

Pattern Recognition Machine Learning Bishop Solution Manual

RECOGNIZING THE EXAGGERATION WAYS TO ACQUIRE THIS EBOOK **PATTERN RECOGNITION MACHINE LEARNING BISHOP SOLUTION MANUAL** IS ADDITIONALLY USEFUL. YOU HAVE REMAINED IN RIGHT SITE TO BEGIN GETTING THIS INFO. ACQUIRE THE PATTERN RECOGNITION MACHINE LEARNING BISHOP SOLUTION MANUAL LINK THAT WE HAVE THE FUNDS FOR HERE AND CHECK OUT THE LINK.

YOU COULD PURCHASE GUIDE PATTERN RECOGNITION MACHINE LEARNING BISHOP SOLUTION MANUAL OR GET IT AS SOON AS FEASIBLE. YOU COULD QUICKLY DOWNLOAD THIS PATTERN RECOGNITION MACHINE LEARNING BISHOP SOLUTION MANUAL AFTER GETTING DEAL. SO, BEHIND YOU REQUIRE THE BOOK SWIFTLY, YOU CAN STRAIGHT ACQUIRE IT. ITS SUITABLY EXTREMELY SIMPLE AND IN VIEW OF THAT FATS, ISNT IT? YOU HAVE TO FAVOR TO IN THIS PROCLAIM

DATA MINING: PRACTICAL MACHINE LEARNING TOOLS AND TECHNIQUES IAN H. WITTEN 2011-02-03 DATA MINING: PRACTICAL MACHINE LEARNING TOOLS AND TECHNIQUES, THIRD EDITION, OFFERS A THOROUGH GROUNDING IN MACHINE LEARNING CONCEPTS AS WELL AS PRACTICAL ADVICE ON APPLYING MACHINE LEARNING TOOLS AND TECHNIQUES IN REAL-WORLD DATA MINING SITUATIONS. THIS HIGHLY ANTICIPATED THIRD EDITION OF THE MOST ACCLAIMED WORK ON DATA MINING AND MACHINE LEARNING WILL TEACH YOU EVERYTHING YOU NEED TO KNOW ABOUT PREPARING INPUTS, INTERPRETING OUTPUTS, EVALUATING RESULTS, AND THE ALGORITHMIC METHODS AT THE HEART OF SUCCESSFUL DATA MINING. THOROUGH UPDATES REFLECT THE TECHNICAL CHANGES AND MODERNIZATIONS THAT HAVE TAKEN PLACE IN THE FIELD SINCE THE LAST EDITION, INCLUDING NEW MATERIAL ON DATA TRANSFORMATIONS, ENSEMBLE LEARNING, MASSIVE DATA SETS, MULTI-INSTANCE LEARNING, PLUS A NEW VERSION OF THE POPULAR WEKA MACHINE LEARNING SOFTWARE DEVELOPED BY THE AUTHORS. WITTEN, FRANK, AND HALL INCLUDE BOTH TRIED-AND-TRUE TECHNIQUES OF TODAY AS WELL AS METHODS AT THE LEADING EDGE OF CONTEMPORARY RESEARCH. THE BOOK IS TARGETED AT INFORMATION SYSTEMS PRACTITIONERS, PROGRAMMERS, CONSULTANTS, DEVELOPERS, INFORMATION TECHNOLOGY MANAGERS, SPECIFICATION WRITERS, DATA ANALYSTS, DATA MODELERS, DATABASE R&D PROFESSIONALS, DATA WAREHOUSE ENGINEERS, DATA MINING PROFESSIONALS. THE BOOK WILL ALSO BE USEFUL FOR PROFESSORS AND STUDENTS OF UPPER-LEVEL UNDERGRADUATE AND GRADUATE-LEVEL DATA MINING AND MACHINE LEARNING COURSES WHO WANT TO INCORPORATE DATA MINING AS PART OF THEIR DATA MANAGEMENT KNOWLEDGE BASE AND EXPERTISE. PROVIDES A THOROUGH GROUNDING IN MACHINE LEARNING CONCEPTS AS WELL AS PRACTICAL ADVICE ON APPLYING THE TOOLS AND TECHNIQUES TO YOUR DATA MINING PROJECTS OFFERS CONCRETE TIPS AND TECHNIQUES FOR PERFORMANCE IMPROVEMENT THAT WORK BY TRANSFORMING THE INPUT OR OUTPUT IN MACHINE LEARNING METHODS INCLUDES DOWNLOADABLE WEKA SOFTWARE TOOLKIT, A COLLECTION OF MACHINE LEARNING ALGORITHMS FOR DATA MINING TASKS—IN AN UPDATED, INTERACTIVE INTERFACE. ALGORITHMS IN TOOLKIT COVER: DATA PRE-PROCESSING, CLASSIFICATION, REGRESSION, CLUSTERING, ASSOCIATION RULES, VISUALIZATION

BIOMEDICAL ENGINEERING SYSTEMS AND TECHNOLOGIES Ana Roque 2020-05-05 This book constitutes the thoroughly refereed post-conference proceedings of the 12th International Joint Conference on Biomedical Engineering Systems and Technologies, BIOSTEC 2019, held in Prague, Czech Republic, in February 2019. The 22 revised and extended full papers presented were carefully reviewed and selected from a total of 271 submissions. The papers are organized in topical sections on biomedical electronics and devices; bioimaging; bioinformatics models, methods and algorithms; bio-inspired systems and signal processing health informatics.

INTELLIGENT DATA SECURITY SOLUTIONS FOR E-HEALTH APPLICATIONS Amit Kumar Singh 2020-09-02 E-HEALTH APPLICATIONS SUCH AS TELE-MEDICINE, TELE-RADIOLOGY, TELE-OPHTHALMOLOGY, AND TELE-DIAGNOSIS ARE VERY PROMISING AND HAVE IMMENSE POTENTIAL TO IMPROVE GLOBAL HEALTHCARE. THEY CAN IMPROVE ACCESS, EQUITY, AND QUALITY THROUGH THE CONNECTION OF HEALTHCARE FACILITIES AND HEALTHCARE PROFESSIONALS, DIMINISHING GEOGRAPHICAL AND PHYSICAL BARRIERS. ONE CRITICAL ISSUE, HOWEVER, IS RELATED TO THE SECURITY OF DATA TRANSMISSION AND ACCESS TO THE TECHNOLOGIES OF MEDICAL INFORMATION. CURRENTLY, MEDICAL-RELATED IDENTITY THEFT COSTS BILLIONS OF DOLLARS EACH YEAR AND ALTERED MEDICAL INFORMATION CAN PUT A PERSON'S HEALTH AT RISK THROUGH MISDIAGNOSIS, DELAYED TREATMENT OR INCORRECT PRESCRIPTIONS. YET, THE USE OF HAND-HELD DEVICES FOR STORING, ACCESSING, AND TRANSMITTING MEDICAL INFORMATION IS OUTPACING THE PRIVACY AND SECURITY PROTECTIONS ON THOSE DEVICES. RESEARCHERS ARE STARTING TO DEVELOP SOME IMPERCEPTIBLE MARKS TO ENSURE THE TAMPER-PROOFING, COST EFFECTIVE, AND GUARANTEED ORIGINALITY OF THE MEDICAL RECORDS. HOWEVER, THE ROBUSTNESS, SECURITY AND EFFICIENT IMAGE ARCHIVING AND RETRIEVAL OF MEDICAL DATA INFORMATION AGAINST THESE CYBERATTACKS IS A CHALLENGING AREA FOR RESEARCHERS IN THE FIELD OF E-HEALTH APPLICATIONS. INTELLIGENT DATA SECURITY SOLUTIONS FOR E-HEALTH APPLICATIONS FOCUSES ON CUTTING-EDGE ACADEMIC AND INDUSTRY-RELATED RESEARCH IN THIS FIELD, WITH PARTICULAR EMPHASIS ON INTERDISCIPLINARY APPROACHES AND NOVEL TECHNIQUES TO PROVIDE SECURITY SOLUTIONS FOR SMART APPLICATIONS. THE BOOK PROVIDES AN OVERVIEW OF CUTTING-EDGE SECURITY TECHNIQUES AND IDEAS TO HELP GRADUATE STUDENTS, RESEARCHERS, AS WELL AS IT PROFESSIONALS WHO WANT TO UNDERSTAND THE OPPORTUNITIES AND CHALLENGES OF USING EMERGING TECHNIQUES AND ALGORITHMS FOR DESIGNING AND DEVELOPING MORE SECURE SYSTEMS AND METHODS FOR E-HEALTH APPLICATIONS. INVESTIGATES NEW SECURITY AND PRIVACY REQUIREMENTS RELATED TO EHEALTH TECHNOLOGIES AND LARGE SETS OF APPLICATIONS REVIEWS HOW THE ABUNDANCE OF DIGITAL INFORMATION ON SYSTEM BEHAVIOR IS NOW BEING CAPTURED, PROCESSED, AND USED TO IMPROVE AND STRENGTHEN SECURITY AND PRIVACY PROVIDES AN OVERVIEW OF INNOVATIVE SECURITY TECHNIQUES WHICH ARE BEING DEVELOPED TO ENSURE THE GUARANTEED AUTHENTICITY OF TRANSMITTED, SHARED OR STORED DATA/INFORMATION

