Arti Cial Intelligence Midterm Examination Solutions

In the 11 contributions, theorists historically associated with each position identify the basic tenets of their position.Have the classical methods and ideas of AI outlived their usefulness? Foundations of Artificial Intelligence critically evaluates the fundamental assumptions underpinning the dominant approaches to AI. In the 11 contributions, theorists historically associated with each position identify the basic tenets of their position. They discuss the underlying principles, describe the natural types of problems and tasks in which their approach succeeds, explain where its power comes from, and what its scope and limits are. Theorists generally skeptical of these positions evaluate the effectiveness of the method or approach and explain why it works - to the extent they believe it does - and why it eventually fails.ContentsFoundations of AI: The Big Issues, D. Kirsh - Logic and Artificial Intelligence, N. J. Nilsson - Rigor Mortis: A Response to Nilsson's 'Logic and Artificial Intelligence, ' L. Birnbaum - Open Information Systems Semantics for Distributed Artificial Intelligence, C. Hewitt - Social Conceptions of Knowledge and Action: DAI Foundations and Open Systems Semantics, L. Gasser - Intelligence without Representation, R. A. Brooks - Today the Earwig, Tomorrow Man? D. Kirsh - On the Thresholds of Knowledge, D. B. Lenat, E. A. Feigenbaum - The Owl and the Electric Encyclopedia, B. C. Smith - A Preliminary Analysis of the Soar Architecture as a Basis for General Intelligence, P. S. Rosenbloom, J. E. Laird, A. Newell, R. McCarl - Approaches to the Study of Intelligence, D. A. Norman

The two-volume set LNAI 7267 and LNCS 7268 (together with LNCS 7269) constitutes the refereed proceedings of the 11th International Conference on Artificial Intelligence and Soft Computing, ICAISC 2012, held in Zakopane, Poland in April/May 2012. The 212 revised full papers presented were carefully reviewed and selected from 483 submissions. The papers are organized in topical sections on neural networks and their applications, computer vision, image and speech analysis, data mining, hardware implementation, bioinformatics, biometrics and medical applications, concurrent parallel processing, agent systems, robotics and control, artificial intelligence in modeling and simulation, various problems od artificial intelligence.

Thanks to rapid technological developments in terms of Computational Intelligence, smart tools have been playing active roles in daily life. It is clear that the 21st century has brought about many advantages in using high-level computation and communication solutions to deal with real-world problems; however, more technologies bring more changes to society. In this sense, the concept of smart cities has been a widely discussed topic in terms of society and Artificial Intelligence-oriented research efforts. The rise of smart cities is a transformation of both community and technology use habits, and there are many different research orientations to shape a better future. The objective of this book is to focus on Explainable Artificial Intelligence (XAI) in smart city development. As recently designed, advanced smart systems require intense use of complex computational solutions (i.e., Deep Learning, Big Data, IoT architectures), the mechanisms of these systems become 'black-box' to users. As this means that there is no clear clue about what is going on within these systems, anxieties regarding ensuring trustworthy tools also rise. In recent years, attempts have been made to solve this issue with the additional use of XAI methods to improve transparency levels. This book provides a timely, global reference source about cutting-edge research efforts to ensure the XAI factor in smart city-oriented developments. The book includes both positive and negative outcomes, as well as future insights and the societal and technical aspects of XAI-based smart city research efforts. This book contains nineteen contributions beginning with a presentation of the background of XAI techniques and sustainable smart-city applications. It then continues with chapters discussing XAI for Smart Healthcare, Smart Education, Smart Transportation, Smart Environment, Smart Urbanization and Governance, and Cyber Security for Smart Cities.

This research monograph brings AI to the field of Customer Relationship Management (CRM) to make a customer experience with a product or service smart and enjoyable. AI is here to help customers to get a refund for a canceled flight, unfreeze a banking account or get a health test result. Today, CRM has evolved from storing and analyzing customers' data to predicting and understanding their behavior by putting a CRM system in a customers' shoes. Hence advanced reasoning with learning from small data, about customers' attitudes, introspection, reading between the lines of customer communication and explainability need to come into play. Artificial Intelligence for Customer Relationship Management leverages a number of Natural Language Processing (NLP), Machine Learning (ML), simulation and reasoning techniques to enable CRM with intelligence. An effective and robust CRM needs to be able to chat with customers, providing desired information, completing their transactions and resolving their problems. It introduces a systematic means of ascertaining a customers' frame of mind, their intents and attitudes to determine when to provide a thorough answer, a recommendation, an explanation, a proper argument, timely advice and promotion or compensation. The author employs a spectrum of ML methods, from deterministic to statistical to deep, to predict customer behavior and anticipate possible complaints, assuring customer retention efficiently. Providing a forum for the exchange of ideas in AI, this book provides a concise yet comprehensive coverage of methodologies, tools, issues, applications, and future trends for professionals, managers, and researchers in the CRM field together with AI and IT professionals.

