and more. Just some of the questions and topics include: - Complicated scheduling problem? Here's how to solve it. - How good are your AI algorithms? Analysis for Efficiency- How to interpret a system into logical code for the AI- How would an AI system would diagnose a system? We show you...- Getting an AI agent to solve problems for you and Much, much more! World-Class Training This book breaks your training down into easy-to-understand modules. It starts from the very essentials of algorithms and program procedures, so you can write great code - even as a beginner!

Prediction Machines-Ajay Agrawal 2018-04-17 "What does AI mean for your business? Read this book to find out." -- Hal Varian, Chief Economist, Google Artificial intelligence does the seemingly impossible, magically bringing machines to life--driving cars, trading stocks, and teaching children. But facing the sea change that AI will bring can be paralyzing. How should companies set strategies, governments design policies, and people plan their lives for a world so different from what we know? In the face of such uncertainty, many analysts either cower in fear or predict an impossibly sunny future. But in Prediction Machines, three eminent economists recast the rise of AI as a drop in the cost of prediction. With this single, masterful stroke, they lift the curtain on the AI-is-magic hype and show how basic tools from economics provide clarity about the AI revolution and a basis for action by CEOs, managers, policy makers, investors, and entrepreneurs. When AI is framed as cheap prediction, its extraordinary potential becomes clear: Prediction is at the heart of making decisions under uncertainty. Our businesses and personal lives are riddled with such decisions. Prediction tools increase productivity--operating machines, handling documents, communicating with customers. Uncertainty constrains strategy. Better prediction creates opportunities for new business structures and strategies to compete. Penetrating, fun, and always insightful and practical, Prediction Machines follows its inescapable logic to explain how to navigate the changes on the horizon. The impact of AI will be profound, but the economic framework for understanding it is surprisingly simple.

Advanced Methodologies and Technologies in Artificial Intelligence, Computer Simulation, and Human-Computer Interaction-Khosrow-Pour, D.B.A., Mehdi 2018-09-28 As modern technologies continue to develop and evolve, the ability of users to adapt with new systems becomes a paramount concern. Research into new ways for humans to make use of advanced computers and other such technologies through artificial intelligence and computer simulation is necessary to fully realize the potential of tools in the 21st century. Advanced Methodologies and Technologies in Artificial Intelligence, Computer Simulation, and Human-Computer Interaction provides emerging research in advanced trends in robotics, AI, simulation, and human-computer interaction. Readers will learn about the positive applications of artificial intelligence and human-computer interaction in various disciplines such as business and medicine. This book is a valuable resource for IT professionals, researchers, computer scientists, and researchers invested in assistive technologies, artificial intelligence, robotics, and computer simulation.

Artificial Intelligence with Uncertainty-Deyi Li 2017-05-18 This book develops a framework that shows how uncertainty in Artificial Intelligence (AI) expands and generalizes traditional AI. It explores the uncertainties of knowledge and intelligence. The authors focus on the importance of natural language -

the carrier of knowledge and intelligence, and introduce efficient physical methods for data mining and control. In this new edition, we have more in-depth description of the models and methods, of which the mathematical properties are proved strictly which make these theories and methods more complete. The authors also highlight their latest research results.

You Look Like a Thing and I Love You-Janelle Shane 2019-11-05 AS HEARD ON NPR'S "SCIENCE FRIDAY" Discover the book that Malcolm Gladwell, Susan Cain, Daniel Pink, and Adam Grant want you to read this year, an "accessible, informative, and hilarious" introduction to the weird and wonderful world of artificial intelligence (Ryan North). "You look like a thing and I love you" is one of the best pickup lines ever... according to an artificial intelligence trained by scientist Janelle Shane, creator of the popular blog AI Weirdness. She creates silly AIs that learn how to name paint colors, create the best recipes, and even flirt (badly) with humans--all to understand the technology that governs so much of our daily lives. We rely on AI every day for recommendations, for translations, and to put cat ears on our selfie videos. We also trust AI with matters of life and death, on the road and in our hospitals. But how smart is AI really... and how does it solve problems, understand humans, and even drive self-driving cars? Shane delivers the answers to every AI question you've ever asked, and some you definitely haven't. Like, how can a computer design the perfect sandwich? What does robot-generated Harry Potter fan-fiction look like? And is the world's best Halloween costume really "Vampire Hog Bride"? In this smart, often hilarious introduction to the most interesting science of our time, Shane shows how these programs learn, fail, and adapt--and how they reflect the best and worst of humanity. You Look Like a Thing and I Love You is the perfect book for anyone curious about what the robots in our lives are thinking. "I can't think of a better way to learn about artificial intelligence, and I've never had so much fun along the way." - Adam Grant, New York Times bestselling author of Originals

