Rich And Knight Artificial Intelligence Solutions

A revision of an established text for undergraduate and postgraduate Artificial Intelligence courses, this text incorporates the latest research and methods.

"The rise of AI must be better managed in the near term in order to mitigate longer term risks and to ensure that AI does not reinforce existing inequalities"--Publisher.

Enhance your understanding of developments in expert systems related to reference work. This important new book introduces readers to expert systems applications in many areas of library and information science and presents design and implementation issues encountered by librarians who have developed early systems to address the library reference function. Systems for ready referenence, online database access, and enhancement of subject searching in online catalogs are all explored. Theoretical issues related to expert systems are balanced with descriptions of actual systems currently operating or under development. Reference librarians interested in computing and automation, library managers and administrators, as well as teachers and students in library schools, will be fascinated by this account of how expert systems are helping to make the expertise of the reference librarian available in a more consistent and timely fashion and reduce the burden of repetitive, predictable questions for the professional.

There are many books available in the market on the proposed topic but none of them can be termed as comprehensive. Besides, students face many problems in understanding the language of this books. Keeping these points in mind, Artificial Intelligence was prepared, which should be simple enough to comprehend and comprehensive enough to encompass all the topics of different institutions and universities.

From the Hugo Award nominee S.B. Divya, Zero Dark Thirty meets The Social Network in this science fiction thriller about artificial intelligence, sentience, and labor rights in a near future dominated by the gig economy. Welga Ramirez, executive bodyguard and ex-special forces, is about to retire early when her client is killed in front of her. It’s 2095 and people don’t usually die from violence. Humanity is entirely dependent on pills that not only help them stay alive, but allow them to compete with artificial intelligence in an increasingly competitive gig economy. Daily doses protect against designer diseases, flow enhances focus, zips and buffs enhance physical strength and speed, and juvers speed the healing process. All that changes when Welga’s client is killed by The Machinehood, a new and mysterious terrorist group that has simultaneously attacked several major pill funders. The Machinehood operatives seem to be part human, part machine, something the world has never seen. They issue an ultimatum: stop all pill production in one week. Global panic ensues as pill production slows and many become ill. Thousands destroy their bots in fear of a strong AI takeover.

But the US government believes the Machinehood is a cover for an old enemy. One that Welga is uniquely qualified to fight. Welga, determined to take down the Machinehood, is pulled back into intelligence work by the government that betrayed her. But who are the Machinehood and what do they really want? A thrilling and thought-provoking novel that asks: if we won't see machines as human, will we instead see humans as machines?

This open access book proposes a novel approach to Artificial Intelligence (AI) ethics. AI offers many advantages: better and faster medical diagnoses, improved business processes and efficiency, and the automation of boring work. But undesirable and ethically problematic consequences are possible too: biases and discrimination, breaches of privacy and security, and societal distortions such as unemployment, economic exploitation and weakened democratic processes. There is even a prospect, ultimately, of super-intelligent machines replacing humans. The key question, then, is: how can we benefit from AI while addressing its ethical problems? This book presents an innovative answer to the question by presenting a different perspective on AI and its ethical consequences. Instead of looking at individual AI techniques, applications or ethical issues, we can understand AI as a system of ecosystems, consisting of numerous interdependent technologies, applications and stakeholders. Developing this idea, the book explores how AI ecosystems can be shaped to foster human flourishing. Drawing on rich empirical insights and detailed conceptual analysis, it suggests practical measures to ensure that AI is used to make the world a better place.

Focusing on fundamental scientific and engineering issues, this book communicates the principles of building and using knowledge systems from the conceptual standpoint as well as the practical. Previous treatments of knowledge systems have focused on applications within a particular field, or on symbol-level representations, such as the use of frame and rule representations. Introduction to Knowledge Systems presents fundamentals of symbol-level representations including representations for time, space, uncertainty, and vagueness. It also compares the knowledge-level organizations for three common knowledge-intensive tasks: classification, configuration, and diagnosis. The art of building knowledge systems incorporates computer science theory, programming practice, and psychology. The scope of this book is appropriately broad, ranging from the design of hierarchical search algorithms to techniques for acquiring the task-specific knowledge needed for successful applications. Each chapter proceeds from concepts to applications, and closes with a brief tour of current research topics and open issues. Readers will come away with a solid foundation that will enable them to create real-world knowledge systems using whatever tools and programming languages are most current and appropriate.

