Automate This How Algorithms

Automate ThisHow Algorithms Took Over Our Markets, Our Jobs, and the WorldPenguin

What identity means in an algorithmic age: how it works, how our lives are controlled by it, and how we can resist it Algorithms are everywhere, organizing the near limitless data that exists in our world. Derived from our every search, like, click, and purchase, algorithms determine the news we get, the ads we see, the information accessible to us and even who our friends are. These complex configurations not only form knowledge and social relationships in the digital and physical world, but also determine who we are and who we can be, both on and offline. Algorithms create and recreate us, using our data to assign and reassign our gender, race, sexuality, and citizenship status. They can recognize us as celebrities or mark us as terrorists. In this era of ubiquitous surveillance, contemporary data collection entails more than gathering information about us. Entities like Google, Facebook, and the NSA also decide what that information means, constructing our worlds and the identities we inhabit in the process. We have little control over who we algorithmically are. Our identities are made useful not for us⏹but for someone else. Through a series of entertaining and engaging examples, John Cheney-Lippold draws on the social constructions of identity to advance a new understanding of our algorithmic identities. We Are Data will educate and inspire readers who want to wrest back some freedom in our increasingly surveilled and algorithmically-

constructed world.

In today's modern age of information, new technologies are quickly emerging and being deployed into the field of information technology. Cloud computing is a tool that has proven to be a versatile piece of software within IT. Unfortunately, the high usage of Cloud has raised many concerns related to privacy, security, and data protection that have prevented cloud computing solutions from becoming the prevalent alternative for mission critical systems. Up-to-date research and current techniques are needed to help solve these vulnerabilities in cloud computing. Modern Principles, Practices, and Algorithms for Cloud Security is a pivotal reference source that provides vital research on the application of privacy and security in cloud computing. While highlighting topics such as chaos theory, soft computing, and cloud forensics, this publication explores present techniques and methodologies, as well as current trends in cloud protection. This book is ideally designed for IT specialists, scientists, software developers, security analysts, computer engineers, academicians, researchers, and students seeking current research on the defense of cloud services.

Novel Algorithms and Techniques in Telecommunications, Automation and Industrial Electronics includes a set of rigorously reviewed world-class manuscripts addressing and detailing state-of-the-art research projects in the areas of Industrial Electronics, Technology and Automation, Telecommunications and Networking. Novel Algorithms and Techniques in Telecommunications, Automation and

Industrial Electronics includes selected papers form the conference proceedings of the International Conference on Industrial Electronics, Technology and Automation (IETA 2007) and International Conference on Telecommunications and Networking (TeNe 07) which were part of the International Joint Conferences on Computer, Information and Systems Sciences and Engineering (CISSE 2007).

This is a hands-on guide for power users and Jira administrators to automate daily repetitive and tedious work with no code approach with Jira family including Jira Software, Jira Service Desk, and Jira Core.

Scholars across the humanities, social sciences, and information sciences are grappling with how best to study virtual environments, use computational tools in their research, and engage audiences with their results. Classic work in science and technology studies (STS) has played a central role in how these fields analyze digital technologies, but many of its key examples do not speak to today's computational realities. This groundbreaking collection brings together a world-class group of contributors to refresh the canon for

contemporary digital scholarship. In twenty-five pioneering and incisive essays, this unique digital field guide offers innovative new approaches to digital scholarship, the design of digital tools and objects, and the deployment of critically grounded technologies for analysis and discovery. Contributors cover a broad range of topics, including software development, hackathons, digitized objects, diversity in the tech sector, and distributed scientific collaborations. They discuss methodological considerations of social networks and data analysis, design projects that can translate STS concepts into durable scientific work, and much more. Featuring a concise introduction by Janet Vertesi and David Ribes and accompanied by an interactive microsite, this book provides new perspectives on digital scholarship that will shape the agenda for tomorrow's generation of STS researchers and practitioners.
"Refreshingly thought-provoking..." – The Financial Times The essential playbook for the future of your business What To Do When Machines Do Everything is a guidebook to succeeding in the next generation of the digital economy. When systems running on Artificial Intelligence can drive our cars, diagnose medical patients, and manage our finances more effectively than humans it raises profound questions on the future of work and how companies compete. Illustrated with real-world cases, data, and insight, the authors provide clear strategic guidance and actionable steps to

help you and your organization move ahead in a world where exponentially developing new technologies are changing how value is created. Written by a team of business and technology expert practitioners—who also authored Code Halos: How the Digital Lives of People, Things, and Organizations are Changing the Rules of Business—this book provides a clear path to the future of your work. The first part of the book examines the once in a generation upheaval most every organization will soon face as systems of intelligence go mainstream. The authors argue that contrary to the doom and gloom that surrounds much of IT and business at the moment, we are in fact on the cusp of the biggest wave of opportunity creation since the Industrial Revolution. Next, the authors detail a clear-cut business model to help leaders take part in this coming boom; the AHEAD model outlines five strategic initiatives—Automate, Halos, Enhance, Abundance, and Discovery—that are central to competing in the next phase of global business by driving new levels of efficiency, customer intimacy and innovation. Business leaders today have two options: be swallowed up by the ongoing technological evolution, or ride the crest of the wave to new profits and better business. This book shows you how to avoid your own extinction event, and will help you; Understand the untold full extent of technology's impact on the way we work and live. Find out where we're headed, and how soon the future will arrive Leverage the new