Artificial Intelligence with Python-Prateek Joshi 2017-01-27 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 to get the best possible results, and will understand how to 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.

Encyclopedia of Information Science and Technology, Fourth Edition-Khosrow-Pour, D.B.A., Mehdi 2017-06-20 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 with Python-Alberto Artasanchez 2020-01-31 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 Features Completely updated and revised to Python 3.x New chapters for AI on the cloud, recurrent neural networks, deep learning models, and feature selection and engineering Learn more about deep learning algorithms, machine learning data pipelines, and chatbots Book 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 learn Understand what artificial intelligence, machine learning, and data science are Explore the most common artificial intelligence use cases Learn how to build a machine learning pipeline Assimilate the basics of feature selection and feature engineering Identify the differences between supervised and unsupervised learning Discover the most recent advances and tools offered for AI development in the cloud Develop automatic speech recognition systems and chatbots Apply AI algorithms to time series data Who 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.

Artificial Intelligence: The Basics-Kevin Warwick 2013-03-01 '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.

Understanding Machine Learning-Shai Shalev-Shwartz 2014-05-19 Introduces machine learning and its algorithmic paradigms, explaining the principles behind automated learning approaches and the considerations underlying their usage.

The AI Book-Ivana Bartoletti 2020-04-09 Written by prominent thought leaders in the global fintech space, The AI Book aggregates diverse expertise into a single, informative volume and explains what artificial intelligence really means and how it can be used across financial services today. Key industry developments are explained in detail, and critical insights from cutting-edge practitioners offer first-hand information and lessons learned. Coverage includes: · Understanding the AI Portfolio: from machine learning to chatbots, to natural language processing (NLP); a deep dive into the Machine Intelligence Landscape; essentials on core technologies, rethinking enterprise, rethinking industries, rethinking humans; quantum computing and next-generation AI · AI experimentation and embedded usage, and the

change in business model, value proposition, organisation, customer and co-worker experiences in today's Financial Services Industry · The future state of financial services and capital markets – what's next for the real-world implementation of AITech? · The innovating customer – users are not waiting for the financial services industry to work out how AI can re-shape their sector, profitability and competitiveness · Boardroom issues created and magnified by AI trends, including conduct, regulation & oversight in an algo-driven world, cybersecurity, diversity & inclusion, data privacy, the 'unbundled corporation' & the future of work, social responsibility, sustainability, and the new leadership imperatives · Ethical considerations of deploying AI solutions and why explainable AI is so important

Computers Helping People with Special Needs, Part II-Klaus Miesenberger 2010-06-29 Welcome to the Proceedings of ICCHP 2010! We were proud to welcome participants from more than 40 countries from all over the world to this year's ICCHP. Since the late 1980s, it has been ICCHP's mission to support and reflect development in the field of "Assistive Technologies," eAccessibility and eInclusion. With a focus on scientific quality, ICCHP has become an important reference in our field. The 2010 conference and this collection of papers once again fulfilled this mission. The International Programme Committee, comprising 106 experts from all over the world, selected 147 full and 44 short papers out of 328 abstracts submitted to ICCHP. This acceptance ratio of about half of the submissions demonstrates our strict pursuit of scientific quality both of the programme and in particular of the proceedings in your hands. An impressive number of experts agreed to organize "Special Thematic Sessions" (STS) for ICCHP 2010. These STS help to bring the meeting into sharper focus in several key areas. In turn, this deeper level of focus helps to collate a state of the art and mainstream technical, social, cultural and political developments.