For the students of B.E./B.Tech Computer Science Engineering and Information Technology (CSE/IT)

Search is an important component of problem solving in artificial intelligence (AI) and, more generally, in computer science, engineering and

operations research. Combinatorial optimization, decision analysis, game playing, learning, planning, pattern recognition, robotics and theorem proving are some of the areas in which search algbrithms playa key role. Less than a decade ago the conventional wisdom in artificial intelligence was that the best search algorithms had already been invented and the likelihood of finding new results in this area was very small. Since then many new insights and results have been obtained. For example, new algorithms for state space, AND/OR graph, and game tree search were discovered. Articles on new theoretical developments and experimental results on backtracking, heuristic search and constraint propaga tion were published. The relationships among various search and combinatorial algorithms in AI, Operations Research, and other fields were clarified. This volume brings together some of this recent work in a manner designed to be accessible to students and professionals interested in these new insights and developments.

The theoretical underpinnings of computing form a standard part of almost every computer science curriculum. But the classic treatment of this material isolates it from the myriad ways in which the theory influences the design of modern hardware and software systems. The goal of this book is to change that. The book is organized into a core set of chapters (that cover the standard material suggested by the title), followed by a set of appendix chapters that highlight application areas including programming language design, compilers, software verification, networks, security, natural language processing, artificial intelligence, game playing, and computational biology. The core material includes discussions of finite state machines, Markov models, hidden Markov models (HMMs), regular expressions, context-free grammars, pushdown automata, Chomsky and Greibach normal forms, context-free parsing, pumping theorems for regular and context-free languages, closure theorems and decision procedures for regular and context-free languages, Turing machines, nondeterminism, decidability and undecidability, the Church-Turing thesis, reduction proofs, Post Correspondence problem, tiling problems, the undecidability of first-order logic, asymptotic dominance, time and space complexity, the Cook-Levin theorem, NP-completeness, Savitch's Theorem, time and space hierarchy theorems, randomized algorithms and heuristic search. Throughout the discussion of these topics there are pointers into the application chapters. So, for example, the chapter that describes reduction proofs of undecidability has a link to the security chapter, which shows a reduction proof of the undecidability of the safety of a simple protection framework.

After a long time of neglect, Artificial Intelligence is once again at the center of most of our political, economic, and socio-cultural debates. Recent advances in the field of Artifical Neural Networks have led to a renaissance of dystopian and utopian speculations on an AI-rendered future. Algorithmic technologies are deployed for identifying potential terrorists through vast surveillance networks, for producing sentencing guidelines and recidivism risk profiles in criminal justice systems, for demographic and psychographic targeting of bodies for advertising or propaganda, and more generally for automating the analysis of language, text, and images. Against this background, the aim of this book is to discuss the heterogenous conditions, implications, and effects of modern AI and Internet technologies in terms of their political dimension: What does it mean to critically investigate efforts of net politics in the age of machine learning algorithms?

Thirty years ago Bill McKibben offered one of the earliest warnings about climate change. Now he broadens the warning: the entire human game, he suggests, has begun to play itself out. Bill McKibben’s groundbreaking book The End of Nature -- issued in dozens of languages and long regarded as a classic -- was the first book to alert us to global warming. But the danger is broader than that: even as climate change shrinks the space where our civilization can exist, new technologies like artificial intelligence and robotics threaten to bleach away the variety of human experience. Falter tells the story of these converging trends and of the ideological fervor that keeps us from bringing them under control. And then, drawing on McKibben’s experience in building 350.org, the first truly global citizens movement to combat climate change, it