BIG DATA ANALYTICS FOR CYBER-PHYSICAL SYSTEMS Guido Dartmann 2019-07-15 BIG DATA ANALYTICS IN CYBER-PHYSICAL SYSTEMS: MACHINE LEARNING FOR THE INTERNET OF THINGS EXAMINES SENSOR SIGNAL PROCESSING, IOT GATEWAYS, OPTIMIZATION AND DECISION-MAKING, INTELLIGENT MOBILITY, AND IMPLEMENTATION OF MACHINE LEARNING ALGORITHMS IN EMBEDDED SYSTEMS. THIS BOOK FOCUSES ON THE INTERACTION BETWEEN IOT TECHNOLOGY AND THE MATHEMATICAL TOOLS USED TO EVALUATE THE EXTRACTED DATA OF THOSE SYSTEMS. EACH CHAPTER PROVIDES THE READER WITH A BROAD LIST OF DATA ANALYTICS AND MACHINE LEARNING METHODS FOR MULTIPLE IOT APPLICATIONS. ADDITIONALLY, THIS VOLUME ADDRESSES THE EDUCATIONAL TRANSFER NEEDED TO INCORPORATE THESE TECHNOLOGIES INTO OUR SOCIETY BY EXAMINING NEW PLATFORMS FOR IOT IN SCHOOLS, NEW COURSES AND CONCEPTS FOR UNIVERSITIES AND ADULT EDUCATION ON IOT AND DATA SCIENCE. BRIDGES THE GAP BETWEEN IOT, CPS, AND MATHEMATICAL MODELLING. FEATURES NUMEROUS USE CASES THAT DISCUSS HOW CONCEPTS ARE APPLIED IN DIFFERENT DOMAINS AND APPLICATIONS. PROVIDES "BEST PRACTICES", "WINNING STORIES" AND "REAL-WORLD EXAMPLES" TO COMPLEMENT INNOVATION. INCLUDES HIGHLIGHTS OF MATHEMATICAL FOUNDATIONS OF SIGNAL PROCESSING AND MACHINE LEARNING IN CPS AND IOT.

SOFT COMPUTING METHODS FOR PRACTICAL ENVIRONMENT SOLUTIONS: TECHNIQUES AND STUDIES Gestal Pose, Marcos 2010-05-31 "THIS PUBLICATION PRESENTS A SERIES OF PRACTICAL APPLICATIONS OF DIFFERENT SOFT COMPUTING TECHNIQUES TO REAL-WORLD PROBLEMS, SHOWING THE ENORMOUS POTENTIAL OF THESE TECHNIQUES IN SOLVING PROBLEMS"—PROVIDED BY PUBLISHER.

MACHINE LEARNING Yagang Zhang 2010-02-01 MACHINE LEARNING TECHNIQUES HAVE THE POTENTIAL OF ALLEVIATING THE COMPLEXITY OF KNOWLEDGE ACQUISITION. THIS BOOK PRESENTS TODAY'S STATE AND DEVELOPMENT TENDENCIES OF MACHINE LEARNING. IT IS A MULTI-AUTHOR BOOK. TAKING INTO ACCOUNT THE LARGE AMOUNT OF KNOWLEDGE ABOUT MACHINE LEARNING AND PRACTICE PRESENTED IN THE BOOK, IT IS DIVIDED INTO THREE MAJOR PARTS: INTRODUCTION, MACHINE LEARNING THEORY AND APPLICATIONS. PART I FOCUSES ON THE INTRODUCTION TO MACHINE LEARNING. THE AUTHOR ALSO ATTEMPTS TO PROMOTE A NEW DESIGN OF THINKING MACHINES AND DEVELOPMENT PHILOSOPHY. CONSIDERING THE GROWING COMPLEXITY AND SERIOUS DIFFICULTIES OF INFORMATION PROCESSING IN MACHINE LEARNING, IN PART II OF THE BOOK, THE THEORETICAL FOUNDATIONS OF MACHINE LEARNING ARE CONSIDERED, AND THEY MAINLY INCLUDE SELF-ORGANIZING MAPS (SOMS), CLUSTERING, ARTIFICIAL NEURAL NETWORKS, NONLINEAR CONTROL, FUZZY SYSTEM AND KNOWLEDGE-BASED SYSTEM (KBS). PART III CONTAINS SELECTED APPLICATIONS OF VARIOUS MACHINE LEARNING APPROACHES, FROM FLIGHT DELAYS, NETWORK INTRUSION, IMMUNE SYSTEM, SHIP DESIGN TO CT AND RNA TARGET PREDICTION. THE BOOK WILL BE OF INTEREST TO INDUSTRIAL ENGINEERS AND SCIENTISTS AS WELL AS ACADEMICS WHO WISH TO PURSUE MACHINE LEARNING. THE BOOK IS INTENDED FOR BOTH GRADUATE AND POSTGRADUATE STUDENTS IN FIELDS SUCH AS COMPUTER SCIENCE, CYBERNETICS, SYSTEM SCIENCES, ENGINEERING, STATISTICS, AND SOCIAL SCIENCES, AND AS A REFERENCE FOR SOFTWARE PROFESSIONALS AND PRACTITIONERS.

MULTISENSOR DATA FUSION AND MACHINE LEARNING FOR ENVIRONMENTAL REMOTE SENSING Ni-Bin Chang 2018-02-21 IN THE LAST FEW YEARS THE SCIENTIFIC COMMUNITY HAS REALIZED THAT OBTAINING A BETTER UNDERSTANDING OF INTERACTIONS BETWEEN NATURAL SYSTEMS AND THE MAN-MADE ENVIRONMENT ACROSS DIFFERENT SCALES DEMANDS MORE RESEARCH EFFORTS IN REMOTE SENSING. AN INTEGRATED EARTH SYSTEM OBSERVATORY THAT MERGES SURFACE-BASED, AIR-BORNE, SPACE-BORNE, AND EVEN UNDERGROUND SENSORS WITH COMPREHENSIVE AND PREDICTIVE CAPABILITIES INDICATES PROMISE FOR REVOLUTIONIZING THE STUDY OF GLOBAL WATER, ENERGY, AND CARBON CYCLES AS WELL AS LAND USE AND LAND COVER CHANGES. THE AIM OF THIS BOOK IS TO PRESENT A SUITE OF RELEVANT CONCEPTS, TOOLS, AND METHODS OF INTEGRATED MULTISENSOR DATA FUSION AND MACHINE LEARNING TECHNOLOGIES TO PROMOTE ENVIRONMENTAL SUSTAINABILITY. THE PROCESS OF MACHINE LEARNING FOR INTELLIGENT FEATURE EXTRACTION CONSISTS OF REGULAR, DEEP, AND FAST LEARNING ALGORITHMS. THE NICHE FOR INTEGRATING DATA FUSION AND MACHINE LEARNING FOR REMOTE SENSING RESTS UPON THE CREATION OF A NEW SCIENTIFIC ARCHITECTURE IN REMOTE SENSING SCIENCE THAT IS DESIGNED TO SUPPORT NUMERICAL AS WELL AS SYMBOLIC FEATURE EXTRACTION MANAGED BY SEVERAL COGNITIVELY ORIENTED MACHINE LEARNING TASKS AT FINER SCALES. BY GROUPING A SUITE OF SATELLITES WITH SIMILAR NATURE IN PLATFORM DESIGN, DATA MERGING MAY COME TO HELP FOR CLOUDY PIXEL RECONSTRUCTION OVER THE SPACE DOMAIN OR CONCATENATION OF TIME SERIES IMAGES OVER THE TIME DOMAIN, OR EVEN BOTH SIMULTANEOUSLY. ORGANIZED IN 5 PARTS, FROM FUNDAMENTAL PRINCIPLES OF REMOTE SENSING; FEATURE EXTRACTION FOR REMOTE SENSING; IMAGE AND DATA FUSION FOR REMOTE SENSING; INTEGRATED DATA MERGING, DATA RECONSTRUCTION, DATA FUSION, AND MACHINE LEARNING; TO REMOTE SENSING FOR ENVIRONMENTAL DECISION ANALYSIS, THE BOOK WILL BE A USEFUL REFERENCE FOR GRADUATE STUDENTS, ACADEMIC SCHOLARS, AND WORKING PROFESSIONALS WHO ARE INVOLVED IN THE STUDY OF EARTH SYSTEMS AND THE ENVIRONMENT FOR A SUSTAINABLE FUTURE. THE NEW KNOWLEDGE IN THIS BOOK CAN BE APPLIED SUCCESSFULLY IN MANY AREAS OF ENVIRONMENTAL SCIENCE AND ENGINEERING.