Logics in Artificial Intelligence-Francesco Calimeri 2019-05-06 This book constitutes the proceedings of the 16th European Conference on Logics in Artificial Intelligence, JELIA 2019, held in Rende, Italy, in May 2019. The 50 full papers and 10 short papers included in this volume were carefully reviewed and selected from 101 submissions. Additionally, the book contains 3 invited papers. The accepted papers span a number of areas within Logics in AI, including: belief revision and argumentation; causal, defeasible and inductive reasoning; conditional, probabilistic and propositional logic; description logics; logic programming; modal and default logic; and temporal logic.

Artificial Intelligence-Melanie Mitchell 2019-10-15 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.

Building Successful Business Models Based on Artificial Intelligence-Bert Langa 2018-05-05 Every few years, there is a technological trend that leads to the creation of thousands of startups and/or new businesses. At present, we can say without any doubt that one of these trends is Machine Learning (Artificial Intelligence). There is a very powerful reason that this is happening. Currently, we are transitioning from the industrial economy born in the late nineteenth century to a new digital economy centered on data. In this data economy, the success of an organization depends to a large extent on how it uses data to make better decisions. Therefore, leading companies are starting to use their data and Machine Learning algorithms to improve their business processes and, consequently, their results. To put it in context, McKinsey (one of the leading Management Consulting companies worldwide) tells us that "Tech giants including Baidu and Google are spending between \$20B to \$30B on AI, with 90% of this

spent on R&D and deployment, and 10% on AI acquisitions". Amazing, right? Can you imagine capturing one-thousandth of these investments with a new startup or a new business model? Well, that is the main objective of this course: explaining the key concepts of Machine Learning in a very practical way, along with the methods needed for creating disruptive Business Models based on said Tech Trend. That way, you can take advantage of this tremendous opportunity and become a successful businessperson or entrepreneur.

Deep Learning for Coders with fastai and PyTorch-Jeremy Howard 2020-06-29 Deep learning is often viewed as the exclusive domain of math PhDs and big tech companies. But as this hands-on guide demonstrates, programmers comfortable with Python can achieve impressive results in deep learning with little math background, small amounts of data, and minimal code. How? With fastai, the first library to provide a consistent interface to the most frequently used deep learning applications. Authors Jeremy Howard and Sylvain Gugger, the creators of fastai, show you how to train a model on a wide range of tasks using fastai and PyTorch. You'll also dive progressively further into deep learning theory to gain a complete understanding of the algorithms behind the scenes. Train models in computer vision, natural language processing, tabular data, and collaborative filtering Learn the latest deep learning techniques that matter most in practice Improve accuracy, speed, and reliability by understanding how deep learning models work Discover how to turn your models into web applications Implement deep learning algorithms from scratch Consider the ethical implications of your work Gain insight from the foreword by PyTorch cofounder, Soumith Chintala

Machine Learning For Dummies-John Paul Mueller 2016-05-11 Your no-nonsense guide to making sense of machine learning Machine learning can be a mind-boggling concept for the masses, but those who are in the trenches of computer programming know just how invaluable it is. Without machine learning, fraud detection, web search results, real-time ads on web pages, credit scoring, automation, and email spam filtering wouldn't be possible, and this is only showcasing just a few of its capabilities. Written by two data science experts, Machine Learning For Dummies offers a much-needed entry point for anyone looking to use machine learning to accomplish practical tasks. Covering the entry-level topics needed to get you familiar with the basic concepts of machine learning, this guide quickly helps you make sense of the programming languages and tools you need to turn machine learning-based tasks into a reality. Whether you're maddened by the math behind machine learning, apprehensive about AI, perplexed by preprocessing data—or anything in between—this guide makes it easier to understand and implement machine learning seamlessly. Grasp how day-to-day activities are powered by machine learning Learn to 'speak' certain languages, such as Python and R, to teach machines to perform pattern-oriented tasks and data analysis Learn to code in R using R Studio Find out how to code in Python using Anaconda Dive into this complete beginner's guide so you are armed with all you need to know about machine learning!