offers some possible ways out of the trap. We're at a bleak moment in human history -- and we'll either confront that bleakness or watch the civilization our forebears built slip away. Falter is a powerful and sobering call to arms, to save not only our planet but also our humanity.
Herbert Simon's classic work on artificial intelligence in the expanded and updated third edition from 1996, with a new introduction by John E. Laird. Herbert Simon's classic and influential The Sciences of the Artificial declares definitively that there can be a science not only of natural phenomena but also of what is artificial. Exploring the commonalities of artificial systems, including economic systems, the business firm, artificial intelligence, complex engineering projects, and social plans, Simon argues that designed systems are a valid field of study, and he proposes a science of design. For this third edition, originally published in 1996, Simon added new material that takes into account advances in cognitive psychology and the science of design while confirming and extending the book's basic thesis: that a physical symbol system has the necessary and sufficient means for intelligent action. Simon won the Nobel Prize for Economics in 1978 for his research into the decision-making process within economic organizations and the Turing Award (considered by some the computer science equivalent to the Nobel) with Allen Newell in 1975 for contributions to artificial intelligence, the psychology of human cognition, and list processing. The Sciences of the Artificial distills the essence of Simon's thought accessibly and coherently. This reissue of the third edition makes a pioneering work available to a new audience.
The book covers the most essential and widely employed material in each area, particularly the material important for real-world applications. Our goal is not to cover every latest progress in the fields, nor to discuss every detail of various techniques that have been developed. New sections/subsections added in this edition are: Simulated Annealing (Section 3.7), Boltzmann Machines (Section 3.8) and Extended Fuzzy if-then Rules Tables (Sub-section 5.5.3). Also, numerous changes and typographical corrections have been made throughout the manuscript. The Preface to the first edition follows. General scope of the book Artificial intelligence (AI) as a field has undergone rapid growth in diversification and practicality. For the past few decades, the repertoire of AI techniques has evolved and expanded. Scores of newer fields have been added to the traditional symbolic AI. Symbolic AI covers areas such as knowledge-based systems, logical reasoning, symbolic machine learning, search techniques, and natural language processing. The newer fields include neural networks, genetic algorithms or evolutionary computing, fuzzy systems, rough set theory, and chaotic systems.
Artificial intelligence (AI) is the latest technological evolution which is transforming the global economy and is a major part of the “Fourth Industrial Revolution.” This book covers the meaning, types, subfields and applications of AI, including U.S. governmental policies and regulations, ethical and privacy issues, particularly as they pertain and affect facial recognition programs and the Internet-of Things (IoT). There is a lengthy analysis of bias, AI’s effect on the current and future job market, and how AI precipitated fake news. In addition, the text covers basics of intellectual property rights and how AI will transform their protection. The author then moves on to explore international initiatives from the European Union, China’s New Generation Development Plan, other regional areas, and international conventions. The book concludes with a discussion of super intelligence and the question and applicability of consciousness in machines. The interdisciplinary scope of the text will appeal to any scholars, students and general readers interested in the effects of AI on our society, particularly in the fields of STS, economics, law and politics.

Advanced Software Applications in Japan

OVERVIEWS : This book presents both theoretical foundations of AI and an indication of the ways that current techniques can be used in application programs. With the revision, most of the content has been preserved as it is, and an effort has been put i.

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.

A classic introduction to artificial intelligence intended to bridge the gap between theory and practice, Principles of Artificial Intelligence describes fundamental AI ideas that underlie applications such as natural language processing, automatic programming, robotics, machine vision, automatic theorem proving, and intelligent data retrieval. Rather than focusing on the subject matter of the applications, the book is organized around general computational concepts involving the kinds of data structures used, the types of operations performed on the data structures, and the properties of the control strategies used. Principles of Artificial Intelligenceevolved from the author's courses and seminars at Stanford University and University of Massachusetts, Amherst, and is suitable for text use in a senior or graduate AI course, or for individual study.

This new book, by one of the most respected researchers in Artificial Intelligence, features a radical new 'evolutionary' organization that begins with low level intelligent behavior and develops complex intelligence as the book progresses.