emerging paradigm into a sustainable business advantage Adopt a strategic model for winning in the new economy The digital world is already transforming how we work, live, and shop, how we are governed and entertained, and how we manage our money, health, security, and relationships. Don't let your business—or your career—get left behind. What To Do When Machines Do Everything is your strategic roadmap to a future full of possibility and success. Or peril.

Interest in algorithmic trading is growing massively – it's cheaper, faster and better to control than standard trading, it enables you to 'pre-think' the market, executing complex math in real time and take the required decisions based on the strategy defined. We are no longer limited by human 'bandwidth'. The cost alone (estimated at 6 cents per share manual, 1 cent per share algorithmic) is a sufficient driver to power the growth of the industry. According to consultant firm, Aite Group LLC, high frequency trading firms alone account for 73% of all US equity trading volume, despite only representing approximately 2% of the total firms operating in the US markets. Algorithmic trading is becoming the industry lifeblood. But it is a secretive industry with few willing to share the secrets of their success. The book begins with a step-by-step guide to algorithmic trading, demystifying this complex subject and providing readers with a specific and usable algorithmic trading knowledge. It provides background information leading to more

advanced work by outlining the current trading algorithms, the basics of their design, what they are, how they work, how they are used, their strengths, their weaknesses, where we are now and where we are going. The book then goes on to demonstrate a selection of detailed algorithms including their implementation in the markets. Using actual algorithms that have been used in live trading readers have access to real time trading functionality and can use the never before seen algorithms to trade their own accounts. The markets are complex adaptive systems exhibiting unpredictable behaviour. As the markets evolve algorithmic designers need to be constantly aware of any changes that may impact their work, so for the more adventurous reader there is also a section on how to design trading algorithms. All examples and algorithms are demonstrated in Excel on the accompanying CD ROM, including actual algorithmic examples which have been used in live trading.
Automating the News
How Algorithms Create and Prevent Fake News
How Search Engines Reinforce Racism
Modern Principles, Practices, and Algorithms for Cloud Security
How Artificial Intelligence is Redefining Who We Are
Imagination in the Age of Computing
Automating Inequality

Algorithms for Automating Open Source Intelligence (OSINT) presents information on the gathering of information and extraction of actionable intelligence

from openly available sources, including news broadcasts, public repositories, and more recently, social media. As OSINT has applications in crime fighting, state-based intelligence, and social research, this book provides recent advances in text mining, web crawling, and other algorithms that have led to advances in methods that can largely automate this process. The book is beneficial to both practitioners and academic researchers, with discussions of the latest advances in applications, a coherent set of methods and processes for automating OSINT, and interdisciplinary perspectives on the key problems identified within each discipline. Drawing upon years of practical experience and using numerous examples, editors Robert Layton, Paul Watters, and a distinguished list of contributors discuss Evidence Accumulation Strategies for OSINT, Named Entity Resolution in Social Media, Analyzing Social Media Campaigns for Group Size Estimation, Surveys and qualitative techniques in OSINT, and Geospatial reasoning of open data. Presents a coherent set of methods and processes for automating OSINT Focuses on algorithms and applications allowing the practitioner to get up and running quickly Includes fully developed case studies on the digital underground and predicting crime through OSINT Discusses the ethical considerations when using publicly available online data

The age of intelligent machines is upon us, and we are at a reflection point. The proliferation of fast-moving technologies, including forms of artificial intelligence, will cause us to confront profound questions about ourselves. The era of human intellectual superiority is ending, and, as a species,

we need to plan for this monumental shift. A Human Algorithm: How Artificial Intelligence Is Redefining Who We Are examines the immense impact intelligent technology will have on humanity. These machines, while challenging our personal beliefs and our socio-economic world order, also have the potential to transform our health and well-being, alleviate poverty and suffering, and reveal the mysteries of intelligence and consciousness. International human rights attorney Flynn Coleman deftly argues that it is critical we instil values, ethics, and morals into our robots, algorithms, and other forms of AI. Equally important, we need to develop and implement laws, policies, and oversight mechanisms to protect us from tech's insidious threats. To realize AI's transcendent potential, Coleman ad- vocates for inviting a diverse group of voices to participate in designing our intelligent machines and using our moral imagination to ensure that human rights, empathy, and equity are core principles of emerging technologies. Ultimately, A Human Algorithm is a clarion call for building a more humane future and moving conscientiously into a new frontier of our own design.
The author of the best-selling \$20 Per Gallon traces the rise of computerized decision making to explore how it has become a pervasive aspect of life, revealing how cleverly designed bots are helping and hindering today's world while considering how algorithm technology will shape the near future.
From deepfakes to GPT-3, deep learning is now powering a new assault on our ability to tell what's real and what's not, bringing a whole new algorithmic side to fake news. On the other hand, remarkable methods are being developed to help automate fact-