Analytics of Life-Mert Damlapinar 2019-11-11 Analytics of Life provides the reader with a broad overview of the field of data analytics and artificial intelligence. It provides the layperson an understanding of the various stages of artificial intelligence, the risks and powerful benefits. And it provides a way to look at big data and machine learning that enables us to make the most of this exciting new realm of technology in our day-to-day jobs and our small businesses. Questions you can find answers\* \* What is artificial intelligence (AI)? \* What is the difference between AI, machine learning and data analytics? \* Which jobs AI will replace, which jobs are safe from data analytics revolution? \* Why data analytics is the best career move? \* How can I apply data analytics in my job or small business? Who is this book for? \* Managers and business professionals \* Marketers, product managers, and business strategists \* Entrepreneurs, founders and startups team members \* Consultants, advisors and educators \* Almost anybody who has an interest in the future According to an article by Cade Metz in The New York Times, "Researchers say computer systems are learning from lots and lots of digitized books and news articles that could bake old attitudes into new technology." Oxford University professor Nick Bostrom argues that if machine brains surpassed human brains in general intelligence, then this new superintelligence could become extremely powerful - possibly beyond our control. MIT professor Max Tegmark describes and illuminates the recent, groundbreaking advances in Artificial Intelligence and how it might overtake human intelligence. As Oxford University economist Daniel Susskind points out, technological progress could bring about unprecedented prosperity, solving one of humanity's oldest problems: how to make sure that everyone has enough to live on. Distinguished AI researcher and professor of computer science at UC Berkeley, Russell Stuart suggests that we can rebuild AI on a new foundation, according to which machines are designed to be inherently uncertain about the human preferences they are required to satisfy. Industry experts claim that AI will have a negative impact on blue-collar jobs, but Mert predicts that Americans and Europeans will

experience a strong impact on white-collar jobs as well. And Mert also provides research results and a clear description of which jobs will be affected and how soon, which jobs could be enhanced with AI. Analytics of Life also provides solutions and insight into some of the most profound changes to come in human history.

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

AI Crash Course-Hadelin de Ponteves 2019-11-29 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 Understand 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).

An Intelligence in Our Image-Osonde A. Osonde 2017-04-05 Machine learning algorithms and artificial intelligence influence many aspects of life today. This report identifies some of their shortcomings and associated policy risks and examines some approaches for combating these problems.

Hands-on Machine Learning with JavaScript-Burak Kanber 2018-05-29 A definitive guide to creating an intelligent web application with the best of machine learning and JavaScript Key Features Solve complex computational problems in browser with JavaScript Teach your browser how to learn from rules using the power of machine learning Understand discoveries on web interface and API in machine learning Book Description In over 20 years of existence, JavaScript has been pushing beyond the boundaries of web evolution with proven existence on servers, embedded devices, Smart TVs, IoT, Smart Cars, and more. Today, with the added advantage of machine learning research and support for JS libraries, JavaScript makes your browsers smarter than ever with the ability to learn patterns and reproduce them to become a part of innovative products and applications. Hands-on Machine Learning with JavaScript presents various avenues of machine learning in a practical and objective way, and helps implement them using the JavaScript language. Predicting behaviors, analyzing feelings, grouping data, and building neural models are some of the skills you will build from this book. You will learn how to train your machine learning models and work with different kinds of data. During this journey, you will come across use cases such as face detection, spam filtering, recommendation systems, character recognition, and more. Moreover, you will learn how to work with deep neural networks and guide your applications to gain insights from data. By the end of this book, you'll have gained hands-on knowledge on evaluating and implementing the right model, along with choosing from different JS libraries, such as NaturalNode, brain, harthur, classifier, and

many more to design smarter applications. What you will learn Get an overview of state-of-the-art machine learning Understand the pre-processing of data handling, cleaning, and preparation Learn Mining and Pattern Extraction with JavaScript Build your own model for classification, clustering, and prediction Identify the most appropriate model for each type of problem Apply machine learning techniques to real-world applications Learn how JavaScript can be a powerful language for machine learning Who this book is for This book is for you if you are a JavaScript developer who wants to implement machine learning to make applications smarter, gain insightful information from the data, and enter the field of machine learning without switching to another language. Working knowledge of JavaScript language is expected to get the most out of the book.