A Collection of Matt Shaw's heartbreaking dramas Matt Shaw does not just write horror. In fact, when asked what his favourite books are, he often names the tales collected within this set. Stories of heartbreak, loss and grief - all with an element of hope... A hope we often forget when dealing with grief. Contained within this collection Heaven's Calling BOY: Built to Love The Missing Years of Thomas Pritchard (unpublished short story) Alone Heaven's Calling Josh and Holly could face anything thrown at them all the time they had each other. Their love would conquer anything and the world was their oyster. But when a tragic accident tears Josh away from Holly she realises that, without her husband, she cannot cope and her world begins to crumble; her loss being more than she can handle. Until, that is, she receives a phone call. Her late husband. The same time every day; he doesn't appear to know what has happened to him and Holly can't bring herself to tell him. She isn't even sure if it really is him calling or whether it's all in her tormented mind. Especially seeing as the calls only happen when she is alone. Is it all in her head, has she gone mad, or is heaven really calling? Boy: Built to Love No parent should have to bury their own child and yet that was exactly what they had to do. Stillborn; a young boy never to open his eyes to take in the world around him. And now Lucy and Jack's marriage was on

the verge of crumbling under the strain of the grief they struggled to cope with. A grief made worse when the doctors tell them they'll never be able to have a child of their own due to complications from the last pregnancy. But what if it didn't have to be that way? What if there was a way of using science and technology to create a son they could love? What if Jack was able to use Artificial Intelligence to create A Boy: Built to Love? Is the answer to their problems to be found within the world of science-fiction or are they setting themselves up for yet more grief and sadness? The Missing Years of Thomas Pritchard August 3rd. 6:03am. The tranquil summer's morning was shattered by the desperate screams of Thomas' mother echoing down the near deserted suburban street. The few people milling about outside getting ready for their daily business had said they couldn't make out what the cries were about when they were interviewed. Not initially. Not until Anne, a pretty woman in her early thirties with shoulder length blonde hair, spilled out onto the street wearing nothing more than her dressing gown and slippers anxiously calling out for her five year old son, Thomas, to come out from wherever he was hiding. Eye witnesses reported Anne was closely followed by her husband Bill - a professional, clean-shaven man in his late thirties with dark, short hair - half dressed for work in his suit trousers and unbuttoned white shirt, and that he too looked just as frantic as the mother did. The year was 2003; the year Thomas disappeared from his home without a trace. * * * * * August 3rd. 6:03am. A young, fragile looking hand knocked confidently on the white PVC of the front door to number twenty-two. The hand belonged to a smartly dressed, skinny fourteen year old, fresh-faced boy. Whilst waiting for an answer to his knocking he slid a brown leather satchel off his shoulder down onto the floor as though the weight was too much for him to bear any more. He went to knock again but stopped himself when he heard the sound of footsteps from the other side of the door as the freshly woken homeowner came to answer his initial knocking. There was the slightest of pauses as keys were twisted in locks before the door opened as much as the strong, gold, security chain would permit it to. "Can I help you?" asked the homeowner, a frail looking woman in her late sixties. "Where's my mum?" asked the boy. The year was 2012; the year Thomas came home.

New York Times Best Seller How will Artificial Intelligence affect crime, war, justice, jobs, society and our very sense of being human? The rise of AI has the potential to transform our future more than any other technology—and there’s nobody better qualified or situated to explore that future than Max Tegmark, an MIT professor who’s helped mainstream research on how to keep AI beneficial. How can we grow our prosperity through automation without leaving people lacking income or purpose? What career advice should we give today’s kids? How can we make future AI systems more robust, so that they do what we want without crashing, malfunctioning or getting hacked? Should we fear an arms race in lethal autonomous weapons? Will machines eventually outsmart us at all tasks, replacing humans on the job market and perhaps altogether? Will AI help life flourish like never before or give us more power than we can handle? What sort of

future do you want? This book empowers you to join what may be the most important conversation of our time. It doesn't shy away from the full range of viewpoints or from the most controversial issues—from superintelligence to meaning, consciousness and the ultimate physical limits on life in the cosmos.

How the history of technological revolutions can help us better understand economic and political polarization in the age of automation The Technology Trap is a sweeping account of the history of technological progress and how it has radically shifted the distribution of economic and political power among society's members. As Carl Benedikt Frey shows, the Industrial Revolution created unprecedented wealth and prosperity over the long run, but the immediate consequences of mechanization were devastating. Middle-income jobs withered, wages stagnated, the labor share of income fell, profits surged, and economic inequality skyrocketed. These trends broadly mirror those in our current age of automation. But, just as the Industrial Revolution eventually brought about extraordinary benefits for society, artificial intelligence systems have the potential to do the same. The Technology Trap demonstrates that in the midst of another technological revolution, the lessons of the past can help us to more effectively face the present.