This two volume set LNAI 10947 and LNAI 10948 constitutes the proceedings of the 19th International Conference on Artificial Intelligence in Education, AIED 2018, held in London, UK, in June 2018.The 45 full papers presented in this book together with 76 poster papers, 11 young researchers tracks, 14 industry papers and 10 workshop papers were carefully reviewed and selected from 192 submissions. The conference provides opportunities for the cross-fertilization of approaches, techniques and ideas from the many fields that comprise AIED, including computer science, cognitive and learning sciences, education, game design, psychology, sociology, linguistics as well as many domain-specific areas.

This two-volume set LNAI 12163 and 12164 constitutes the refereed proceedings of the 21th International Conference on Artificial Intelligence in Education, AIED 2020, held in Ifrane, Morocco, in July 2020.* The 49 full papers presented together with 66 short, 4 industry & innovation, 4 doctoral consortium, and 4 workshop papers were carefully reviewed and selected from 214 submissions. The conference provides opportunities for the cross-fertilization of approaches, techniques and ideas from the many fields that comprise AIED, including computer science, cognitive and learning sciences, education, game design, psychology, sociology, linguistics as well as many domain-specific areas. ?*The conference was held virtually due to the COVID-19 pandemic.

This book constitutes the refereed proceedings of the Joint European Conference on Artificial Intelligence in Medicine and Medical Decision Making, AIMDM'99, held in Aalborg, Denmark, in June 1999. The 27 full papers and 19 short papers presented in the book together with four invited papers were selected from 90 submissions. The papers are organized in topical sections on guidelines and protocols; decision support systems, knowledge-based systems, and cooperative systems; model-based systems; neural nets and causal probabilistic networks; knowledge representation; temporal reasoning; machine learning; natural language processing; and image processing and computer aided design.

" The nature of technology has changed since Artificial Intelligence in Education (AIED) was conceptualised as a research community and Interactive Learning Environments were initially developed. Technology is smaller, more mobile, networked, pervasive and often ubiquitous as well as being provided by the standard desktop PC. This creates the potential for technology supported learning wherever and whenever learners need and want it. However, in order to take advantage of this potential for greater flexibility we need to understand and model learners and the contexts with which they interact in a manner that enables us to design, deploy and evaluate technology to most effectively support learning across multiple locations, subjects and times. The AIED community has much to contribute to this endeavour. This publication contains papers, posters and tutorials from the 2007 Artificial Intelligence in Education conference in Los Angeles, CA, USA. "

This book constitutes the refereed proceedings of the 17th Portuguese Conference on Artificial Intelligence, EPIA 2015, held in Coimbra, Portugal, in September 2015. The 45 revised full papers presented together with 36 revised short papers were carefully reviewed and selected from a total of 131 submissions. EPIA 2015, following the standard EPIA format, covers a wide range of AI topics as follows: ambient intelligence and affective environments, artificial Intelligence in medicine, artificial intelligence in transportation systems, artificial life and evolutionary algorithms, computational methods in bioinformatics and systems biology, general artificial intelligence, intelligent information systems, intelligent robotics, knowledge discovery and business intelligence, multi-agent systems: theory and applications, social simulation and modelling, text mining and applications.

As industries are rapidly being digitalized and information is being more heavily stored and transmitted online, the security of information has become a top priority in securing the use of online networks as a safe and effective platform. With the vast and diverse potential of artificial intelligence (AI) applications, it has become easier than ever to identify cyber vulnerabilities, potential threats, and the identification of solutions to these unique problems. The latest tools and technologies for AI applications have untapped potential that conventional systems and human security systems cannot meet, leading AI to be a frontrunner in the fight against malware, cyber-attacks, and various security issues. However, even with the tremendous progress AI has made within the sphere of security, it's important to understand the impacts, implications, and critical issues and challenges of AI applications along with the many benefits and emerging trends in this essential field of security-based research. Research Anthology on Artificial Intelligence Applications in Security seeks to address the fundamental advancements and technologies being used in AI applications for the security of digital data and information. The included chapters cover a wide range of topics related to AI in security stemming from the development and design of these applications, the latest tools and technologies, as well as the utilization of AI and what challenges and impacts have been discovered along the way. This resource work is a critical exploration of the latest research on security and an overview of how AI has impacted the field and will continue to advance as an essential tool for security, safety, and privacy online. This book is ideally intended for cyber security analysts, computer engineers, IT specialists, practitioners, stakeholders, researchers, academicians, and students interested in AI applications in the realm of security research.