checking and the detection of fake news and doctored media. Success in the modern business world requires you to understand these algorithmic currents, and to recognize the strengths, limits, and impacts of deep learning---especially when it comes to discerning the truth and differentiating fact from fiction. This book tells the stories of this algorithmic battle for the truth and how it impacts individuals and society at large. In doing so, it weaves together the human stories and what's at stake here, a simplified technical background on how these algorithms work, and an accessible survey of the research literature exploring these various topics. How Algorithms Create and Prevent Fake News is an accessible, broad account of the various ways that data-driven algorithms have been distorting reality and rendering the truth harder to grasp. From news aggregators to Google searches to YouTube recommendations to Facebook news feeds, the way we obtain information today is filtered through the lens of tech giant algorithms. The way data is collected, labelled, and stored has a big impact on the machine learning algorithms that are trained on it, and this is a main source of algorithmic bias – which gets amplified in harmful data feedback loops. Don't be afraid: with this book you'll see the remedies and technical solutions that are being applied to oppose these harmful trends. There is hope. What You Will Learn The ways that data labeling and storage impact machine learning and how feedback loops can occur The history and inner-workings of YouTube's recommendation algorithm The state-of-the-art capabilities of AI-powered text generation (GPT-3) and video synthesis/doctoring (deepfakes) and how these technologies have been

used so far The algorithmic tools available to help
with automated fact-checking and truth-detection
Who This Book is For People who don't have a
technical background (in data, computers, etc.) but
who would like to learn how algorithms impact
society; business leaders who want to know the
powers and perils of relying on artificial intelligence. A
secondary audience is people with a technical
background who want to explore the larger social and
societal impact of their work.

How Algorithms Came to Rule Our World

The Quest for Lights Out

How Algorithms Took Over Our Markets, Our Jobs, and
the World

Algorithms and the Making of Our Digital Selves

A beginner's guide to building automated machine
learning systems using AutoML and Python

Automating Open Source Intelligence

The Age of Surveillance Capitalism

Market_Desc: · Electrical Engineering Students
taking courses on VLSI systems, CAD tools for
VLSI, Design Automation at Final Year or
Graduate Level, Computer Science courses on
the same topics, at a similar level· Practicing
Engineers wishing to learn the state of the art in
VLSI Design Automation· Designers of CAD tools
for chip design in software houses or large
electronics companies. Special Features: ·
Probably the first book on Design Automation for
VLSI Systems which covers all stages of design
from layout synthesis through logic synthesis to
high-level synthesis· Clear, precise presentation

of examples, well illustrated with over 200 figures· Focus on algorithms for VLSI design tools means it will appeal to some Computer Science as well as Electrical Engineering departments About The Book: Enrollments in VLSI design automation courses are not large but it's a very popular elective, especially for those seeking a career in the microelectronics industry. Already the reviewers seem very enthusiastic about the coverage of the book being a better match for their courses than available competitors, because it covers all design phases. It has plenty of worked problems and a large no. of illustrations. It's a good 'list-builder' title that matches our strategy of focusing on topics that lie on the interface between Elec Eng and Computer Science.

From hidden connections in big data to bots spreading fake news, journalism is increasingly computer-generated. Nicholas Diakopoulos explains the present and future of a world in which algorithms have changed how the news is created, disseminated, and received, and he shows why journalists--and their values--are at little risk of being replaced.

A revealing look at how negative biases against women of color are embedded in search engine results and algorithms Run a Google search for "black girls"—what will you find? "Big Booty" and other sexually explicit terms are likely to come up as top search terms. But, if you type in

"white girls," the results are radically different. The suggested porn sites and un-moderated discussions about "why black women are so sassy" or "why black women are so angry" presents a disturbing portrait of black womanhood in modern society. In Algorithms of Oppression, Safiya Umoja Noble challenges the idea that search engines like Google offer an equal playing field for all forms of ideas, identities, and activities. Data discrimination is a real social problem; Noble argues that the combination of private interests in promoting certain sites, along with the monopoly status of a relatively small number of Internet search engines, leads to a biased set of search algorithms that privilege whiteness and discriminate against people of color, specifically women of color. Through an analysis of textual and media searches as well as extensive research on paid online advertising, Noble exposes a culture of racism and sexism in the way discoverability is created online. As search engines and their related companies grow in importance—operating as a source for email, a major vehicle for primary and secondary school learning, and beyond—understanding and reversing these disquieting trends and discriminatory practices is of utmost importance. An original, surprising and, at times, disturbing account of bias on the internet, Algorithms of Oppression contributes to our understanding of