THE ALGORITHM DESIGN MANUAL Steven S. Skiena 2020-10-05 "MY ABSOLUTE FAVORITE FOR THIS KIND OF INTERVIEW PREPARATION IS STEVEN SKIENA'S THE ALGORITHM DESIGN MANUAL. MORE THAN ANY OTHER BOOK IT HELPED ME UNDERSTAND JUST HOW ASTONISHINGLY COMMONPLACE ... GRAPH PROBLEMS ARE -- THEY SHOULD BE PART OF EVERY WORKING PROGRAMMER'S TOOLKIT. THE BOOK ALSO COVERS BASIC DATA STRUCTURES AND SORTING ALGORITHMS, WHICH IS A NICE BONUS. ... EVERY 1 - PAGER HAS A SIMPLE PICTURE, MAKING IT EASY TO REMEMBER. THIS IS A GREAT WAY TO LEARN HOW TO IDENTIFY HUNDREDS OF PROBLEM TYPES." (STEVE YEGGE, GET THAT JOB AT GOOGLE) "STEVEN SKIENA'S ALGORITHM DESIGN MANUAL RETAINS ITS TITLE AS THE BEST AND MOST COMPREHENSIVE PRACTICAL ALGORITHM GUIDE TO HELP IDENTIFY AND SOLVE PROBLEMS. ... EVERY PROGRAMMER SHOULD READ THIS BOOK, AND ANYONE WORKING IN THE FIELD SHOULD KEEP IT CLOSE TO HAND. ... THIS IS THE BEST INVESTMENT ... A PROGRAMMER OR ASPIRING PROGRAMMER CAN MAKE." (HAROLD THIMBLEBY, TIMES HIGHER EDUCATION) "IT IS WONDERFUL TO OPEN TO A RANDOM SPOT AND DISCOVER AN INTERESTING ALGORITHM. THIS IS THE ONLY TEXTBOOK I FELT COMPELLED TO BRING WITH ME OUT OF MY STUDENT DAYS.... THE COLOR REALLY ADDS A LOT OF ENERGY TO THE NEW EDITION OF THE BOOK!" (CORY BART, UNIVERSITY OF DELAWARE) "THE IS THE MOST APPROACHABLE BOOK ON ALGORITHMS I HAVE." (MEGAN SQUIRE, ELON UNIVERSITY) --- THIS NEWLY EXPANDED AND UPDATED THIRD EDITION OF THE BEST-SELLING CLASSIC CONTINUES TO TAKE THE "MYSTERY" OUT OF DESIGNING ALGORITHMS, AND ANALYZING THEIR EFFICIENCY. IT SERVES AS THE PRIMARY TEXTBOOK OF CHOICE FOR ALGORITHM DESIGN COURSES AND INTERVIEW SELF-STUDY, WHILE MAINTAINING ITS STATUS AS THE PREMIER PRACTICAL REFERENCE GUIDE TO ALGORITHMS FOR PROGRAMMERS, RESEARCHERS, AND STUDENTS. THE READER-FRIENDLY ALGORITHM DESIGN MANUAL PROVIDES STRAIGHTFORWARD ACCESS TO COMBINATORIAL ALGORITHMS TECHNOLOGY, STRESSING DESIGN OVER ANALYSIS. THE FIRST PART, PRACTICAL ALGORITHM DESIGN, PROVIDES ACCESSIBLE INSTRUCTION ON METHODS FOR DESIGNING AND ANALYZING COMPUTER ALGORITHMS. THE SECOND PART, THE HITCHHIKER'S GUIDE TO ALGORITHMS, IS INTENDED FOR BROWSING AND REFERENCE, AND COMPRISES THE CATALOG OF ALGORITHMIC RESOURCES, IMPLEMENTATIONS, AND AN EXTENSIVE BIBLIOGRAPHY. NEW TO THE THIRD EDITION: -- NEW AND EXPANDED COVERAGE OF RANDOMIZED ALGORITHMS, HASHING, DIVIDE AND CONQUER, APPROXIMATION ALGORITHMS, AND QUANTUM COMPUTING -- PROVIDES FULL ONLINE SUPPORT FOR LECTURERS,

INCLUDING AN IMPROVED WEBSITE COMPONENT WITH LECTURE SLIDES AND VIDEOS -- FULL COLOR ILLUSTRATIONS AND CODE INSTANTLY CLARIFY DIFFICULT CONCEPTS -- INCLUDES SEVERAL NEW "WAR STORIES" RELATING EXPERIENCES FROM REAL-WORLD APPLICATIONS -- OVER 100 NEW PROBLEMS, INCLUDING PROGRAMMING-CHALLENGE PROBLEMS FROM LEETCODE AND HACKERRANK. -- PROVIDES UP-TO-DATE LINKS LEADING TO THE BEST IMPLEMENTATIONS AVAILABLE IN C, C++, AND JAVA ADDITIONAL LEARNING TOOLS: -- CONTAINS A UNIQUE CATALOG IDENTIFYING THE 75 ALGORITHMIC PROBLEMS THAT ARISE MOST OFTEN IN PRACTICE, LEADING THE READER DOWN THE RIGHT PATH TO SOLVE THEM -- EXERCISES INCLUDE "JOB INTERVIEW PROBLEMS" FROM MAJOR SOFTWARE COMPANIES -- HIGHLIGHTED "TAKE HOME LESSONS" EMPHASIZE ESSENTIAL CONCEPTS -- THE "NO THEOREM-PROOF" STYLE PROVIDES A UNIQUELY ACCESSIBLE AND INTUITIVE APPROACH TO A CHALLENGING SUBJECT -- MANY ALGORITHMS ARE PRESENTED WITH ACTUAL CODE (WRITTEN IN C) -- PROVIDES COMPREHENSIVE REFERENCES TO BOTH SURVEY ARTICLES AND THE PRIMARY LITERATURE WRITTEN BY A WELL-KNOWN ALGORITHMS RESEARCHER WHO RECEIVED THE IEEE COMPUTER SCIENCE AND ENGINEERING TEACHING AWARD, THIS SUBSTANTIALLY ENHANCED THIRD EDITION OF THE ALGORITHM DESIGN MANUAL IS AN ESSENTIAL LEARNING TOOL FOR STUDENTS AND PROFESSIONALS NEEDED A SOLID GROUNDING IN ALGORITHMS. PROFESSOR SKIENA IS ALSO THE AUTHOR OF THE POPULAR SPRINGER TEXTS, THE DATA SCIENCE DESIGN MANUAL AND PROGRAMMING CHALLENGES: THE PROGRAMMING CONTEST TRAINING MANUAL.

POSITIVE UNLABELED LEARNING Kristen Jaskie 2022-04-20 MACHINE LEARNING AND ARTIFICIAL INTELLIGENCE (AI) ARE POWERFUL TOOLS THAT CREATE PREDICTIVE MODELS, EXTRACT INFORMATION, AND HELP MAKE COMPLEX DECISIONS. THEY DO THIS BY EXAMINING AN ENORMOUS QUANTITY OF LABELED TRAINING DATA TO FIND PATTERNS TOO COMPLEX FOR HUMAN OBSERVATION. HOWEVER, IN MANY REAL-WORLD APPLICATIONS, WELL-LABELED DATA CAN BE DIFFICULT, EXPENSIVE, OR EVEN IMPOSSIBLE TO OBTAIN. IN SOME CASES, SUCH AS WHEN IDENTIFYING RARE OBJECTS LIKE NEW ARCHEOLOGICAL SITES OR SECRET ENEMY MILITARY FACILITIES IN SATELLITE IMAGES, ACQUIRING LABELS COULD REQUIRE MONTHS OF TRAINED HUMAN OBSERVERS AT INCREDIBLE EXPENSE. OTHER TIMES, AS WHEN ATTEMPTING TO PREDICT DISEASE INFECTION DURING A PANDEMIC SUCH AS COVID-19, RELIABLE TRUE LABELS MAY BE NEARLY IMPOSSIBLE TO OBTAIN EARLY ON DUE TO LACK OF TESTING EQUIPMENT OR OTHER FACTORS. IN THAT SCENARIO, IDENTIFYING EVEN A SMALL AMOUNT OF TRULY NEGATIVE DATA MAY BE IMPOSSIBLE DUE TO THE HIGH FALSE NEGATIVE RATE OF AVAILABLE TESTS. IN SUCH PROBLEMS, IT IS POSSIBLE TO LABEL A SMALL SUBSET OF DATA AS BELONGING TO THE CLASS OF INTEREST THOUGH IT IS IMPRACTICAL TO MANUALLY LABEL ALL DATA NOT OF INTEREST. WE ARE LEFT WITH A SMALL SET OF POSITIVE LABELED DATA AND A LARGE SET OF UNKNOWN AND UNLABELED DATA. READERS WILL EXPLORE THIS POSITIVE AND UNLABELED LEARNING (PU LEARNING) PROBLEM IN DEPTH. THE BOOK RIGOROUSLY DEFINES THE PU LEARNING PROBLEM, DISCUSSES SEVERAL COMMON ASSUMPTIONS THAT ARE FREQUENTLY MADE ABOUT THE PROBLEM AND THEIR IMPLICATIONS, AND CONSIDERS HOW TO EVALUATE SOLUTIONS FOR THIS PROBLEM BEFORE DESCRIBING SEVERAL OF THE MOST POPULAR ALGORITHMS TO SOLVE THIS PROBLEM. IT EXPLORES SEVERAL USES FOR PU LEARNING INCLUDING APPLICATIONS IN BIOLOGICAL/MEDICAL, BUSINESS, SECURITY, AND SIGNAL PROCESSING. THIS BOOK ALSO PROVIDES HIGH-LEVEL SUMMARIES OF SEVERAL RELATED LEARNING PROBLEMS SUCH AS ONE-CLASS CLASSIFICATION, ANOMALY DETECTION, AND NOISY LEARNING AND THEIR RELATION TO PU LEARNING.

KNOWLEDGE, INFORMATION AND CREATIVITY SUPPORT SYSTEMS: RECENT TRENDS, ADVANCES AND SOLUTIONS Andrzej M.J. Skulimowski 2016-02-25 THIS VOLUME CONTAINS SOME CAREFULLY SELECTED PAPERS PRESENTED AT THE 8TH INTERNATIONAL CONFERENCE ON KNOWLEDGE, INFORMATION AND CREATIVITY SUPPORT SYSTEMS KICCS'2013, WHICH WAS HELD IN KRAKÓW AND WIELICZKA, POLAND IN NOVEMBER 2013. IN MOST CASES THE PAPERS ARE EXTENDED VERSIONS WITH NEWER RESULTS ADDED, REPRESENTING VIRTUALLY ALL TOPICS COVERED BY THE CONFERENCE. THE KICCS'2013 FOCUS THEME, "LOOKING INTO THE FUTURE OF CREATIVITY AND DECISION SUPPORT SYSTEMS", CLEARLY INDICATES THAT THE GROWING COMPLEXITY CALLS FOR SOME DEEPER AND INSIGHTFUL DISCUSSIONS ABOUT THE FUTURE BUT, OBVIOUSLY, COMPLEMENTED WITH AN EXPOSITION OF MODERN PRESENT DEVELOPMENTS THAT HAVE PROVEN THEIR POWER AND USEFULNESS. FOLLOWING THIS THEME, THE LIST OF TOPICS PRESENTED IN THIS VOLUME INCLUDE SOME FUTURE-ORIENTED FIELDS OF RESEARCH, SUCH AS ANTICIPATORY NETWORKS AND SYSTEMS, FORESIGHT SUPPORT SYSTEMS, RELEVANT NEWLY-EMERGING APPLICATIONS, EXEMPLIFIED BY AUTONOMOUS CREATIVE SYSTEMS. SPECIAL ATTENTION WAS ALSO GIVEN TO COGNITIVE AND COLLABORATIVE ASPECTS OF CREATIVITY.