Artificial Intelligence for Games-Ian Millington 2018-12-14 Creating robust artificial intelligence is one of the greatest challenges for game developers, yet the commercial success of a game is often dependent upon the quality of the AI. In this book, Ian Millington brings extensive professional experience to the problem of improving the quality of AI in games. He describes numerous examples from real games and explores the underlying ideas through detailed case studies. He goes further to introduce many techniques little used by developers today. The book's associated web site contains a library of C++ source code and demonstration programs, and a complete commercial source code library of AI algorithms and techniques. "Artificial Intelligence for Games - 2nd edition" will be highly useful to academics teaching courses on game AI, in that it includes exercises with each chapter. It will also include new and expanded coverage of the following: AI-oriented gameplay; Behavior driven AI; Casual games (puzzle games). Key Features \* The first comprehensive, professional tutorial and reference to implement true AI in games written by an engineer with extensive industry experience. \* Walks through the entire development process from beginning to end. \* Includes examples from over 100 real games, 10 in-depth case studies, and web site with sample code.

AI for Game Developers-David M Bourg 2004-07-23 Written for the novice AI programmer, this text introduces the reader to techniques such as finite state machines, fuzzy logic, neural networks and many others in an easy-to-understand language, supported with code samples throughout the text.

Machine Learning with Python Cookbook-Chris Albon 2018-03-09 This practical guide provides nearly 200 self-contained recipes to help you solve machine learning challenges you may encounter in your daily work. If you're comfortable with Python and its libraries, including pandas and scikit-learn, you'll be able to address specific problems such as loading data, handling text or numerical data, model selection, and dimensionality reduction and many other topics. Each recipe includes code that you can copy and paste into a toy dataset to ensure that it actually works. From there, you can insert, combine, or adapt the code to help construct your application. Recipes also include a discussion that explains the solution and provides meaningful context. This cookbook takes you beyond theory and concepts by providing the nuts and bolts you need to construct working machine learning applications. You'll find recipes for: Vectors, matrices, and arrays Handling numerical and categorical data, text, images, and dates and times Dimensionality reduction using feature extraction or feature selection Model evaluation and selection Linear and logical regression, trees and forests, and k-nearest neighbors Support vector machines (SVM), naïve Bayes, clustering, and neural networks Saving and loading trained models

Superintelligence-Nick Bostrom 2014 The human brain has some capabilities that the brains of other animals lack. It is to these distinctive capabilities that our species owes its dominant position. Other animals have stronger muscles or sharper claws, but we have cleverer brains. If machine brains one day come to surpass human brains in general intelligence, then this new superintelligence could become very powerful. As the fate of the gorillas now depends more on us humans than on the gorillas themselves, so the fate of our species then would come to depend on the actions of the machine superintelligence. But we have one advantage: we get to make the first move. Will it be possible to construct a seed AI or otherwise to engineer initial conditions so as to make an intelligence explosion survivable? How could one achieve a controlled detonation? To get closer to an answer to this question, we must make our way through a fascinating landscape of topics and considerations. Read the book and learn about oracles, genies, singletons; about boxing methods, tripwires, and mind crime; about humanity's cosmic endowment and differential technological development; indirect normativity, instrumental convergence, whole brain emulation and technology couplings; Malthusian economics and dystopian evolution; artificial intelligence, and biological cognitive enhancement, and collective intelligence.