how racism is created, maintained, and disseminated in the 21st century.
_____ 'One of the best books yet written on data and algorithms. . .deserves a place on the bestseller charts.' (The Times) You are accused of a crime. Who would you rather determined your fate – a human or an algorithm? An algorithm is more consistent and less prone to error of judgement. Yet a human can look you in the eye before passing sentence. Welcome to the age of the algorithm, the story of a not-too-distant future where machines rule supreme, making important decisions – in healthcare, transport, finance, security, what we watch, where we go even who we send to prison. So how much should we rely on them? What kind of future do we want? Hannah Fry takes us on a tour of the good, the bad and the downright ugly of the algorithms that surround us. In Hello World she lifts the lid on their inner workings, demonstrates their power, exposes their limitations, and examines whether they really are an improvement on the humans they are replacing. A BBC RADIO 4: BOOK OF THE WEEK SHORTLISTED FOR THE 2018 BAILLIE GIFFORD PRIZE AND 2018 ROYAL SOCIETY SCIENCE BOOK PRIZE
Networks, Algorithms, Humanity
How to Get Ahead in a World of AI, Algorithms, Bots, and Big Data
What Algorithms Want

digitalSTS
How the Inevitable Rise in the Price of Gasoline
Will Change Our Lives for the Better
$20 Per Gallon
Automate this

*Automate data and model pipelines for faster machine
learning applications Key Features Build automated
modules for different machine learning components
Understand each component of a machine learning
pipeline in depth Learn to use different open source
AutoML and feature engineering platforms Book
Description AutoML is designed to automate parts of
Machine Learning. Readily available AutoML tools are
making data science practitioners' work easy and are
received well in the advanced analytics community.
Automated Machine Learning covers the necessary
foundation needed to create automated machine
learning modules and helps you get up to speed with
them in the most practical way possible. In this book,
you'll learn how to automate different tasks in the
machine learning pipeline such as data preprocessing,
feature selection, model training, model optimization, and
much more. In addition to this, it demonstrates how you
can use the available automation libraries, such as auto-
sklearn and MLBox, and create and extend your own
custom AutoML components for Machine Learning. By
the end of this book, you will have a clearer
understanding of the different aspects of automated
Machine Learning, and you'll be able to incorporate
automation tasks using practical datasets. You can
leverage your learning from this book to implement*

Machine Learning in your projects and get a step closer to winning various machine learning competitions. What you will learn Understand the fundamentals of Automated Machine Learning systems Explore auto-sklearn and MLBox for AutoML tasks Automate your preprocessing methods along with feature transformation Enhance feature selection and generation using the Python stack Assemble individual components of ML into a complete AutoML framework Demystify hyperparameter tuning to optimize your ML models Dive into Machine Learning concepts such as neural networks and autoencoders Understand the information costs and trade-offs associated with AutoML Who this book is for If you're a budding data scientist, data analyst, or Machine Learning enthusiast and are new to the concept of automated machine learning, this book is ideal for you. You'll also find this book useful if you're an ML engineer or data professional interested in developing quick machine learning pipelines for your projects. Prior exposure to Python programming will help you get the best out of this book.

THE TOP 10 SUNDAY TIMES BESTSELLER Shortlisted for the FT Business Book of the Year Award 2019 'Easily the most important book to be published this century. I find it hard to take any young activist seriously who hasn't at least familarised themselves with Zuboff's central ideas.' - Zadie Smith, The Guardian The challenges to humanity posed by the digital future, the first detailed examination of the unprecedented form of power called "surveillance capitalism," and the quest by powerful corporations to predict and control us. The

*heady optimism of the Internet's early days is gone. Technologies that were meant to liberate us have deepened inequality and stoked divisions. Tech companies gather our information online and sell it to the highest bidder, whether government or retailer. Profits now depend not only on predicting our behaviour but modifying it too. How will this fusion of capitalism and the digital shape our values and define our future? Shoshana Zuboff shows that we are at a crossroads. We still have the power to decide what kind of world we want to live in, and what we decide now will shape the rest of the century. Our choices: allow technology to enrich the few and impoverish the many, or harness it and distribute its benefits. The Age of Surveillance Capitalism is a deeply-reasoned examination of the threat of unprecedented power free from democratic oversight. As it explores this new capitalism's impact on society, politics, business, and technology, it exposes the struggles that will decide both the next chapter of capitalism and the meaning of information civilization. Most critically, it shows how we can protect ourselves and our communities and ensure we are the masters of the digital rather than its slaves.
Everyone wants a "lights out" data center, but in an era of distributed, Internet-centered computing, that's tougher to accomplish than ever. This book can get you close! It helps managers define realistic expectations and goals for automating IT, then presents a systematic, enterprise-level methodology that incorporates today's best approaches to achieving those goals. The book contains sample project plans, process flows, IT*

organization charts, and other valuable resources for
getting from where you are to where you want to be.
This easily accessible book provides a broad view of the
latest developments in the field of fast digital signal
processing algorithms. It bridges the gap between DSP
algorithms and their implementation on a variety of serial
and super computers.
Algorithms for OSINT
Basic to Advanced Strategies
Algorithms for Discrete Fourier Transform and
Convolution
Practical Programming for Total Beginners
How Algorithms Are Rewriting the Media
Case Studies and Algorithms to Get You Started
Calculative Devices in the Age of Big Data