Drawn from the pages of Scientific American and collected here for the first time, this work contains updated and condensed information, made accessible to a general popular science audience, on the subject of artificial intelligence.

A documentary filmmaker, bringing together Artificial Intelligence experts from around the world, explores the terrifying possibility of catastrophic outcomes once we share the planet with intelligent machines who are smarter and more powerful than we could ever have imagined. 25,000 first printing.

The field of Artificial Intelligence in Education has continued to broaden and now includes research and researchers from many areas of technology and social science. This study opens opportunities for the cross-fertilization of information and ideas from researchers in the many fields that make up this interdisciplinary research area, including artificial intelligence, other areas of computer science, cognitive science, education, learning sciences, educational technology, psychology, philosophy, sociology, anthropology, linguistics, and the many domain-specific areas for which Artificial Intelligence in Education systems have been designed and built. An explicit goal is to appeal to those researchers who share the perspective that true progress in learning technology requires both deep insight into technology and also deep insight into learners, learning, and the context of learning. The theme reflects this basic duality.

This work reports on research into intelligent systems, models, and architectures for educational computing applications. It covers a wide range of advanced information and communication and computational methods applied to education and training.

Forty-year-old Louise Berman has been wallowing in self-pity ever since her husband left her for a woman half her age and twice her brassiere size. Her English literature professor daughter, Laurie, has been living with her, all while attempting to keep a relationship with her father and his new wife. But as Laurie grows more exasperated with her mother, it seems inevitable that something needs to changeand fast. After Louise finally secures a job as a lingerie buyer at Henri Bendel, her ex-husbands wife, Vivian, presents Louise with a strange birthday gifta stuffed gray mouse named Thelma. While Louise treats Thelma like a living family member, she and Vivian grow close, much to the dismay of Laurie. As Louise is led to a new opportunity running a Bergdorfs store, Laurie makes full professor at NYU. But everything is about to change when Louises ex-husband proclaims he wants to reconcile. While Louise decides whether to take him back or keep Thelma as her companion, Laurie is led down her own path where both love and sadness await. Living with Thelma shares the charming tale of a divorced woman and her grown daughter as they search for love, acceptance, and the magic within a stuffed gray mouse.

Spine title: AISMC-3 : artificial intelligence and symbolic mathematical computation.

This new edition provides a comprehensive, colorful, up-to-date, and accessible presentation of AI without sacrificing theoretical foundations. It includes numerous examples, applications, full color images, and human interest boxes to enhance student interest. New chapters on robotics and machine learning are now included. Advanced topics cover neural nets, genetic algorithms, natural language processing, planning, and complex board games. A companion DVD is provided with resources, applications, and figures from the book. Numerous instructors' resources are available upon adoption. eBook Customers: Companion files are available for downloading with order number/proof of purchase by writing to the publisher at info@merclearning.com. FEATURES: • Includes new chapters on robotics and machine learning and new sections on speech understanding and metaphor in NLP • Provides a comprehensive, colorful, up to date, and accessible presentation of AI without sacrificing theoretical foundations • Uses numerous examples, applications, full color images, and human interest boxes to enhance student interest • Introduces important AI concepts e.g., robotics, use in video games, neural nets, machine learning, and more thorough practical applications • Features over 300 figures and color images with worked problems detailing AI methods and solutions to selected exercises • Includes DVD with resources, simulations, and figures from the book • Provides numerous instructors' resources, including: solutions to exercises, Microsoft PP slides, etc.