DECISION THEORY MODELS FOR APPLICATIONS IN ARTIFICIAL INTELLIGENCE: CONCEPTS AND SOLUTIONS Sugar, L. Enrique 2011-10-31 ONE OF THE GOALS OF ARTIFICIAL INTELLIGENCE (AI) IS CREATING AUTONOMOUS AGENTS THAT MUST MAKE DECISIONS BASED ON UNCERTAIN AND INCOMPLETE INFORMATION. THE GOAL IS TO DESIGN RATIONAL AGENTS THAT MUST TAKE THE BEST ACTION GIVEN THE INFORMATION AVAILABLE AND THEIR GOALS. DECISION THEORY MODELS FOR APPLICATIONS IN ARTIFICIAL INTELLIGENCE: CONCEPTS AND SOLUTIONS PROVIDES AN INTRODUCTION TO DIFFERENT TYPES OF DECISION THEORY TECHNIQUES, INCLUDING MDPs, POMDPs, INFLUENCE DIAGRAMS, AND REINFORCEMENT LEARNING, AND ILLUSTRATES THEIR APPLICATION IN ARTIFICIAL INTELLIGENCE. THIS BOOK PROVIDES INSIGHTS INTO THE ADVANTAGES AND CHALLENGES OF USING DECISION THEORY MODELS FOR DEVELOPING INTELLIGENT SYSTEMS.

MACHINE LEARNING AND KNOWLEDGE DISCOVERY IN DATABASES Paolo Frasconi 2016-09-03 THE THREE VOLUME SET LNAI 9851, LNAI 9852, AND LNAI 9853 CONSTITUTES THE REFEREED PROCEEDINGS OF THE EUROPEAN CONFERENCE ON MACHINE LEARNING AND KNOWLEDGE DISCOVERY IN DATABASES, ECML PKDD 2016, HELD IN RIVA DEL GARDA, ITALY, IN SEPTEMBER 2016. THE 123 FULL PAPERS AND 16 SHORT PAPERS PRESENTED WERE CAREFULLY REVIEWED AND SELECTED FROM A TOTAL OF 460 SUBMISSIONS. THE PAPERS PRESENTED FOCUS ON PRACTICAL AND REAL-WORLD STUDIES OF MACHINE LEARNING, KNOWLEDGE DISCOVERY, DATA MINING; INNOVATIVE PROTOTYPE IMPLEMENTATIONS OR MATURE SYSTEMS THAT USE MACHINE LEARNING TECHNIQUES AND KNOWLEDGE DISCOVERY PROCESSES IN A REAL SETTING; RECENT ADVANCES AT THE FRONTIER OF MACHINE LEARNING AND DATA MINING WITH OTHER DISCIPLINES. PART I AND PART II OF THE PROCEEDINGS CONTAIN THE FULL PAPERS OF THE CONTRIBUTIONS PRESENTED IN THE SCIENTIFIC TRACK AND ABSTRACTS OF THE SCIENTIFIC PLENARY TALKS. PART III CONTAINS THE FULL PAPERS OF THE CONTRIBUTIONS PRESENTED IN THE INDUSTRIAL TRACK, SHORT PAPERS DESCRIBING DEMONSTRATION, THE NECTAR PAPERS, AND THE ABSTRACTS OF THE INDUSTRIAL PLENARY TALKS.

POSITIVE UNLABELED LEARNING Hamed Mirzaei 2022-06-08 MACHINE LEARNING AND ARTIFICIAL INTELLIGENCE (AI) ARE POWERFUL TOOLS THAT CREATE PREDICTIVE MODELS, EXTRACT INFORMATION, AND HELP MAKE COMPLEX DECISIONS. THEY DO THIS BY EXAMINING AN ENORMOUS QUANTITY OF LABELED TRAINING DATA TO FIND PATTERNS TOO COMPLEX FOR HUMAN OBSERVATION. HOWEVER, IN MANY REAL-WORLD APPLICATIONS, WELL-LABELED DATA CAN BE DIFFICULT, EXPENSIVE, OR EVEN IMPOSSIBLE TO OBTAIN. IN SOME CASES, SUCH AS WHEN IDENTIFYING RARE OBJECTS LIKE NEW ARCHEOLOGICAL SITES OR SECRET ENEMY MILITARY FACILITIES IN SATELLITE IMAGES, ACQUIRING LABELS COULD REQUIRE MONTHS OF TRAINED HUMAN OBSERVERS AT INCREDIBLE EXPENSE. OTHER TIMES, AS WHEN ATTEMPTING TO PREDICT DISEASE INFECTION DURING A PANDEMIC SUCH AS COVID-19, RELIABLE TRUE LABELS MAY BE NEARLY IMPOSSIBLE TO OBTAIN EARLY ON DUE TO LACK OF TESTING EQUIPMENT OR OTHER FACTORS. IN THAT SCENARIO, IDENTIFYING EVEN A SMALL AMOUNT OF TRULY NEGATIVE DATA MAY BE IMPOSSIBLE DUE TO THE HIGH FALSE NEGATIVE RATE OF AVAILABLE TESTS. IN SUCH PROBLEMS, IT IS POSSIBLE TO LABEL A SMALL SUBSET OF DATA AS BELONGING TO THE CLASS OF INTEREST THOUGH IT IS IMPRACTICAL TO MANUALLY LABEL ALL DATA NOT OF INTEREST. WE ARE LEFT WITH A SMALL SET OF POSITIVE LABELED DATA AND A LARGE SET OF UNKNOWN AND UNLABELED DATA. READERS WILL EXPLORE THIS POSITIVE AND UNLABELED LEARNING (PU LEARNING) PROBLEM IN DEPTH. THE BOOK RIGOROUSLY DEFINES THE PU LEARNING PROBLEM, DISCUSSES SEVERAL COMMON ASSUMPTIONS THAT ARE FREQUENTLY MADE ABOUT THE PROBLEM AND THEIR IMPLICATIONS, AND CONSIDERS HOW TO EVALUATE SOLUTIONS FOR THIS PROBLEM BEFORE DESCRIBING SEVERAL OF THE MOST POPULAR ALGORITHMS TO SOLVE THIS PROBLEM. IT EXPLORES SEVERAL USES FOR PU LEARNING INCLUDING APPLICATIONS IN BIOLOGICAL/MEDICAL, BUSINESS, SECURITY, AND SIGNAL PROCESSING. THIS BOOK ALSO PROVIDES HIGH-LEVEL SUMMARIES OF SEVERAL RELATED LEARNING PROBLEMS SUCH AS ONE-CLASS CLASSIFICATION, ANOMALY DETECTION, AND NOISY LEARNING AND THEIR RELATION TO PU LEARNING.

DIGITAL INNOVATION FOR HEALTHCARE IN COVID-19 PANDEMIC: STRATEGIES AND SOLUTIONS Patricia Ordóñez de Pablos 2022-03-25 DIGITAL INNOVATION FOR HEALTHCARE IN COVID-19 PANDEMIC: STRATEGIES AND SOLUTIONS PROVIDES COMPREHENSIVE KNOWLEDGE AND INSIGHTS ON THE APPLICATION OF INFORMATION TECHNOLOGIES IN THE HEALTHCARE SECTOR, SHARING EXPERIENCES FROM LEADING RESEARCHERS AND ACADEMICS FROM AROUND THE WORLD. THE BOOK PRESENTS INNOVATIVE IDEAS, SOLUTIONS AND EXAMPLES TO DEAL WITH ONE OF THE MAJOR CHALLENGES OF THE WORLD, A GLOBAL PROBLEM WITH HEALTH, ECONOMIC AND POLITICAL DIMENSIONS. ADVANCED INFORMATION TECHNOLOGIES CAN PLAY A KEY ROLE IN SOLVING PROBLEMS GENERATED BY THE COVID-19 OUTBREAK. THE BOOK ADDRESSES HOW SCIENCE, TECHNOLOGY AND INNOVATION CAN PROVIDE ADVANCES AND SOLUTIONS TO NEW GLOBAL HEALTH CHALLENGES. THIS IS A VALUABLE RESOURCE FOR RESEARCHERS, CLINICIANS, HEALTHCARE WORKERS, POLICYMAKERS AND MEMBERS OF THE BIOMEDICAL FIELD WHO ARE INTERESTED IN LEARNING HOW DIGITAL TECHNOLOGIES CAN HELP US AVOID AND SOLVE GLOBAL DISEASE DISSEMINATION. PRESENTS REAL-WORLD CASES WITH EXPERIENCES OF APPLICATIONS OF HEALTHCARE SOLUTIONS DURING THE PANDEMIC OF COVID-19 DISCUSSES NEW APPROACHES, THEORIES AND TOOLS DEVELOPED DURING AN UNPRECEDENTED HEALTH SITUATION AND HOW THEY CAN BE USED AFTERWARDS ENCOMPASSES INFORMATION ON PREPAREDNESS FOR FUTURE OUTBREAKS TO MAKE LESS COSTLY AND MORE EFFECTIVE HEALTHCARE RESPONSES TO CRISES

DEEP LEARNING: ALGORITHMS AND APPLICATIONS Witold Pedrycz 2019-10-23 THIS BOOK PRESENTS A WEALTH OF DEEP-LEARNING ALGORITHMS AND DEMONSTRATES THEIR DESIGN PROCESS. IT ALSO HIGHLIGHTS THE NEED FOR A PRUDENT ALIGNMENT WITH THE ESSENTIAL CHARACTERISTICS OF THE NATURE OF LEARNING ENCOUNTERED IN THE PRACTICAL PROBLEMS BEING TACKLED. INTENDED FOR READERS INTERESTED IN ACQUIRING PRACTICAL KNOWLEDGE OF ANALYSIS, DESIGN, AND DEPLOYMENT OF DEEP LEARNING SOLUTIONS TO REAL-WORLD PROBLEMS, IT COVERS A WIDE RANGE OF THE PARADIGM'S ALGORITHMS AND THEIR APPLICATIONS IN DIVERSE AREAS INCLUDING IMAGING, SEISMIC TOMOGRAPHY, SMART GRIDS, SURVEILLANCE AND SECURITY, AND HEALTH CARE, AMONG OTHERS. FEATURING SYSTEMATIC AND COMPREHENSIVE DISCUSSIONS ON THE DEVELOPMENT PROCESSES, THEIR EVALUATION, AND RELEVANCE, THE BOOK OFFERS INSIGHTS INTO FUNDAMENTAL DESIGN STRATEGIES FOR ALGORITHMS OF DEEP LEARNING.