Feature Engineering Made Easy-Sinan Ozdemir 2018-01-22 A perfect guide to speed up the predicting power of machine learning algorithms Key Features Design, discover, and create dynamic, efficient features for your machine learning application Understand your data in-depth and derive astonishing data

insights with the help of this Guide Grasp powerful feature-engineering techniques and build machine learning systems Book Description Feature engineering is the most important step in creating powerful machine learning systems. This book will take you through the entire feature-engineering journey to make your machine learning much more systematic and effective. You will start with understanding your data—often the success of your ML models depends on how you leverage different feature types, such as continuous, categorical, and more, You will learn when to include a feature, when to omit it, and why, all by understanding error analysis and the acceptability of your models. You will learn to convert a problem statement into useful new features. You will learn to deliver features driven by business needs as well as mathematical insights. You'll also learn how to use machine learning on your machines, automatically learning amazing features for your data. By the end of the book, you will become proficient in Feature Selection, Feature Learning, and Feature Optimization. What you will learn Identify and leverage different feature types Clean features in data to improve predictive power Understand why and how to perform feature selection, and model error analysis Leverage domain knowledge to construct new features Deliver features based on mathematical insights Use machine-learning algorithms to construct features Master feature engineering and optimization Harness feature engineering for real world applications through a structured case study Who this book is for If you are a data science professional or a machine learning engineer looking to strengthen your predictive analytics model, then this book is a perfect guide for you. Some basic understanding of the machine learning concepts and Python scripting would be enough to get started with this book.

Practical Machine Learning with Python-Dipanjan Sarkar 2017-12-20 Master the essential skills needed to recognize and solve complex problems with machine learning and deep learning. Using real-world examples that leverage the popular Python machine learning ecosystem, this book is your perfect companion for learning the art and science of machine learning to become a successful practitioner. The concepts, techniques, tools, frameworks, and methodologies used in this book will teach you how to think, design, build, and execute machine learning systems and projects successfully. Practical Machine Learning with Python follows a structured and comprehensive three-tiered approach packed with hands-on examples and code. Part 1 focuses on understanding machine learning concepts and tools. This includes machine learning basics with a broad overview of algorithms, techniques, concepts and applications, followed by a tour of the entire Python machine learning ecosystem. Brief guides for useful machine learning tools, libraries and frameworks are also covered. Part 2 details standard machine learning pipelines, with an emphasis on data processing analysis, feature engineering, and modeling. You will learn how to process, wrangle, summarize and visualize data in its various forms. Feature engineering and selection methodologies will be covered in detail with real-world datasets followed by model building, tuning, interpretation and deployment. Part 3 explores multiple real-world case studies spanning diverse domains and industries like retail, transportation, movies, music, marketing, computer vision and finance. For each case study, you will learn the application of various machine learning techniques and methods. The hands-on examples will help you become familiar with state-of-the-art machine learning tools and techniques and understand what algorithms are best suited for any problem. Practical Machine Learning with Python will empower you to start solving your own problems with machine learning today! What You'll Learn Execute end-to-end machine learning projects and systems Implement hands-on examples with industry standard, open source, robust machine learning tools and frameworks Review case studies depicting applications of machine learning and deep learning on diverse domains and industries Apply a wide range of machine learning models including regression, classification, and clustering. Understand and apply the latest models and methodologies from deep learning including CNNs, RNNs, LSTMs and transfer learning. Who This Book Is For IT professionals, analysts, developers, data scientists, engineers, graduate students

The Handbook of Artificial Intelligence-Avron Barr 2014-05-12 The Handbook of Artificial Intelligence, Volume I focuses on the progress in artificial intelligence (AI) and its increasing applications, including parsing, grammars, and search methods. The book first elaborates on AI, AI handbook and literature, problem representation, search methods, and sample search programs. The text then ponders on representation of knowledge, including survey of representation techniques and representation schemes. The manuscript explores understanding natural languages, as well as machine translation, grammars, parsing, test generation, and natural language processing systems. The book also takes a look at understanding spoken language, including systems architecture and the ARPA SUR projects. The text is a valuable source of information for computer science experts and researchers interested in pursuing further research in artificial intelligence.