Artificial IntelligenceMcGraw-Hill Science, Engineering & Mathematics

"A paean to cognitive agility and the elasticity of the imagination…Convincingly, Framers is a plea for diversity in all its forms. It argues for the importance of 'frame pluralism', in which ideas can compete vigorously yet still share space." —The Economist The essential tool that will enable humanity to find the best way through a forest of looming problems is defined in Framers by internationally renowned authors Kenneth Cukier, Viktor Mayer-Schönberger and Francis de Véricourt. From pandemics to populism, AI to ISIS, wealth inequity to climate change, humanity faces unprecedented challenges that threaten our very existence. To frame is to make a mental model that enables us to see patterns, predict how things will unfold, and make sense of new situations. Frames guide the decisions we make and the results we attain. People have long focused on traits like memory and reasoning leaving framing all but ignored. But with computers becoming better at some of those cognitive tasks, framing stands out as a critical function—and only humans can do it. This book is the first guide to mastering this innate human ability. Illustrating their case with compelling examples and the latest research, authors Cukier, Mayer-Schönberger and de Véricourt examine: · Why advice to "think outside the box" is useless. · How Spotify beat Apple by reframing music as an experience. · What the historic 1976 Israeli commando raid on Entebbe that rescued over 100 hostages can tell us about how to frame. · How the #MeToo twitter hashtag reframed the perception of sexual assault. · The disaster of framing Covid-19 as equivalent to seasonal flu, and how framing it akin to SARS delivered New Zealand from the pandemic. Framers shows how framing is not just a way to improve how we make decisions in the era of algorithms—but why it will be a matter of survival for humanity in a time of societal upheaval

and machine prosperity.

Artificial intelligence (AI) is on everybody's minds these days. Most of the world's leading companies are making massive investments in it. Governments are scrambling to catch up. Every single one of us who uses Google Search or any of the new digital assistants on our smartphones has witnessed first-hand how quickly these developments now go. Many analysts foresee truly disruptive changes in education, employment, health, knowledge generation, mobility, etc. But what will AI mean for defense and security? In a new study HCSS offers a unique perspective on this question. Most studies to date quickly jump from AI to autonomous (mostly weapon) systems. They anticipate future armed forces that mostly resemble today's armed forces, engaging in fairly similar types of activities with a still primarily industrial-kinetic capability bundle that would increasingly be AI-augmented. The authors of this study argue that AI may have a far more transformational impact on defense and security whereby new incarnations of 'armed force' start doing different things in novel ways. The report sketches a much broader option space within which defense and security organizations (DSOs) may wish to invest in successive generations of AI technologies. It suggests that some of the most promising investment opportunities to start generating the sustainable security effects that our polities, societies and economies expect may lie in in the realms of prevention and resilience. Also in those areas any large-scale application of AI will have to result from a preliminary open-minded (on all sides) public debate on its legal, ethical and privacy implications. The authors submit, however, that such a debate would be more fruitful than the current heated discussions about 'killer drones' or robots. Finally, the study suggests that the advent of artificial super-intelligence (i.e. AI that is superior across the board to human intelligence), which many experts now put firmly within the longer-term planning horizons of our DSOs, presents us with unprecedented risks but also opportunities that we have to start to explore. The report contains an overview of the role that 'intelligence' - the computational part of the ability to achieve goals in the world - has played in defense and security throughout human history; a primer on AI (what it is, where it comes from and where it stands today - in both civilian and military contexts); a discussion of the broad option space for DSOs it opens up; 12 illustrative use cases across that option space; and a set of recommendations for - especially - small- and medium sized defense and security organizations.

Live Longer with AI is a wake-up call that shows us how we can each live our best and longest lives through the power of AI in health and wealth, and how we must stop thinking just about treating our illnesses and focus more on our well-being, which has never been more important in this age of Covid-19.