REMOTE SENSING DIGITAL IMAGE ANALYSIS John Alan Richards 2021 REMOTE SENSING DIGITAL IMAGE ANALYSIS PROVIDES A COMPREHENSIVE TREATMENT OF THE METHODS USED FOR THE PROCESSING AND INTERPRETATION OF REMOTELY SENSED IMAGE DATA. OVER THE PAST DECADE THERE HAVE BEEN CONTINUING AND SIGNIFICANT DEVELOPMENTS IN THE ALGORITHMS USED FOR THE ANALYSIS OF REMOTE SENSING IMAGERY, EVEN THOUGH MANY OF THE FUNDAMENTALS HAVE SUBSTANTIALLY REMAINED THE SAME. AS WITH ITS PREDECESSORS THIS NEW EDITION AGAIN PRESENTS MATERIAL THAT HAS RETAINED VALUE BUT ALSO INCLUDES NEWER TECHNIQUES, COVERED FROM THE PERSPECTIVE OF OPERATIONAL REMOTE SENSING. THE BOOK IS DESIGNED AS A TEACHING TEXT FOR THE SENIOR UNDERGRADUATE AND POSTGRADUATE STUDENT, AND AS A FUNDAMENTAL TREATMENT FOR THOSE ENGAGED IN RESEARCH USING DIGITAL IMAGE ANALYSIS IN REMOTE SENSING. THE PRESENTATION LEVEL IS FOR THE MATHEMATICAL NON-SPECIALIST. SINCE THE VERY GREAT NUMBER OF OPERATIONAL USERS OF REMOTE SENSING COME FROM THE EARTH SCIENCES COMMUNITIES, THE TEXT IS PITCHED AT A LEVEL COMMENSURATE WITH THEIR BACKGROUND. THE CHAPTERS PROGRESS LOGICALLY THROUGH MEANS FOR THE ACQUISITION OF REMOTE SENSING IMAGES, TECHNIQUES BY WHICH THEY CAN BE CORRECTED, AND METHODS FOR THEIR INTERPRETATION. THE PRIME FOCUS IS ON APPLICATIONS OF THE METHODS, SO THAT WORKED EXAMPLES ARE INCLUDED AND A SET OF PROBLEMS CONCLUDE EACH CHAPTER.

ENGINEERED TRANSPARENCY 2021 Bernhard Weller 2021-07-06 THIS BOOK CONTAINS MORE THAN 70 ARTICLES AND PRESENTS INTERNATIONAL TRENDS IN STRUCTURAL GLAZING AND FACADE CONSTRUCTION. RENOWNED AUTHORS FROM ALL OVER THE WORLD REPORT ON CURRENT RESEARCH RESULTS AND INNOVATIVE CONSTRUCTION PROJECTS.

MACHINE INTERPRETATION OF PATTERNS Rajat K. De 2010 THIS REVIEW VOLUME PROVIDES FROM BOTH THEORETICAL AND APPLICATION POINTS OF VIEWS, RECENT DEVELOPMENTS AND STATE-OF-THE-ART REVIEWS IN VARIOUS AREAS OF PATTERN RECOGNITION,

IMAGE PROCESSING, MACHINE LEARNING, SOFT COMPUTING, DATA MINING AND WEB INTELLIGENCE. MACHINE INTERPRETATION OF PATTERNS: IMAGE ANALYSIS AND DATA MINING IS AN ESSENTIAL AND INVALUABLE RESOURCE FOR PROFESSIONALS AND ADVANCED GRADUATES IN COMPUTER SCIENCE, MATHEMATICS AND LIFE SCIENCES. IT CAN ALSO BE CONSIDERED AS AN INTEGRATED VOLUME TO RESEARCHERS INTERESTED IN DOING INTERDISCIPLINARY RESEARCH WHERE COMPUTER SCIENCE IS A COMPONENT.

PATTERN RECOGNITION Władysław Homenda 2018-03-07 A NEW APPROACH TO THE ISSUE OF DATA QUALITY IN PATTERN RECOGNITION DETAILING FOUNDATIONAL CONCEPTS BEFORE INTRODUCING MORE COMPLEX METHODOLOGIES AND ALGORITHMS, THIS BOOK IS A SELF-CONTAINED MANUAL FOR ADVANCED DATA ANALYSIS AND DATA MINING. TOP-DOWN ORGANIZATION PRESENTS DETAILED APPLICATIONS ONLY AFTER METHODOLOGICAL ISSUES HAVE BEEN MASTERED, AND STEP-BY-STEP INSTRUCTIONS HELP ENSURE SUCCESSFUL IMPLEMENTATION OF NEW PROCESSES. BY POSITIONING DATA QUALITY AS A FACTOR TO BE DEALT WITH RATHER THAN OVERCOME, THE FRAMEWORK PROVIDED SERVES AS A VALUABLE, VERSATILE TOOL IN THE ANALYSIS ARSENAL. FOR DECADES, PRACTICAL NEED HAS INSPIRED INTENSE THEORETICAL AND APPLIED RESEARCH INTO PATTERN RECOGNITION FOR NUMEROUS AND DIVERSE APPLICATIONS. THROUGHOUT, THE LIMITING FACTOR AND PERPETUAL PROBLEM HAS BEEN DATA—ITS SHEER DIVERSITY, ABUNDANCE, AND VARIABLE QUALITY PRESENTS THE CENTRAL CHALLENGE TO PATTERN RECOGNITION INNOVATION. PATTERN RECOGNITION: A QUALITY OF DATA PERSPECTIVE REPOSITIONS THAT CHALLENGE FROM A HURDLE TO A GIVEN, AND PRESENTS A NEW FRAMEWORK FOR COMPREHENSIVE DATA ANALYSIS THAT IS DESIGNED SPECIFICALLY TO ACCOMMODATE PROBLEM DATA. DESIGNED AS BOTH A PRACTICAL MANUAL AND A DISCUSSION ABOUT THE MOST USEFUL ELEMENTS OF PATTERN RECOGNITION INNOVATION, THIS BOOK: DETAILS FUNDAMENTAL PATTERN RECOGNITION CONCEPTS, INCLUDING FEATURE SPACE CONSTRUCTION, CLASSIFIERS, REJECTION, AND EVALUATION PROVIDES A SYSTEMATIC EXAMINATION OF THE CONCEPTS, DESIGN METHODOLOGY, AND ALGORITHMS INVOLVED IN PATTERN RECOGNITION INCLUDES NUMEROUS EXPERIMENTS, DETAILED SCHEMES, AND MORE ADVANCED PROBLEMS THAT REINFORCE COMPLEX CONCEPTS ACTS AS A SELF-CONTAINED PRIMER TOWARD ADVANCED SOLUTIONS, WITH DETAILED BACKGROUND AND STEP-BY-STEP PROCESSES INTRODUCES THE CONCEPT OF GRANULES AND PROVIDES A FRAMEWORK FOR GRANULAR COMPUTING PATTERN RECOGNITION PLAYS A PIVOTAL ROLE IN DATA ANALYSIS AND DATA MINING, FIELDS WHICH ARE THEMSELVES BEING APPLIED IN AN EXPANDING SPHERE OF UTILITY. BY FACING THE DATA QUALITY ISSUE HEAD-ON, THIS BOOK PROVIDES STUDENTS, PRACTITIONERS, AND RESEARCHERS WITH A CLEAR WAY FORWARD AMIDST THE EVER-EXPANDING DATA SUPPLY.

TECHNOLOGIES AND APPLICATIONS FOR BIG DATA VALUE Edward Curry

MACHINE LEARNING, OPTIMIZATION, AND BIG DATA Panos M. Pardalos 2016-12-24 THIS BOOK CONSTITUTES REVISED SELECTED PAPERS FROM THE SECOND INTERNATIONAL WORKSHOP ON MACHINE LEARNING, OPTIMIZATION, AND BIG DATA, MOD 2016, HELD IN VOLTERRA, ITALY, IN AUGUST 2016. THE 40 PAPERS PRESENTED IN THIS VOLUME WERE CAREFULLY REVIEWED AND SELECTED FROM 97 SUBMISSIONS. THESE PROCEEDINGS CONTAIN PAPERS IN THE FIELDS OF MACHINE LEARNING, COMPUTATIONAL OPTIMIZATION AND DATA SCIENCE PRESENTING A SUBSTANTIAL ARRAY OF IDEAS, TECHNOLOGIES, ALGORITHMS, METHODS AND APPLICATIONS.