Deep Learning with Python-Francois Chollet 2017-10-28 Summary Deep Learning with Python introduces the field of deep learning using the Python language and the powerful Keras library. Written by Keras creator and Google AI researcher Francois Chollet, this book builds your understanding through intuitive explanations and practical examples. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Machine learning has made remarkable progress in recent years. We went from near-unusable speech and image recognition, to near-human accuracy. We went from machines that couldn't beat a serious Go player, to defeating a world champion. Behind this progress is deep learning--a combination of engineering advances, best practices, and theory that enables a wealth of previously impossible smart applications. About the Book Deep Learning with Python introduces the field of deep learning using the Python language and the powerful Keras library. Written by Keras creator and Google AI researcher Francois Chollet, this book builds your understanding through intuitive explanations and practical examples. You'll explore challenging concepts and practice with applications in computer vision, natural-language processing, and generative models. By the time you finish, you'll have the knowledge and hands-on skills to apply deep learning in your own projects. What's Inside Deep learning from first principles Setting up your own deep-learning environment Image-classification models Deep learning for text and sequences Neural style transfer, text generation, and image generation About the Reader Readers need intermediate Python skills. No previous experience with Keras, TensorFlow, or machine learning is required. About the Author Francois Chollet works on deep learning at Google in Mountain View, CA. He is the creator of the Keras deep-learning library, as well as a contributor to the TensorFlow machine-learning framework. He also does deep-learning research, with a focus on computer vision and the application of machine learning to formal reasoning. His papers have been published at major conferences in the field, including the Conference on Computer Vision and Pattern Recognition (CVPR), the Conference and Workshop on Neural Information Processing Systems (NIPS), the International Conference on Learning Representations (ICLR), and others. Table of Contents PART 1 - FUNDAMENTALS OF DEEP LEARNING What is deep learning? Before we begin: the mathematical building blocks of neural networks Getting started with neural networks Fundamentals of machine learning PART 2 - DEEP LEARNING IN PRACTICE Deep learning for computer vision Deep learning for text and sequences Advanced deep-learning best practices Generative deep learning Conclusions appendix A - Installing Keras and its dependencies on Ubuntu appendix B - Running Jupyter notebooks on an EC2 GPU instance

The Quest for Artificial Intelligence-Nils J. Nilsson 2009-10-30 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.

Grokking Machine Learning-Serrano G. Luis 2020-11-24 It's time to dispel the myth that machine learning is difficult. Grokking Machine Learning teaches you how to apply ML to your projects using only standard Python code and high school-level math. No specialist knowledge is required to tackle the hands-on exercises using readily-available machine learning tools! In Grokking Machine Learning, expert machine learning engineer Luis Serrano introduces the most valuable ML techniques and teaches you how to make them work for you. Practical examples illustrate each new concept to ensure you're grokking as you go. You'll build models for spam detection, language analysis, and image recognition as you lock in each carefully-selected skill. Packed with easy-to-follow Python-based exercises and mini-projects, this book sets you on the path to becoming a machine learning expert. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

The Economics of Artificial Intelligence-Ajay Agrawal 2019 Advances in artificial intelligence (AI) highlight the potential of this technology to affect productivity, growth, inequality, market power, innovation, and employment. This volume seeks to set the agenda for economic research on the impact of AI. It covers four broad themes: AI as a general purpose technology; the relationships between AI, growth, jobs, and inequality; regulatory responses to changes brought on by AI; and the effects of AI on the way economic