Data mining is a very active research area with many
successful real-world app- cations. It consists of a set
of concepts and methods used to extract interesting
useful knowledge (or patterns) from real-world
datasets, providing valuable support for decision
making in industry, business, government, and science.
Although there are already many types of data mining
algorithms available in the literature, it is still dif cult
for users to choose the best possible data mining
algorithm for their particular data mining problem. In
addition, data mining al- rithms have been manually
designed; therefore they incorporate human biases
and preferences. This book proposes a new approach
to the design of data mining algorithms. - stead of
relying on the slow and ad hoc process of manual

algorithm design, this book proposes systematically automating the design of data mining algorithms with an evolutionary computation approach. More precisely, we propose a genetic p- gramming system (a type of evolutionary computation method that evolves c- puter programs) to automate the design of rule induction algorithms, a type of cl- si cation method that discovers a set of classi cation rules from data. W focus on genetic programming in this book because it is the paradigmatic type of machine learning method for automating the generation of programs and because it has the advantage of performing a global search in the space of candidate solutions (data mining algorithms in our case), but in principle other types of search methods for this task could be investigated in the future.

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.

The second edition of this best-selling Python book (over 500,000 copies sold!) uses Python 3 to teach even the technically uninclined how to write programs that do in minutes what would take hours to do by hand. There is no prior programming experience required and the book is loved by liberal arts majors and geeks alike. If you've ever spent hours renaming files or updating hundreds of spreadsheet cells, you know how tedious tasks like these can be. But what if you could have your computer do them for you? In this fully revised second edition of the best-selling classic

Automate the Boring Stuff with Python, you'll learn how to use Python to write programs that do in minutes what would take you hours to do by hand--no prior programming experience required. You'll learn the basics of Python and explore Python's rich library of modules for performing specific tasks, like scraping data off websites, reading PDF and Word documents, and automating clicking and typing tasks. The second edition of this international fan favorite includes a brand-new chapter on input validation, as well as tutorials on automating Gmail and Google Sheets, plus tips on automatically updating CSV files. You'll learn how to create programs that effortlessly perform useful feats of automation to: • Search for text in a file or across multiple files • Create, update, move, and rename files and folders • Search the Web and download online content • Update and format data in Excel spreadsheets of any size • Split, merge, watermark, and encrypt PDFs • Send email responses and text notifications • Fill out online forms Step-by-step instructions walk you through each program, and updated practice projects at the end of each chapter challenge you to improve those programs and use your newfound skills to automate similar tasks. Don't spend your time doing work a well-trained monkey could do. Even if you've never written a line of code, you can make your computer do the grunt work. Learn how in Automate the Boring Stuff with Python, 2nd Edition. Computerized processes are everywhere in our society

They are the automated phone messaging systems that businesses use to screen calls; the link between students' standardized test scores and public schools' access to resources; the algorithms that regulate patient diagnoses and reimbursements to doctors. The storage, sorting, and analysis of massive amounts of information have enabled the automation of decision-making at an unprecedented level. Meanwhile, computers have offered a model of cognition that increasingly shapes our approach to the world. The proliferation of "roboprocesses" is the result, as editors Catherine Besteman and Hugh Gusterson observe in this rich and wide-ranging volume, which features contributions from a distinguished cast of scholars in anthropology, communications, international studies, and political science. Although automatic processes are designed to be engines of rational systems, the stories in Life by Algorithms reveal how they can in fact produce absurd, inflexible, or even dangerous outcomes. Joining the call for "algorithmic transparency," the contributors bring exceptional sensitivity to everyday sociality into their critique to better understand how the perils of modern technology affect finance, medicine, education, housing, the workplace, food production, public space, and emotions—not as separate problems but as linked manifestations of a deeper defect in the fundamental ordering of our society.
The Algorithmic Leader

Novel Algorithms and Techniques in
Telecommunications, Automation and Industrial
Electronics

Futureproof
The Fight for a Human Future at the New Frontier of
Power
After the Digital Tornado
How to be Human in the Age of the Machine