A thoughtful, poignant novel that explores the creation of Artificial Intelligence—illuminating the very human need for communication, connection, and understanding. In a narrative that spans geography and time, from the Atlantic Ocean in

the seventeenth century, to a correctional institute in Texas in the near future, and told from the perspectives of five very different characters, Speak considers what it means to be human, and what it means to be less than fully alive. A young Puritan woman travels to the New World with her unwanted new husband. Alan Turing, the renowned mathematician and code breaker, writes letters to his best friend's mother. A Jewish refugee and professor of computer science struggles to reconnect with his increasingly detached wife. An isolated and traumatized young girl exchanges messages with an intelligent software program. A former Silicon Valley Wunderkind is imprisoned for creating illegal lifelike dolls. Each of these characters is attempting to communicate across gaps—to estranged spouses, lost friends, future readers, or a computer program that may or may not understand them. In dazzling and electrifying prose, Louisa Hall explores how the chasm between computer and human—shrinking rapidly with today's technological advances—echoes the gaps that exist between ordinary people. Though each speaks from a distinct place and moment in time, all five characters share the need to express themselves while simultaneously wondering if they will ever be heard, or understood.

The breadth of A. I. is explored and explained in this best selling text. Assuming no prior knowledge,it covers topics like neural networks and robotics. This text explores the range of problems which have been and remain to be solved using A. I. tools and techniques. The second half of this text is an excellent reference.

Examining the potential benefits and risks of using artificial intelligence to advance global sustainability. Drones with night vision are tracking elephant and rhino poachers in African wildlife parks and sanctuaries; smart submersibles are saving coral from carnivorous starfish on Australia's Great Barrier Reef; recycled cell phones alert Brazilian forest rangers to the sound of illegal logging. The tools of artificial intelligence are being increasingly deployed in the battle for global sustainability. And yet, warns Peter Dauvergne, we should be cautious in declaring AI the planet's savior. In AI in the Wild, Dauvergne avoids the AI industry-powered hype and offers a critical view, exploring both the potential benefits and risks of using artificial intelligence to advance global sustainability.

This book deals with the major philosophical issues in the theoretical framework of Artificial Intelligence (AI) in particular and cognitive science in general. The researchers in AI are concerned with the issues of consciousness, human subjectivity, creativity, etc. Cognitive Science and AI argue that consciousness can be artificially created and comprehended in the function of robots. The robotic activities explain the mechanism involved in computation, language processing, sensing the information, etc. Contrary to this thesis, the philosophical study tries to show that human consciousness, thinking, imagination, etc. are much larger concepts and need to be delved into in the broad theoretical framework. This book is a critique of the mechanistic theory of mind. It shows the basic foundation of AI and its limitations in explaining the activities of the human mental life. Machine-functionalism fails to account for the subjective nature of consciousness and the creativity involved in the conscious acts. There are two aspects of this thesis-- the epistemological and the metaphysical. Epistemologically, the subject of consciousness intimately knows the raw feelings or the qualia. Metaphysically speaking, however, the raw feelings are real in the sense that they are part of the furniture of the mental world. Therefore, we can hardly deny that the mental world is real.

This book provides a detailed understanding of the broad issues in artificial intelligence and a useful survey of current AI technology. The author delivers broad coverage of innovative representational techniques, including neural networks, image processing, and probabilistic

reasoning, alongside the traditional methods of symbolic reasoning. AI algorithms are described in detailed prose in the text and fully implemented in LISP at the ends of chapters. A stand-alone LISP chapter makes an excellent reference and refresher. Each chapter includes a detailed description of an AI application.

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.

The incredible story of the first African American military pilot, who went on to become a Paris nightclub impresario, a spy in the French Resistance and an American civil rights pioneer Eugene Bullard lived one of the most fascinating lives of the twentieth century. The son of a former slave and an indigenous Creek woman, Bullard fled home at the age of eleven to escape the racial hostility of his Georgia community. When his journey led him to Europe, he garnered worldwide fame as a boxer, and later as the first African American fighter pilot in history. After the war, Bullard returned to Paris a celebrated hero. But little did he know that the dramatic, globe-spanning arc of his life had just begun. All Blood Runs Red is the inspiring untold story of an American hero, a thought-provoking chronicle of the twentieth century and a portrait of a man who came from nothing and by his own courage, determination, gumption, intelligence and luck forged a legendary life.

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.