SMART GRID INSPIRED FUTURE TECHNOLOGIES Eng Tseng Lau 2017-08-18 THIS BOOK CONSTITUTES THE POST-CONFERENCE PROCEEDINGS OF THE SECOND EAI INTERNATIONAL CONFERENCE ON SMART GRID INSPIRED FUTURE TECHNOLOGIES, SMARTGIFT 2017, HELD IN LONDON, UK, IN MARCH 2017. THE REVISED FULL PAPERS ARE PRESENTED IN FOUR TRACKS: TRACK 1 - COMMUNICATIONS, NETWORKS AND ARCHITECTURES; TRACK 2 - SMART CONTROL AND OPERATION; TRACK 3 - GRID AND COMPONENTS; AND TRACK 4 - DATA MANAGEMENT AND GRID ANALYTICS. ASIDE FROM THE TECHNICAL PAPER PRESENTATIONS, THE BOOK ALSO CONTAINS FIVE INVITED TALKS AND TWO TECHNICAL WORKSHOPS. THE TWO WORKSHOPS ORGANIZED WERE: THE IMPROVING THE ROBUSTNESS OF URBAN ELECTRICITY NETWORK (IRENE) AND WIRELESS COMMUNICATIONS AND NETWORKING TECHNOLOGIES FOR CONNECTED SMART GRIDS (WCSG). THE IRENE WORKSHOP AIMED TO ADDRESS THE NEW DIMENSION OF THREATS IN THE CRITICAL INFRASTRUCTURES THROUGH DEMONSTRATION OF IRENE METHODOLOGIES AND APPROACHES. THE WCSG WORKSHOP AIMED TO GAIN INSIGHTS INTO KEY CHALLENGES, UNDERSTANDING AND DESIGN CRITERIA OF EMPLOYING WIRELESS TECHNOLOGIES TO DEVELOP AND IMPLEMENT FUTURE SMART GRIDS RELATED SERVICES AND APPLICATIONS.

THE ROUTLEDGE COMPANION TO ARTIFICIAL INTELLIGENCE IN ARCHITECTURE Imdat As 2021-05-06 PROVIDING THE MOST COMPREHENSIVE SOURCE AVAILABLE, THIS BOOK SURVEYS THE STATE OF THE ART IN ARTIFICIAL INTELLIGENCE (AI) AS IT RELATES TO ARCHITECTURE. THIS BOOK IS ORGANIZED IN FOUR PARTS: THEORETICAL FOUNDATIONS, TOOLS AND TECHNIQUES, AI IN RESEARCH, AND AI IN ARCHITECTURAL PRACTICE. IT PROVIDES A FRAMEWORK FOR THE ISSUES SURROUNDING AI AND OFFERS A VARIETY OF PERSPECTIVES. IT CONTAINS 24 CONSISTENTLY ILLUSTRATED CONTRIBUTIONS EXAMINING SEMINAL WORK ON AI FROM AROUND THE WORLD, INCLUDING THE UNITED STATES, EUROPE, AND ASIA. IT ARTICULATES CURRENT THEORETICAL AND PRACTICAL METHODS, OFFERS CRITICAL VIEWS ON TOOLS AND TECHNIQUES, AND SUGGESTS FUTURE DIRECTIONS FOR MEANINGFUL USES OF AI TECHNOLOGY. ARCHITECTS AND EDUCATORS WHO ARE CONCERNED WITH THE ADVENT OF AI AND ITS RAMIFICATIONS FOR THE DESIGN INDUSTRY WILL FIND THIS BOOK AN ESSENTIAL REFERENCE.

THE IMAGE PROCESSING HANDBOOK John C. Russ 2018-09-03 CONSISTENTLY RATED AS THE BEST OVERALL INTRODUCTION TO COMPUTER-BASED IMAGE PROCESSING, THE IMAGE PROCESSING HANDBOOK COVERS TWO-DIMENSIONAL (2D) AND THREE-DIMENSIONAL (3D) IMAGING TECHNIQUES, IMAGE PRINTING AND STORAGE METHODS, IMAGE PROCESSING ALGORITHMS, IMAGE AND FEATURE MEASUREMENT, QUANTITATIVE IMAGE MEASUREMENT ANALYSIS, AND MORE. INCORPORATING IMAGE PROCESSING AND ANALYSIS EXAMPLES AT ALL SCALES, FROM NANO- TO ASTRO-, THIS SEVENTH EDITION: FEATURES A GREATER RANGE OF COMPUTATIONALLY INTENSIVE ALGORITHMS THAN PREVIOUS VERSIONS PROVIDES BETTER ORGANIZATION, MORE QUANTITATIVE RESULTS, AND NEW MATERIAL ON RECENT DEVELOPMENTS INCLUDES COMPLETELY REWRITTEN CHAPTERS ON 3D IMAGING AND A THOROUGHLY REVAMPED CHAPTER ON STATISTICAL ANALYSIS CONTAINS MORE THAN 1700 REFERENCES TO THEORY, METHODS, AND APPLICATIONS IN A WIDE VARIETY OF DISCIPLINES PRESENTS 500+ ENTIRELY NEW FIGURES AND IMAGES, WITH MORE THAN TWO-THIRDS APPEARING IN COLOR THE IMAGE PROCESSING HANDBOOK, SEVENTH EDITION DELIVERS AN ACCESSIBLE AND UP-TO-DATE TREATMENT OF IMAGE PROCESSING, OFFERING BROAD COVERAGE AND COMPARISON OF ALGORITHMS, APPROACHES, AND OUTCOMES.

RADICAL SOLUTIONS FOR DIGITAL TRANSFORMATION IN LATIN AMERICAN UNIVERSITIES Daniel Burgos 2021-07-24 THIS BOOK PRESENTS HOW DIGITAL TRANSFORMATION IS A REQUIREMENT TO UPGRADE LATIN AMERICAN UNIVERSITIES TO A NEXT LEVEL IN MANAGEMENT, LECTURING AND LEARNING PROCESSES AND STRATEGIES. THE BOOK STARTS WITH A THOROUGH INTRODUCTION OF THE LATIN AMERICAN CONTEXT ADDRESSING THE THREE MAIN TOPICS IN THE BOOK: DIGITAL TRANSFORMATION, HIGHER EDUCATION AND ARTIFICIAL INTELLIGENCE & INDUSTRY 4.0. THEY WILL BE DEPICTED BY REGION, WITH A CLEAR DISTRIBUTION BETWEEN CENTRAL AMERICA & MEXICO, COMUNIDAD ANDINA (PERU), COLOMBIA, CHILE, ECUADOR, BOLIVIA), MERCOSUR (ARGENTINA, BRASIL, PARAGUAY AND URUGUAY), AND OTHER COUNTRIES. THE BOOK ALSO SHOWS HOW ONLINE LEARNING IS A KEY PART OF THE TRANSFORMATION, WITH A CLEAR FOCUS ON LEARNING MANAGEMENT SYSTEMS, INNOVATION AND LEARNING ANALYTICS. FURTHER, PERSONALISED SERVICES FOR EVERY SINGLE PROFILE AT THE UNIVERSITY (STUDENTS, LECTURERS, ACADEMIC MANAGERS) ARE PRESENTED TO GUARANTEE INCLUSIVE EDUCATION SERVICE AGGREGATION FOR NETWORKED CAMPUSES. FOLLOWING, THE BOOK ADDRESSES STRATEGY AND OVERALL SERVICES THAT CONCENTRATE ON SUSTAINABILITY AND REVENUE MODELS INTEGRATED WITH A STRATEGIC PLANNING. FINALLY A SET OF CHAPTERS WILL SHOW SPECIFIC EXPERIENCES AND CASE STUDIES OF DIRECT APPLICATION OF ARTIFICIAL INTELLIGENCE AND TECHNOLOGY 4.0, WHERE THE READERS CAN LEARN FROM AND TRANSFER DIRECTLY INTO THEIR EDUCATIONAL CONTEXTS.

PATTERN RECOGNITION AND BIG DATA Pal Sankar Kumar 2016-12-15 CONTAINING TWENTY SIX CONTRIBUTIONS BY EXPERTS FROM ALL OVER THE WORLD, THIS BOOK PRESENTS BOTH RESEARCH AND REVIEW MATERIAL DESCRIBING THE EVOLUTION AND RECENT DEVELOPMENTS OF VARIOUS PATTERN RECOGNITION METHODOLOGIES, RANGING FROM STATISTICAL, LINGUISTIC, FUZZY-SET-THEORETIC, NEURAL, EVOLUTIONARY COMPUTING AND ROUGH-SET-THEORETIC TO HYBRID SOFT COMPUTING, WITH SIGNIFICANT REAL-LIFE APPLICATIONS. PATTERN RECOGNITION AND BIG DATA PROVIDES STATE-OF-THE-ART CLASSICAL AND MODERN APPROACHES TO PATTERN RECOGNITION AND MINING, WITH EXTENSIVE REAL LIFE APPLICATIONS. THE BOOK DESCRIBES EFFICIENT SOFT AND ROBUST MACHINE LEARNING ALGORITHMS AND GRANULAR COMPUTING TECHNIQUES FOR DATA MINING AND KNOWLEDGE DISCOVERY; AND THE ISSUES ASSOCIATED WITH HANDLING BIG DATA. APPLICATION DOMAINS CONSIDERED INCLUDE BIOINFORMATICS, COGNITIVE MACHINES (OR MACHINE MIND DEVELOPMENTS), BIOMETRICS, COMPUTER VISION, THE E-NOSE, REMOTE SENSING AND SOCIAL NETWORK ANALYSIS.