Leading technology scholars examine how networks powered
by algorithms are transforming humanity, posing deep
questions about power, freedom, and fairness. This title is
also available as Open Access on Cambridge Core.
How the rise of computerized decision-making affects every
aspect of business and daily life The bot takeover began with
high frequency trading on Wall Street, and from there it
spread to all manners of high-level tasks—such as
diagnosing illnesses or interpreting legal documents. There is
no realm of human endeavor safe from algorithms that
employ speed, precision and nuance. In this fascinating book,
Steiner tells the story of how algorithms took over and shows
why the "bot revolution" is about to spill into every aspect of
our lives. We meet bots that are driving cars, penning haikus,
and writing music mistaken for Bach's. They listen in on
customer service calls and figure out what Iran would do in
the event of a nuclear standoff. On Wall Street, pre-
programmed algorithmic deals are executed by machines
faster than any human could—leaving human investors at a
severe disadvantage. But what will the world look like when
algorithms control our hospitals, our roads, and our national
security? Is a stock market controlled by high-speed trading
bots worth investing in? And what role will be left for doctors,

lawyers, writers, truck drivers, and many others?
This book highlights the latest advancements in the use of
automated systems in the design, construction, operation and
future of the built environment and its occupants. It considers
how the use of automated decision-making frameworks,
artificial intelligence and other technologies of automation are
presently impacting the practice of architects, engineers,
project managers and contractors, and articulates the near
future changes to workflows, legal frameworks and the wider
AEC industry. This book surveys and compiles the use of city
apps, robots that operate buildings and fabricate structural
elements, 3D printing, drones, sensors, algorithms, and
advanced prefabricated modules. The book also contributes
to the growing literature on smart cities, and explores the
impacts on data privacy and data sovereignty that arise
through the use of sensors, digital twins and intelligent
transport systems. It provides a useful reference for further
research and development in the area of automation in
design and construction to architects, engineers, project
managers, superintendents and construction lawyers,
contractors, policy makers, and students.
A New York Times bestselling author and tech columnist's
counter-intuitive guide to staying relevant - and employable -
in the machine age by becoming irreplaceably human. It's not
a future scenario any more. We've been taught that to
compete with automation and AI, we'll have to become more
like the machines themselves, building up technical skills like
coding. But, there's simply no way to keep up. What if all the
advice is wrong? And what do we need to do instead to
become futureproof? We tend to think of automation as a
blue-collar phenomenon that will affect truck drivers, factory
workers, and other people with repetitive manual jobs. But it's
much, much broader than that. Lawyers are being automated
out of existence. Last year, JPMorgan Chase built a piece of

software called COIN, which uses machine learning to review complicated contracts and documents. It used to take the firm's lawyers more than 300,000 hours every year to review all of those documents. Now, it takes a few seconds, and requires just one human to run the program. Doctors are being automated out of existence, too. Last summer, a Chinese tech company built a deep learning algorithm that diagnosed brain cancer and other diseases faster and more accurately than a team of 15 top Chinese doctors. Kevin Roose has spent the past few years studying the question of how people, communities, and organisations adapt to periods of change, from the Industrial Revolution to the present. And the insight that is sweeping through Silicon Valley as we speak -- that in an age dominated by machines, it's human skills that really matter - is one of the more profound and counter-intuitive ideas he's discovered. It's the antidote to the doom-and-gloom worries many people feel when they think about AI and automation. And it's something everyone needs to hear. In nine accessible, prescriptive chapters, Roose distills what he has learned about how we will survive the future, that the way to become futureproof is to become incredibly, irreplaceably human.

Automate the Boring Stuff with Python, 2nd Edition
9 Rules for Humans in the Age of Automation
How Roboprocesses Are Remaking Our World
A Field Guide for Science & Technology Studies
Metrics at Work
Python for Algorithmic Trading
How High-Tech Tools Profile, Police, and Punish the Poor

One of the main difficulties of applying an evolutionary algorithm (or, as a matter of fact, any heuristic method) to a given problem is to decide on an appropriate set of parameter values. Typically these are specified before the algorithm is

run and include population size, selection rate, operator probabilities, not to mention the representation and the operators themselves. This book gives the reader a solid perspective on the different approaches that have been proposed to automate control of these parameters as well as understanding their interactions. The book covers a broad area of evolutionary computation, including genetic algorithms, evolution strategies, genetic programming, estimation of distribution algorithms, and also discusses the issues of specific parameters used in parallel implementations, multi-objective evolutionary algorithms, and practical consideration for real-world applications. It is a recommended read for researchers and practitioners of evolutionary computation and heuristic methods.

From Circulation Numbers to Web Analytics: Journalists and their Readers in the United States and France -- Utopian Beginnings: A Tale of Two Websites -- Entering the Chase for Clicks: Transatlantic Convergences -- The Multiple Meanings of Clicks: Journalists and Algorithmic Publics -- The Fast and the Slow: Producing Online News in Real Time -- Between Exposure and Unpaid Work: Compensation and Freelance Careers in Online News -- Conclusion.