Readings in Artificial Intelligence and Software Engineering covers the main techniques and application of artificial intelligence and software engineering. The ultimate goal of artificial intelligence applied to software engineering is automatic programming. Automatic programming would allow a user to simply say what is wanted and have a program produced completely

automatically. This book is organized into 11 parts encompassing 34 chapters that specifically tackle the topics of deductive synthesis, program transformations, program verification, and programming tutors. The opening parts provide an introduction to the key ideas to the deductive approach, namely the correspondence between theorems and specifications and between constructive proofs and programs. These parts also describes automatic theorem provers whose development has be designed for the programming domain. The subsequent parts present generalized program transformation systems, the problims involved in using natural language input, the features of very high level languages, and the advantages of the programming by example system. Other parts explore the intelligent assistant approach and the significance and relation of programming knowledge in other programming system. The concluding parts focus on the features of the domain knowledge system and the artificial intelligence programming. Software engineers and designers and computer programmers, as well as researchers in the field of artificial intelligence will find this book invaluable.

Energy has been a crucial element for human beings and sustainable development. The issues of global warming and non-green energy have yet to be resolved. This book is a collection of twelve articles that provide strong evidence for the success of artificial intelligence deployment in energy research, particularly research devoted to non-intrusive load monitoring, network, and grid, as well as other emerging topics. The presented artificial intelligence algorithms may provide insight into how to apply similar approaches, subject to fine-tuning and customization, to other unexplored energy research. The ultimate goal is to fully apply artificial intelligence to the energy sector. This book may serve as a guide for professionals, researchers, and data scientists—namely, how to share opinions and exchange ideas so as to facilitate a better fusion of energy, academic, and industry research, and improve in the quality of people's daily life activities.

Web technologies have become a vital element within educational, professional, and social settings as they have the potential to improve performance and productivity across organizations. Artificial Intelligence Technologies and the Evolution of Web 3.0 brings together emergent research and best practices surrounding the effective usage of Web 3.0 technologies in a variety of environments. Featuring the latest technologies and applications across industries, this publication is a vital reference source for academics, researchers, students, and professionals who are interested in new ways to use intelligent web technologies within various settings.

Recent decades have witnessed the emergence of artificial intelligence as a serious science and engineering discipline. This textbook, aimed at junior to senior undergraduate students and first-year graduate students, presents artificial intelligence (AI) using a coherent framework to study the design of intelligent computational agents. By showing how basic approaches fit into a multidimensional design space, readers can learn the fundamentals without losing sight of the bigger picture. The book balances theory and experiment, showing how to link them intimately together, and develops the science of AI together with its engineering applications. Although structured as a textbook, the book's straightforward, self-contained style will also appeal to a wide audience of professionals, researchers, and independent learners. AI is a rapidly developing field: this book encapsulates the latest results without being exhaustive and encyclopedic. The text is supported by an online learning environment, AIspace, http://aispace.org, so that students can experiment with the main AI algorithms plus problems, animations, lecture slides, and a knowledge representation system, AIlog, for experimentation and problem solving.

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

This book constitutes the refereed proceedings of the 15th Conference on Artificial Intelligence in Medicine, AIME 2015, held in Pavia, Italy, in June 2015. The 19 revised full and 24 short papers presented were carefully reviewed and selected from 99 submissions. The papers are organized in the following topical sections: process mining and phenotyping; data mining and machine learning; temporal data mining; uncertainty and Bayesian networks; text mining; prediction in clinical practice; and knowledge representation and guidelines.

This book constitutes the refereed proceedings of the 16th International Conference on Artificial Intelligence in Education, AIED 2013, held in Memphis, TN, USA in July 2013. The 55 revised full papers presented together with 73 poster presentations were carefully reviewed and selected from a total of 168 submissions. The papers are arranged in sessions on student modeling and personalization, open-learner modeling, affective computing and engagement, educational data mining, learning together (collaborative learning and social computing), natural language processing, pedagogical agents, metacognition and self-regulated learning, feedback and scaffolding, designed learning activities, educational games and narrative, and outreach and scaling up.

This book constitutes the refereed proceedings of the 11th IFIP WG 12.5 International Conference on Artificial Intelligence Applications and Innovations, AIAI 2015, held in Bayonne, France, in September 2015. The 35 revised full papers presented were carefully reviewed and selected from 81 submissions. The papers feature highly novel research describing innovative algorithms, systems, tools and techniques, as well as proposing advanced prototypes in the area of artificial intelligence.

This book constitutes the refereed proceedings of the 13th Ibero-American Conference on Artificial Intelligence, IBERAMIA 2012, held in Cartagena de Indias, Colombia, in November 2012. The 75 papers presented were carefully reviewed and selected from 170 submissions. The papers are organized in topical sections on knowledge representation and reasoning, information and knowledge processing, knowledge discovery and data mining, machine learning, bio-inspired computing, fuzzy systems, modelling and simulation, ambient intelligence, multi-agent systems, human-computer interaction, natural language processing, computer vision and robotics, planning and scheduling, AI in education, and knowledge engineering and applications.