research is conducted. It explores the economic influence of machine learning, the branch of computational statistics that has driven much of the recent excitement around AI, as well as the economic impact of robotics and automation and the potential economic consequences of a still-hypothetical artificial general intelligence. The volume provides frameworks for understanding the economic impact of AI and identifies a number of open research questions. Contributors: Daron Acemoglu, Massachusetts Institute of Technology Philippe Aghion, Collège de France Ajay Agrawal, University of Toronto Susan Athey, Stanford University James Bessen, Boston University School of Law Erik Brynjolfsson, MIT Sloan School of Management Colin F. Camerer, California Institute of Technology Judith Chevalier, Yale School of Management Iain M. Cockburn, Boston University Tyler Cowen, George Mason University Jason Furman, Harvard Kennedy School Patrick Francois, University of British Columbia Alberto Galasso, University of Toronto Joshua Gans, University of Toronto Avi Goldfarb, University of Toronto Austan Goolsbee, University of Chicago Booth School of Business Rebecca Henderson, Harvard Business School Ginger Zhe Jin, University of Maryland Benjamin F. Jones, Northwestern University Charles I. Jones, Stanford University Daniel Kahneman, Princeton University Anton Korinek, Johns Hopkins University Mara Lederman, University of Toronto Hong Luo, Harvard Business School John McHale, National University of Ireland Paul R. Milgrom, Stanford University Matthew Mitchell, University of Toronto Alexander Oettl, Georgia Institute of Technology Andrea Prat, Columbia Business School Manav Raj, New York University Pascual Restrepo, Boston University Daniel Rock, MIT Sloan School of Management Jeffrey D. Sachs, Columbia University Robert Seamans, New York University Scott Stern, MIT Sloan School of Management Betsey Stevenson, University of Michigan Joseph E. Stiglitz, Columbia University Chad Syverson, University of Chicago Booth School of Business Matt Taddy, University of Chicago Booth School of Business Steven Tadelis, University of California, Berkeley Manuel Trajtenberg, Tel Aviv University Daniel Trefler, University of Toronto Catherine Tucker, MIT Sloan School of Management Hal Varian, University of California, Berkeley

Interpretable Machine Learning-Christoph Molnar 2019

Artificial Intelligence-Stuart Russell 2016-09-10 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.

The Ethical Algorithm-Michael Kearns 2019-10-04 Over the course of a generation, algorithms have gone from mathematical abstractions to powerful mediators of daily life. Algorithms have made our lives more efficient, more entertaining, and, sometimes, better informed. At the same time, complex algorithms are increasingly violating the basic rights of individual citizens. Allegedly anonymized datasets routinely leak our most sensitive personal information; statistical models for everything from mortgages to college admissions reflect racial and gender bias. Meanwhile, users manipulate algorithms to "game" search engines, spam filters, online reviewing services, and navigation apps. Understanding and improving the science behind the algorithms that run our lives is rapidly becoming one of the most pressing issues of this century. Traditional fixes, such as laws, regulations and watchdog groups, have proven woefully inadequate. Reporting from the cutting edge of scientific research, The Ethical Algorithm offers a new approach: a set of principled solutions based on the emerging and exciting science of socially aware algorithm design. Michael Kearns and Aaron Roth explain how we can better embed human principles into machine code - without halting the advance of data-driven scientific exploration. Weaving together innovative research with stories of citizens, scientists, and activists on the front lines, The Ethical Algorithm offers a compelling vision for a future, one in which we can better protect humans from the unintended impacts of algorithms while continuing to inspire wondrous advances in technology.

DOS Made Easy-Herbert Schildt 1988 Contains practical information on DOS 3.3, covering the basic principles of the disk operating system and tips on commands, programming techniques, and applications Paradigms of Artificial Intelligence Programming-Peter Norvig 2014-06-28 Paradigms of AI Programming is the first text to teach advanced Common Lisp techniques in the context of building major AI systems. By reconstructing authentic, complex AI programs using state-of-the-art Common Lisp, the book teaches students and professionals how to build and debug robust practical programs, while demonstrating superior programming style and important AI concepts. The author strongly emphasizes the practical performance issues involved in writing real working programs of significant size. Chapters on troubleshooting and efficiency are included, along with a discussion of the fundamentals of object-oriented programming and a description of the main CLOS functions. This volume is an excellent text for a course on AI programming, a useful supplement for general AI courses and an indispensable reference for the

professional programmer.

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