WINNER: The 2018 McGannon Center Book Prize and shortlisted for the Goddard Riverside Stephan Russo Book Prize for Social Justice The New York Times Book Review: "Riveting." Naomi Klein: "This book is downright scary." Ethan Zuckerman, MIT: "Should be required reading." Dorothy Roberts, author of Killing the Black Body: "A must-read." Astra Taylor, author of The People's Platform: "The single most important book about technology you will read this year." Cory Doctorow: "Indispensable." A powerful

investigative look at data-based discrimination—and how technology affects civil and human rights and economic equity The State of Indiana denies one million applications for healthcare, foodstamps and cash benefits in three years—because a new computer system interprets any mistake as "failure to cooperate." In Los Angeles, an algorithm calculates the comparative vulnerability of tens of thousands of homeless people in order to prioritize them for an inadequate pool of housing resources. In Pittsburgh, a child welfare agency uses a statistical model to try to predict which children might be future victims of abuse or neglect. Since the dawn of the digital age, decision-making in finance, employment, politics, health and human services has undergone revolutionary change. Today, automated systems—rather than humans—control which neighborhoods get policed, which families attain needed resources, and who is investigated for fraud. While we all live under this new regime of data, the most invasive and punitive systems are aimed at the poor. In Automating Inequality, Virginia Eubanks systematically investigates the impacts of data mining, policy algorithms, and predictive risk models on poor and working-class people in America. The book is full of heart-wrenching and eye-opening stories, from a woman in Indiana whose benefits are literally cut off as she lays dying to a family in Pennsylvania in daily fear of losing their daughter because they fit a certain statistical profile. The U.S. has always used its most cutting-edge science and technology to contain, investigate, discipline and punish the destitute. Like the county poorhouse and scientific charity before them, digital tracking and automated decision-making hide poverty from the middle-class public and give the nation the ethical distance it needs to

make inhumane choices: which families get food and which starve, who has housing and who remains homeless, and which families are broken up by the state. In the process, they weaken democracy and betray our most cherished national values. This deeply researched and passionate book could not be more timely.

The rousing story of the last gasp of human agency and how today's best and brightest minds are endeavoring to put an end to it. It used to be that to diagnose an illness, interpret legal documents, analyze foreign policy, or write a newspaper article you needed a human being with specific skills—and maybe an advanced degree or two. These days, high-level tasks are increasingly being handled by algorithms that can do precise work not only with speed but also with nuance. These "bots" started with human programming and logic, but now their reach extends beyond what their creators ever expected. In this fascinating, frightening book, Christopher Steiner tells the story of how algorithms took over—and shows why the "bot revolution" is about to spill into every aspect of our lives, often silently, without our knowledge. The May 2010 "Flash Crash" exposed Wall Street's reliance on trading bots to the tune of a 998-point market drop and $1 trillion in vanished market value. But that was just the beginning. In Automate This, we meet bots that are driving cars, penning haiku, and writing music mistaken for Bach's. They listen in on our customer service calls and figure out what Iran would do in the event of a nuclear standoff. There are algorithms that can pick out the most cohesive crew of astronauts for a space mission or identify the next Jeremy Lin. Some can even ingest statistics from baseball games and spit out pitch-perfect sports journalism indistinguishable from that produced by humans.

The interaction of man and machine can make our lives easier. But what will the world look like when algorithms control our hospitals, our roads, our culture, and our national security? What happens to businesses when we automate judgment and eliminate human instinct? And what role will be left for doctors, lawyers, writers, truck drivers, and many others? Who knows—maybe there's a bot learning to do your job this minute.

A Human Algorithm
Social Media and the Automatic Production of Memory
An Introduction to Algorithmic Trading
Life by Algorithms
Automating Cities
Hands-On Automated Machine Learning
A practical, no-code approach for Jira admins and power users to automate everyday processes

Social media platforms hold vast amounts of data about our lives. Content from the past is increasingly being presented in the form of 'memories'. Critically exploring this new form of memory making, this unique book asks how social media are beginning to change the way we remember.

Algorithmic trading, once the exclusive domain of institutional players, is now open to small organizations and individual traders using online platforms. The tool of choice for many traders today is Python and its ecosystem of powerful packages. In this practical book, author Yves Hilpisch shows

students, academics, and practitioners how to use Python in the fascinating field of algorithmic trading. You'll learn several ways to apply Python to different aspects of algorithmic trading, such as backtesting trading strategies and interacting with online trading platforms. Some of the biggest buy- and sell-side institutions make heavy use of Python. By exploring options for systematically building and deploying automated algorithmic trading strategies, this book will help you level the playing field. Set up a proper Python environment for algorithmic trading Learn how to retrieve financial data from public and proprietary data sources Explore vectorization for financial analytics with NumPy and pandas Master vectorized backtesting of different algorithmic trading strategies Generate market predictions by using machine learning and deep learning Tackle real-time processing of streaming data with socket programming tools Implement automated algorithmic trading strategies with the OANDA and FXCM trading platforms An extraordinarily insightful and thought- provoking look at how our society and culture are going to change, and change rapidly, as the price of gasoline, heating oil, and all