MACHINE LEARNING AND DATA MINING IN PATTERN RECOGNITION Petra Pernert 2015-06-30 THIS BOOK CONSTITUTES THE REFEREED PROCEEDINGS OF THE 11TH INTERNATIONAL CONFERENCE ON MACHINE LEARNING AND DATA MINING IN PATTERN RECOGNITION, MLDM 2015, HELD IN HAMBURG, GERMANY IN JULY 2015. THE 41 FULL PAPERS PRESENTED WERE CAREFULLY REVIEWED AND SELECTED FROM 123 SUBMISSIONS. THE TOPICS RANGE FROM THEORETICAL TOPICS FOR CLASSIFICATION, CLUSTERING, ASSOCIATION RULE AND PATTERN MINING TO SPECIFIC DATA MINING METHODS FOR THE DIFFERENT MULTIMEDIA DATA TYPES SUCH AS IMAGE MINING, TEXT MINING, VIDEO MINING AND WEB MINING.

SUPPORT VECTOR MACHINES FOR PATTERN CLASSIFICATION Shigeo Abe 2010-07-23 A GUIDE ON THE USE OF SVMs IN PATTERN CLASSIFICATION, INCLUDING A RIGOROUS PERFORMANCE COMPARISON OF CLASSIFIERS AND REGRESSORS. THE BOOK PRESENTS ARCHITECTURES FOR MULTICLASS CLASSIFICATION AND FUNCTION APPROXIMATION PROBLEMS, AS WELL AS EVALUATION CRITERIA FOR CLASSIFIERS AND REGRESSORS. FEATURES: CLARIFIES THE CHARACTERISTICS OF TWO-CLASS SVMs; DISCUSSES KERNEL METHODS FOR IMPROVING THE GENERALIZATION ABILITY OF NEURAL NETWORKS AND FUZZY SYSTEMS; CONTAINS AMPLE ILLUSTRATIONS AND EXAMPLES; INCLUDES PERFORMANCE EVALUATION USING PUBLICLY AVAILABLE DATA SETS; EXAMINES MAHALANOBIS KERNELS, EMPIRICAL FEATURE SPACE, AND THE EFFECT OF MODEL SELECTION BY CROSS-VALIDATION; COVERS SPARSE SVMs, LEARNING USING PRIVILEGED INFORMATION, SEMI-SUPERVISED LEARNING, MULTIPLE CLASSIFIER SYSTEMS, AND MULTIPLE KERNEL LEARNING; EXPLORES INCREMENTAL

TRAINING BASED BATCH TRAINING AND ACTIVE-SET TRAINING METHODS, AND DECOMPOSITION TECHNIQUES FOR LINEAR PROGRAMMING SVMs; DISCUSSES VARIABLE SELECTION FOR SUPPORT VECTOR REGRESSORS.

PATTERN RECOGNITION J.P. Marques de Sá 2012-12-06 THE BOOK PROVIDES A COMPREHENSIVE VIEW OF PATTERN RECOGNITION CONCEPTS AND METHODS, ILLUSTRATED WITH REAL-LIFE APPLICATIONS IN SEVERAL AREAS. A CD-ROM OFFERED WITH THE BOOK INCLUDES DATASETS AND SOFTWARE TOOLS, MAKING IT EASIER TO FOLLOW IN A HANDS-ON FASHION, RIGHT FROM THE START. **ADVANCES IN MACHINE LEARNING/DEEP LEARNING-BASED TECHNOLOGIES** George A. Tsihrintzis 2021-08-05 AS THE 4TH INDUSTRIAL REVOLUTION IS RESTRUCTURING HUMAN SOCIETAL ORGANIZATION INTO, SO-CALLED, "SOCIETY 5.0", THE FIELD OF MACHINE LEARNING (AND ITS SUB-FIELD OF DEEP LEARNING) AND RELATED TECHNOLOGIES IS GROWING CONTINUOUSLY AND RAPIDLY, DEVELOPING IN BOTH ITSELF AND TOWARDS APPLICATIONS IN MANY OTHER DISCIPLINES. RESEARCHERS WORLDWIDE AIM AT INCORPORATING COGNITIVE ABILITIES INTO MACHINES, SUCH AS LEARNING AND PROBLEM SOLVING. WHEN MACHINES AND SOFTWARE SYSTEMS HAVE BEEN ENHANCED WITH MACHINE LEARNING/DEEP LEARNING COMPONENTS, THEY BECOME BETTER AND MORE EFFICIENT AT PERFORMING SPECIFIC TASKS. CONSEQUENTLY, MACHINE LEARNING/DEEP LEARNING STANDS OUT AS A RESEARCH DISCIPLINE DUE TO ITS WORLDWIDE PACE OF GROWTH IN BOTH THEORETICAL ADVANCES AND AREAS OF APPLICATION, WHILE ACHIEVING VERY HIGH RATES OF SUCCESS AND PROMISING MAJOR IMPACT IN SCIENCE, TECHNOLOGY AND SOCIETY. THE BOOK AT HAND AIMS AT EXPOSING ITS READERS TO SOME OF THE MOST SIGNIFICANT ADVANCES IN MACHINE LEARNING/DEEP LEARNING-BASED TECHNOLOGIES. THE BOOK CONSISTS OF AN EDITORIAL NOTE AND AN ADDITIONAL TEN (10) CHAPTERS, ALL INVITED FROM AUTHORS WHO WORK ON THE CORRESPONDING CHAPTER THEME AND ARE RECOGNIZED FOR THEIR SIGNIFICANT RESEARCH CONTRIBUTIONS. IN MORE DETAIL, THE CHAPTERS IN THE BOOK ARE ORGANIZED INTO FIVE PARTS, NAMELY (i) MACHINE LEARNING/DEEP LEARNING IN SOCIALIZING AND ENTERTAINMENT, (ii) MACHINE LEARNING/DEEP LEARNING IN EDUCATION, (iii) MACHINE LEARNING/DEEP LEARNING IN SECURITY, (iv) MACHINE LEARNING/DEEP LEARNING IN TIME SERIES FORECASTING, AND (v) MACHINE LEARNING IN VIDEO CODING AND INFORMATION EXTRACTION. THIS RESEARCH BOOK IS DIRECTED TOWARDS PROFESSORS, RESEARCHERS, SCIENTISTS, ENGINEERS AND STUDENTS IN MACHINE LEARNING/DEEP LEARNING-RELATED DISCIPLINES. IT IS ALSO DIRECTED TOWARDS READERS WHO COME FROM OTHER DISCIPLINES AND ARE INTERESTED IN BECOMING VERSED IN SOME OF THE MOST RECENT MACHINE LEARNING/DEEP LEARNING-BASED TECHNOLOGIES. AN EXTENSIVE LIST OF BIBLIOGRAPHIC REFERENCES AT THE END OF EACH CHAPTER GUIDES THE READERS TO PROBE FURTHER INTO THE APPLICATION AREAS OF INTEREST TO THEM.

STRUCTURAL, SYNTACTIC, AND STATISTICAL PATTERN RECOGNITION Pasi Franti 2014-08-13 THIS BOOK CONSTITUTES THE PROCEEDINGS OF THE JOINT IAPR INTERNATIONAL WORKSHOP ON STRUCTURAL, SYNTACTIC, AND STATISTICAL PATTERN RECOGNITION, S+SSPR 2014; COMPRISING THE INTERNATIONAL WORKSHOP ON STRUCTURAL AND SYNTACTIC PATTERN RECOGNITION, SSPR, AND THE INTERNATIONAL WORKSHOP ON STATISTICAL TECHNIQUES IN PATTERN RECOGNITION, SPR. THE TOTAL OF 25 FULL PAPERS AND 22 POSTER PAPERS INCLUDED IN THIS BOOK WERE CAREFULLY REVIEWED AND SELECTED FROM 78 SUBMISSIONS. THEY ARE ORGANIZED IN TOPICAL SECTIONS NAMED: GRAPH KERNELS; CLUSTERING; GRAPH EDIT DISTANCE; GRAPH MODELS AND EMBEDDING; DISCRIMINANT ANALYSIS; COMBINING AND SELECTING; JOINT SESSION; METRICS AND DISSIMILARITIES; APPLICATIONS; PARTIAL SUPERVISION; AND POSTER SESSION.

DRIVER DROWSINESS DETECTION Aleksandar Olj 2014-09-27 THIS SPRINGERBRIEF PRESENTS THE FUNDAMENTALS OF DRIVER DROWSINESS DETECTION SYSTEMS, PROVIDES EXAMPLES OF EXISTING PRODUCTS, AND OFFERS GUIDES FOR PRACTITIONERS INTERESTED IN DEVELOPING THEIR OWN SOLUTIONS TO THE PROBLEM. DRIVER DROWSINESS CAUSES APPROXIMATELY 7% OF ALL ROAD ACCIDENTS AND UP TO 18% OF FATAL COLLISIONS. PROACTIVE SYSTEMS THAT ARE CAPABLE OF PREVENTING THE LOSS OF LIVES COMBINE TECHNIQUES, METHODS, AND ALGORITHMS FROM MANY FIELDS OF ENGINEERING AND COMPUTER SCIENCE SUCH AS SENSOR DESIGN, IMAGE PROCESSING, COMPUTER VISION, MOBILE APPLICATION DEVELOPMENT, AND MACHINE LEARNING WHICH IS COVERED IN THIS BRIEF. THE MAJOR CONCEPTS ADDRESSED IN THIS BRIEF ARE: THE NEED FOR SUCH SYSTEMS, THE DIFFERENT METHODS BY WHICH DROWSINESS CAN BE DETECTED (AND THE ASSOCIATED TERMINOLOGY), EXISTING COMMERCIAL SOLUTIONS, SELECTED ALGORITHMS AND RESEARCH DIRECTIONS, AND A COLLECTION OF EXAMPLES AND CASE STUDIES. THESE TOPICS EQUIP THE READER TO UNDERSTAND THIS CRITICAL FIELD AND ITS APPLICATIONS. **PATTERN RECOGNITION AND DATA MINING IN DRIVER DROWSINESS** IS AN INVALUABLE RESOURCE FOR RESEARCHERS AND PROFESSIONALS WORKING IN INTELLIGENT VEHICLE SYSTEMS AND TECHNOLOGIES. ADVANCED-LEVEL STUDENTS STUDYING COMPUTER SCIENCE AND ELECTRICAL ENGINEERING WILL ALSO FIND THE CONTENT HELPFUL.