This volume constitutes the refereed proceedings of the 4th Pacific Rim International Conference on Artificial Intelligence, PRICAI '96, held in Cairns, Queensland, Australia in August 1996. The 56 revised full

papers included in the book were carefully selected for presentation at the conference from a total of 175 submissions. The topics covered are machine learning, interactive systems, knowledge representation, reasoning about change, neural nets and uncertainty, natural language, constraint satisfaction and optimization, qualitative reasoning, automated deduction, nonmonotonic reasoning, intelligent agents, planning, and pattern recognition.

This book constitutes the refereed proceedings of the 12th Conference on Artificial Intelligence in Medicine in Europe, AIME 2009, held in Verona, Italy in July 2009. The 24 revised long papers and 36 revised short papers presented together with 2 invited talks were carefully reviewed and selected from 140 submissions. The papers are organized in topical sections on agent-based systems, temporal data mining, machine learning and knowledge discovery, text mining, natural language processing and generation, ontologies, decision support systems, applications of AI-based image processing techniques, protocols and guidelines, as well as workflow systems.

This two-volume set LNAI 12748 and 12749 constitutes the refereed proceedings of the 22nd International Conference on Artificial Intelligence in Education, AIED 2021, held in Utrecht, The Netherlands, in June 2021.* The 40 full papers presented together with 76 short papers, 2 panels papers, 4 industry papers, 4 doctoral consortium, and 6 workshop papers were carefully reviewed and selected from 209 submissions. The conference provides opportunities for the cross-fertilization of approaches, techniques and ideas from the many fields that comprise AIED, including computer science, cognitive and learning sciences, education, game design, psychology, sociology, linguistics as well as many domain-specific areas. *The conference was held virtually due to the COVID-19 pandemic.

This book constitutes the refereed proceedings of the 15th International Conference on Artificial Intelligence in Education, AIED 2011, held in Auckland, New Zealand in June/July 2011. The 49 revised full papers presented together with three invited talks and extended abstracts of poster presentations, young researchers contributions and interactive systems reports and workshop reports were carefully reviewed and selected from a total of 193 submissions. The papers report on technical advances in and cross-fertilization of approaches and ideas from the many topical areas that make up this highly interdisciplinary field of research and development including artificial intelligence, agent technology, computer science, cognitive and learning sciences, education, educational technology, game design, psychology, philosophy, sociology, anthropology and linguistics.

This book constitutes the refereed proceedings of the 9th Conference on Artificial Intelligence in Medicine in Europe, AIME 2003, held in Protaras, Cyprus, in October 2003. The 24 revised full papers and 26 revised short papers presented together with two invited contributions were carefully reviewed and selected from 65 submissions. The papers are organized in topical sections on temporal reasoning, ontology and terminology, image processing and simulation, guidelines and clinical protocols, terminology and natural language issues, machine learning, probabilistic networks and Bayesian models, case-based reasoning and decision support, and data mining and knowledge discovery.

Parallel processing for AI problems is of great current interest because of its potential for alleviating the computational demands of AI procedures. The articles in this book consider parallel processing for problems in several areas of artificial intelligence: image processing, knowledge representation in semantic networks, production rules, mechanization of logic, constraint satisfaction, parsing of natural language, data filtering and data mining. The publication is divided into six sections. The first addresses parallel computing for processing and understanding images. The second discusses parallel processing for semantic networks, which are widely used means for representing knowledge - methods which enable efficient and flexible processing of semantic networks are expected to have high utility for building large-scale knowledge-based systems. The third section explores the automatic parallel execution of production systems, which are used extensively in building rule-based expert systems - systems containing large numbers of rules are slow to execute and can significantly benefit from automatic parallel execution. The exploitation of parallelism for the mechanization of logic is dealt with in the fourth section. While sequential control aspects pose problems for the parallelization of production systems, logic has a purely declarative interpretation which does not demand a particular evaluation strategy. In this area, therefore, very large search spaces provide significant potential for parallelism. In particular, this is true for automated theorem proving. The fifth section considers the problem of constraint satisfaction, which is a useful abstraction of a number of important problems in AI and other fields of computer science. It also discusses the technique of consistent labeling as a preprocessing step in the constraint satisfaction problem. Section VI consists of two articles, each on a different, important topic. The first discusses parallel formulation for the Tree Adjoining Grammar (TAG), which is a powerful formalism for describing natural languages. The second examines the suitability of a parallel programming paradigm called Linda, for solving problems in artificial intelligence. Each of the areas discussed in the book holds many open problems, but it is believed that parallel processing will form a key ingredient in achieving at least partial solutions. It is hoped that the contributions, sourced from experts around the world, will inspire readers to take on these challenging areas of inquiry.