other everyday consumer products that are derived from oil continue to escalate. Imagine an everyday world in which the price of gasoline (and oil) continues to go up, and up, and up. Think about the immediate impact that would have on our lives. Of course, everybody already knows how about gasoline has affected our driving habits. People can't wait to junk their gas-guzzling SUVs for a new Prius. But there are more, not-so-obvious changes on the horizon that Chris Steiner tracks brilliantly in this provocative work. Consider the following societal changes: people who own homes in far-off suburbs will soon realize that there's no longer any market for their houses (reason: nobody wants to live too far away because it's too expensive to commute to work). Telecommuting will begin to expand rapidly. Trains will become the mode of national transportation (as it used to be) as the price of flying becomes prohibitive. Families will begin to migrate southward as the price of heating northern homes in the winter is too pricey. Cheap everyday items that are comprised of plastic will go away because of the rising price to produce them (plastic is derived from oil). And this is just the beginning of a huge and overwhelming

domino effect that our way of life will
undergo in the years to come. Steiner, an
engineer by training before turning to
journalism, sees how this simple but constant
rise in oil and gas prices will totally re-
structure our lifestyle. But what may be
surprising to readers is that all of these
changes may not be negative - but actually
will usher in some new and very promising
aspects of our society. Steiner will probe how
the liberation of technology and innovation,
triggered by climbing gas prices, will change
our lives. The book may start as an alarmist's
exercise.... but don't be misled. The future
will be exhilarating.

The gap between theoretical ideas and messy
reality, as seen in Neal Stephenson, Adam
Smith, and Star Trek. We depend on—we
believe in—algorithms to help us get a ride,
choose which book to buy, execute a
mathematical proof. It's as if we think of code
as a magic spell, an incantation to reveal
what we need to know and even what we
want. Humans have always believed that
certain invocations—the marriage vow, the
shaman's curse—do not merely describe the
world but make it. Computation casts a
cultural shadow that is shaped by this long
tradition of magical thinking. In this book, Ed

Finn considers how the algorithm—in practical terms, "a method for solving a problem"—has its roots not only in mathematical logic but also in cybernetics, philosophy, and magical thinking. Finn argues that the algorithm deploys concepts from the idealized space of computation in a messy reality, with unpredictable and sometimes fascinating results. Drawing on sources that range from Neal Stephenson's Snow Crash to Diderot's Encyclopédie, from Adam Smith to the Star Trek computer, Finn explores the gap between theoretical ideas and pragmatic instructions. He examines the development of intelligent assistants like Siri, the rise of algorithmic aesthetics at Netflix, Ian Bogost's satiric Facebook game Cow Clicker, and the revolutionary economics of Bitcoin. He describes Google's goal of anticipating our questions, Uber's cartoon maps and black box accounting, and what Facebook tells us about programmable value, among other things. If we want to understand the gap between abstraction and messy reality, Finn argues, we need to build a model of "algorithmic reading" and scholarship that attends to process, spearheading a new experimental humanities.
Classification, Ranking and the Sorting of the

*This book critically explores forms and
techniques of calculation that emerge with
digital computation, and their
implications. The contributors demonstrate
that digital calculative devices matter
beyond their specific functions as they
progressively shape, transform and govern
all areas of our life. In particular, it
addresses such questions as: How does the
drive to make sense of, and productively
use, large amounts of diverse data, inform
the development of new calculative
devices, logics and techniques? How do
these devices, logics and techniques
affect our capacity to decide and to act?
How do mundane elements of our physical
and virtual existence become data to be
analysed and rearranged in complex
ensembles of people and things? In what
ways are conventional notions of public*

and private, individual and population, certainty and probability, rule and exception transformed and what are the consequences? How does the search for 'hidden' connections and patterns change our understanding of social relations and associative life? Do contemporary modes of calculation produce new thresholds of calculability and computability, allowing for the improbable or the merely possible to be embraced and acted upon? As contemporary approaches to governing uncertain futures seek to anticipate future events, how are calculation and decision engaged anew? Drawing together different strands of cutting-edge research that is both theoretically sophisticated and empirically rich, this book makes an important contribution to several areas of scholarship, including the emerging social science field of software studies, and will be a vital resource for students and scholars alike.

A comprehensive and rigorous introduction for graduate students and researchers, with applications in sequential decision-making problems.

If you're an experienced programmer interested in crunching data, this book will get you started with machine learning—a toolkit of algorithms that

enables computers to train themselves to automate useful tasks. Authors Drew Conway and John Myles White help you understand machine learning and statistics tools through a series of hands-on case studies, instead of a traditional math-heavy presentation. Each chapter focuses on a specific problem in machine learning, such as classification, prediction, optimization, and recommendation. Using the R programming language, you'll learn how to analyze sample datasets and write simple machine learning algorithms. Machine Learning for Hackers is ideal for programmers from any background, including business, government, and academic research. Develop a naïve Bayesian classifier to determine if an email is spam, based only on its text Use linear regression to predict the number of page views for the top 1,000 websites Learn optimization techniques by attempting to break a simple letter cipher Compare and contrast U.S. Senators statistically, based on their voting records Build a "whom to follow" recommendation system from Twitter data
Hello World
IT Automation
We Are Data
Algorithmic Life

What To Do When Machines Do Everything
An Evolutionary Computation Approach
Automate This