PROCEEDINGS OF THE INTERNATIONAL CONFERENCE ON SOFT COMPUTING SYSTEMS L. Padma Suresh 2015-12-28 THE BOOK IS A COLLECTION OF HIGH-QUALITY PEER-REVIEWED RESEARCH PAPERS PRESENTED IN INTERNATIONAL CONFERENCE ON SOFT COMPUTING SYSTEMS (ICSCS 2015) HELD AT NOORUL ISLAM CENTRE FOR HIGHER EDUCATION, CHENNAI, INDIA. THESE RESEARCH PAPERS PROVIDE THE LATEST DEVELOPMENTS IN THE EMERGING AREAS OF SOFT COMPUTING IN ENGINEERING AND TECHNOLOGY. THE BOOK IS ORGANIZED IN TWO VOLUMES AND DISCUSSES A WIDE VARIETY OF INDUSTRIAL, ENGINEERING AND SCIENTIFIC APPLICATIONS OF THE EMERGING TECHNIQUES. IT PRESENTS INVITED PAPERS FROM THE INVENTORS/ORIGINATORS OF NEW APPLICATIONS AND ADVANCED TECHNOLOGIES.

COMPUTER VISION FOR MULTIMEDIA APPLICATIONS: METHODS AND SOLUTIONS Wang, Junjun 2010-10-31 "THIS BOOK PRESENTS THE LATEST DEVELOPMENTS IN COMPUTER VISION METHODS APPLICABLE TO VARIOUS PROBLEMS IN MULTIMEDIA COMPUTING, INCLUDING NEW IDEAS, AS WELL AS PROBLEMS IN COMPUTER VISION AND MULTIMEDIA COMPUTING"--PROVIDED BY PUBLISHER.

MACHINE LEARNING, OPTIMIZATION, AND DATA SCIENCE Giuseppe Nicosia 2019-02-16 THIS BOOK CONSTITUTES THE POST-CONFERENCE PROCEEDINGS OF THE 4TH INTERNATIONAL CONFERENCE ON MACHINE LEARNING, OPTIMIZATION, AND DATA SCIENCE, LOD 2018, HELD IN VOLTERRA, ITALY, IN SEPTEMBER 2018. THE 46 FULL PAPERS PRESENTED WERE CAREFULLY REVIEWED AND SELECTED FROM 126 SUBMISSIONS. THE PAPERS COVER TOPICS IN THE FIELD OF MACHINE LEARNING, ARTIFICIAL INTELLIGENCE, REINFORCEMENT LEARNING, COMPUTATIONAL OPTIMIZATION AND DATA SCIENCE PRESENTING A SUBSTANTIAL ARRAY OF IDEAS, TECHNOLOGIES, ALGORITHMS, METHODS AND APPLICATIONS.

UNCERTAINTY AND IMPRECISION IN DECISION MAKING AND DECISION SUPPORT: NEW CHALLENGES, SOLUTIONS AND PERSPECTIVES Krassimir T. Atanassov 2020-06-26 THIS BOOK GATHERS SELECTED PAPERS FROM TWO IMPORTANT CONFERENCES HELD ON OCTOBER 24-28, 2018, IN WARSAW, POLAND: THE FIFTEENTH NATIONAL CONFERENCE OF OPERATIONAL AND SYSTEMS RESEARCH, BOS-2018, ONE OF THE LEADING CONFERENCES IN THE FIELD OF OPERATIONAL AND SYSTEMS RESEARCH NOT ONLY IN POLAND BUT ALSO AT THE EUROPEAN LEVEL; AND THE SEVENTEENTH INTERNATIONAL WORKSHOP ON INTUITIONISTIC FUZZY SETS AND GENERAL NETS, IWIFSGN-2018, ONE OF THE PREMIERE CONFERENCES ON FUZZY LOGIC. THE PAPERS PRESENTED HERE CONSTITUTE A FAIR AND COMPREHENSIVE REPRESENTATION OF THE TOPICS COVERED BY BOTH BOS-2018 AND IWIFSGN-2018, INCLUDING EXTENSIONS OF THE TRADITIONAL FUZZY SETS, IN PARTICULAR ON THE INTUITIONISTIC FUZZY SETS, AS WELL AS OTHER TOPICS IN UNCERTAINTY AND IMPRECISION MODELING, THE GENERALIZED NETS (GNs), A POWERFUL EXTENSION OF THE TRADITIONAL PETRI NET PARADIGM, AND INTERCRITERIA ANALYSIS, A NEW METHOD FOR FEATURE SELECTION AND ANALYSES IN MULTICRITERIA AND MULTI-ATTRIBUTE DECISION-MAKING PROBLEMS. THE WORKSHOP WAS DEDICATED TO THE MEMORY OF PROFESSOR BELOSLAV RIJEAN (1936-2018), A REGULAR PARTICIPANT AT THE IWIFSGN WORKSHOPS.

CHRISTOPHER M. BISHOP 2006-08-17 THIS IS THE FIRST TEXT ON PATTERN RECOGNITION TO PRESENT THE BAYESIAN VIEWPOINT, ONE THAT HAS BECOME INCREASING POPULAR IN THE LAST FIVE YEARS. IT PRESENTS APPROXIMATE INFERENCE ALGORITHMS THAT PERMIT FAST APPROXIMATE ANSWERS IN SITUATIONS WHERE EXACT ANSWERS ARE NOT FEASIBLE. IT PROVIDES THE FIRST TEXT TO USE GRAPHICAL MODELS TO DESCRIBE PROBABILITY DISTRIBUTIONS WHEN THERE ARE NO OTHER BOOKS THAT APPLY GRAPHICAL MODELS TO MACHINE LEARNING. IT IS ALSO THE FIRST FOUR-COLOR BOOK ON PATTERN RECOGNITION. THE BOOK IS SUITABLE FOR COURSES ON MACHINE LEARNING, STATISTICS, COMPUTER SCIENCE, SIGNAL PROCESSING, COMPUTER VISION, DATA MINING, AND BIOINFORMATICS. EXTENSIVE SUPPORT IS PROVIDED FOR COURSE INSTRUCTORS, INCLUDING MORE THAN 400 EXERCISES, GRADED ACCORDING TO DIFFICULTY. EXAMPLE SOLUTIONS FOR A SUBSET OF THE EXERCISES ARE AVAILABLE FROM THE BOOK WEB SITE, WHILE SOLUTIONS FOR THE REMAINDER CAN BE OBTAINED BY INSTRUCTORS FROM THE PUBLISHER.

CHRISTOPHER BISHOP 2008-11-01 THIS IS THE FIRST TEXTBOOK ON PATTERN RECOGNITION TO PRESENT THE BAYESIAN VIEWPOINT. THE BOOK PRESENTS APPROXIMATE INFERENCE ALGORITHMS THAT PERMIT FAST APPROXIMATE ANSWERS IN SITUATIONS WHERE EXACT ANSWERS ARE NOT FEASIBLE. IT USES GRAPHICAL MODELS TO DESCRIBE PROBABILITY DISTRIBUTIONS WHEN NO OTHER BOOKS APPLY GRAPHICAL MODELS TO MACHINE LEARNING. NO PREVIOUS KNOWLEDGE OF PATTERN RECOGNITION OR MACHINE LEARNING CONCEPTS IS ASSUMED. FAMILIARITY WITH MULTIVARIATE CALCULUS AND BASIC LINEAR ALGEBRA IS REQUIRED, AND SOME EXPERIENCE IN THE USE OF PROBABILITIES WOULD BE HELPFUL THOUGH NOT ESSENTIAL AS THE BOOK INCLUDES A SELF-CONTAINED INTRODUCTION TO BASIC PROBABILITY THEORY.

GENERALIZATION OF KNOWLEDGE Marie T. Banich 2011-01-07 THIS VOLUME TAKES A MULTIDISCIPLINARY PERSPECTIVE ON GENERALIZATION OF KNOWLEDGE FROM SEVERAL FIELDS ASSOCIATED WITH COGNITIVE SCIENCE, INCLUDING COGNITIVE NEUROSCIENCE, COMPUTER SCIENCE, EDUCATION, LINGUISTICS, DEVELOPMENTAL SCIENCE, AND SPEECH, LANGUAGE AND HEARING SCIENCES. THE AIM IS TO DERIVE GENERAL PRINCIPLES FROM TRIANGULATION ACROSS DIFFERENT DISCIPLINES AND APPROACHES.

ARTIFICIAL INTELLIGENCE: METHODOLOGY, SYSTEMS, AND APPLICATIONS Gennady Agre 2014-09-04 THIS BOOK CONSTITUTES THE REFEREED PROCEEDINGS OF THE 16TH INTERNATIONAL CONFERENCE ON ARTIFICIAL INTELLIGENCE: METHODOLOGY, SYSTEMS, AND APPLICATIONS, AIMS A 2014, HELD IN VARNA, BULGARIA IN SEPTEMBER 2014. THE 14 REVISED FULL PAPERS AND 9 SHORT PAPERS PRESENTED WERE CAREFULLY REVIEWED AND SELECTED FROM 53 SUBMISSIONS. THE RANGE OF TOPICS IS ALMOST EQUALLY BROAD, FROM TRADITIONAL AREAS SUCH AS COMPUTER VISION AND NATURAL LANGUAGE PROCESSING TO EMERGING AREAS SUCH AS MINING THE BEHAVIOR OF WEB-BASED COMMUNITIES.