FLINS, originally an acronym for Fuzzy Logic and Intelligent Technologies in Nuclear Science, is now extended to Applied Artificial Intelligence for Applied Research. The contributions to the seventh in the series of FLINS conferences contained in this volume cover state-of-the-art research and development in applied artificial intelligence for applied research in general and for power/nuclear engineering in particular. Contents: Learning Techniques in Service Robotic Environment (Z Z Bien et al.); The Role of Soft Computing in Applied Sciences (P P Wang); New Operators for Context Adaptation of Mamdani Fuzzy Systems (A Botta et al.); Lukasiewicz Algebra Model of Linguistic Values of Truth and Their Reasoning (L Yi et al.); Annihilator and Alpha-Subset (X Q Long et al.); On PCA Error of Subject Classification (L H Feng et al.); Knowledge Discovery for Customer Classification on the Principle of Maximum Profit (C Zeng et al.); Fuzzy Multi-Objective Interactive Goal Programming Approach to Aggregate Production Planning (T Ertay); Analysing Success Criteria for ICT Projects (K Milis & K Vanhoof); Prioritization of Relational Capital Measurement Indicators Using Fuzzy AHP (A Beskese & F T Bozbura); Risk Analysis and Management of Urban Rainstorm Water Logging in Tianjin (S Han et al.); Obstacle Avoidance Learning for Biomimetic Robot Fish (Z Shen et al.); Urban Signal Control Using Intelligent Agents (M A Alipour & S Jalili); Parallel Evolutionary Methods Applied to a PWR Core Reload Pattern Optimization (R Schirru et al.); and other papers. Readership: Graduate students, researchers and industrialists in AI, applied mathematics, computer science and engineering, electrical & electronic engineering, and nuclear/power engineering.

This book constitutes the refereed proceedings of the 17th International Conference on Artificial Intelligence in Education, AIED 2015, held in Madrid, Spain, in June 2015. The 50 revised full papers presented together with 3 keynotes, 79 poster presentations, 13 doctoral consortium papers, 16 workshop abstracts, and 8 interactive event papers were carefully reviewed and selected from numerous submissions. The conference provides opportunities for the cross-fertilization of approaches, techniques and ideas from the many

fields that comprise AIED, including computer science, cognitive and learning sciences, education, game design, psychology, sociology, linguistics, as well as many domain-specific areas.

This book focuses on emerging issues following the integration of artificial intelligence systems in our daily lives. It focuses on the cognitive, visual, social and analytical aspects of computing and intelligent technologies, highlighting ways to improve technology acceptance, effectiveness, and efficiency. Topics such as responsibility, integration and training are discussed throughout. The book also reports on the latest advances in systems engineering, with a focus on societal challenges and next-generation systems and applications for meeting them. It also discusses applications in smart grids and infrastructures, systems engineering education as well as defense and aerospace. The book is based on both the AHFE 2018 International Conference on Human Factors in Artificial Intelligence and Social Computing, Software and Systems Engineering, The Human Side of Service Engineering and Human Factors in Energy, July 21–25, 2018, Loews Sapphire Falls Resort at Universal Studios, Orlando, Florida, USA.

The Eighth International Baltic Conference on Databases and Information Systems took place on June 25 2008 in Tallinn, Estonia. This conference is continuing a series of successful bi-annual Baltic conferences on databases and information systems (IS). The aim is to provide a wide international forum for academics and practitioners in the field of databases and modern information systems for exchanging their achievements in this area. The original research results presented in Databases and Information Systems V mostly belong to novel fields of IS and database research such as database technology and the semantic web, ontology-based IS, IS and AI technologies and IS integration. The contribution of Dr. Jari Palomauml;ki showed how different ontological commitments affect the way we are modeling the world when creating an information system. As semantic technologies have been gaining more attention recently, a special session on semantic interoperability of IS was organized. The invited talks from each Baltic State gave a good insight how semantic interoperability initiatives are developing in each of the Baltic States and how they relate to the European semantic interoperability framework.

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.