A Survey On Artificial Intelligence And Expert System For

This report presents the results of a survey on Artificial Intelligence (AI) at JRC –run from the 18th of May to the 06th of June 6 2018. The questionnaire was completed by 108 respondents (74% men and 26% women) from 29 different Units. Almost 90% were JRC Contract Agents and Administrators.

Abstract: "A survey of 150 papers from the Proceedings of the Eighth National Conference on Artificial Intelligence (AAAI-90) shows that AI research follows two methodologies, each incomplete with respect to the goals of designing and analyzing AI systems but with complementary strengths. I propose a mixed methodology and illustrate it with examples from the proceedings."

Identity theft, criminal investigations of the dead or missing, mass disasters both by natural causes and by criminal intent with this as our day to day reality, the establishment and verification of human identity has never been more important or more prominent in our society. Maintaining and protecting the integrity of out identity has reached

A Survey of Research in Deliberative Real-time Artificial Intelligence

A Survey of Artificial Intelligence Techniques Used in Computer Vision

An Introduction

A Survey of Architectures for Distributed Artificial Intelligence

Survey of Artificial Intelligence

A Survey on Deep Transfer Learning and Edge Computing for Mitigating the COVID-19 Pandemic

Machine learning algorithms and artificial intelligence influence many aspects of life today. This report identifies some of their shortcomings and associated policy risks and examines some approaches for combating these problems.

Abstract: "This report surveys literature and research in the field of distributed artificial intelligence (DAI) and provides an overview of computer architectures particularly suited to such research. It concentrates on work to date that has involved the construction of testbeds and development tools for DAI. It tries to draw some lessons from these efforts and suggests ways in which testbeds, which heretofor have been used primarily for experimentation, might be used in the full course of system development."

The report gives a concise description of the topics covered in our surveys of two major aspects of artificial intelligence: problem solving and pattern recognition. The survey of problem solving gives separate treatment to three main approaches, the state-space, problem-reduction, and formal-logic approaches. The survey of pattern recognition covers statistical classification and scene analysis. These topics encompass major fields of research in artificial intelligence. (Author).

A Collection of Innovative Methods

The Risks of Bias and Errors in Artificial Intelligence

2020 3rd International Conference on Unmanned Systems (ICUS)

A Survey of AI Approaches to the Integration of Information

A Survey of the Eighth National Conference on Artificial Intelligence: Pulling Together Or Pulling Apart?

Artificial Intelligence in Asset Management

An introductory guide with real-life examples on using AI to help homeless youth, diabetes patients, and other social welfare interventions.

The interaction of database and AI technologies is crucial to such applications as data mining, active databases, and knowledge-based expert systems. This volume collects the primary readings on the interactions, actual and potential, between these two fields. The editors have chosen articles to balance significant early research and the best and most comprehensive articles from the 1980s. An in-depth introduction discusses basic research motivations, giving a survey of the history, concepts, and terminology of the interaction. Major themes, approaches and results, open issues and future directions are all discussed, including the results of a major survey conducted by the editors of current work in industry and research labs. Thirteen sections follow, each with a short introduction. Topics examined include semantic data models with emphasis on conceptual modeling techniques for databases and information systems and the integration of data model concepts in high-level data languages, definition and maintenance of integrity constraints in databases and knowledge bases, natural language front ends, object-oriented database management systems, implementation issues such as concurrency control and error recovery, and representation of time and knowledge incompleteness from the viewpoints of databases, logic programming, and AI.

Artificial intelligence (AI) has grown in presence in asset management and has revolutionized the sector in many ways. It has improved portfolio management, trading, and risk management practices by increasing efficiency, accuracy, and compliance. In particular, AI techniques help construct portfolios based on more accurate risk and return forecasts and more complex constraints. Trading algorithms use AI to devise novel trading signals and execute trades with lower transaction costs. AI also improves risk modeling and forecasting by generating insights from new data sources. Finally, robo-advisors owe a large part of their success to AI techniques. Yet the use of AI can also create new risks and challenges, such as those resulting from model opacity, complexity, and reliance on data integrity.

Minds in the Making

A Survey of Fair and Responsible Machine Learning and Artificial Intelligence

Big Data Meets Survey Science

Survey Talks from the National Conferences on Artificial Intelligence

A survey of the literature on problem solving methods in artificial intelligence

A Tutorial Survey

This volume offers a look at the fundamental issues of present and future AI, especially from cognitive science, computer science, neuroscience and philosophy. This work examines the conditions for artificial intelligence, how these relate to the conditions for intelligence in humans and other natural agents, as well as ethical and societal problems that artificial intelligence raises or will raise. The key issues this volume investigates include the relation of AI and cognitive science, ethics of AI and robotics, brain emulation and simulation, hybrid systems and cyborgs, intelligence and intelligence testing, interactive systems, multi-agent systems, and super intelligence. Based on the 2nd conference on "Theory and Philosophy of Artificial Intelligence" held in Oxford, the volume includes prominent researchers within the field from around the world.

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.

The remarkable progress in algorithms for machine and deep learning have opened the doors to new opportunities, and some dark possibilities. However, a bright future awaits those who build on their working methods by including HCAI strategies of design and testing. As many technology companies and thought leaders have argued, the goal is not to replace people, but to empower them by making design choices that give humans control over technology. In Human-Centered AI, Professor Ben Shneiderman offers an optimistic realist's guide to how artificial intelligence can be used to augment and enhance humans' lives. This project bridges the gap between ethical considerations and practical realities to offer a road map for successful, reliable systems. Digital cameras, communications services, and navigation apps are just the beginning. Shneiderman shows how future applications will support health and wellness, improve education, accelerate business, and connect people in reliable, safe, and trustworthy ways that respect human values, rights, justice, and dignity.

Human-Centered AI

Survey Results

AI in the 1980s and Beyond

An Intelligence in Our Image

Artificial intelligence & software engineering

Artificial Intelligence and Social Work

2020 3rd International Conference on Unmanned Systems (ICUS) will be held from Nov 27 to Nov 28, 2020 in Harbin, China The conference offers a unique and interesting platform for scientists, engineers and practitioners throughout the world to present and share their most recent research and innovative ideas in the areas of unmanned systems, robotics, automation, and intelligent systems The aim of the ICUS is to stimulate researchers active in the areas pertinent to intelligent unmanned systems ICUS will feature plenary lectures, contributed and invited sessions, panel discussions, pre conference workshops, oral presentation sessions and interactive sessions The accepted papers of ICUS will be included in the IEEE Xplore library and indexed by the EI Compendex

This collection of essays by 12 members of the MIT staff, provides an inside reporton the scope and expectations of current research in one of the world's major AI centers. Thechapters on artificial intelligence, expert systems, vision, robotics, and natural language provideboth a broad overview of current areas of activity and an assessment of the field at a time of greatpublic interest and rapid technological progress.Contents: Artificial Intelligence (Patrick H.Winston and Karen Prendergast). KnowledgeBased Systems (Randall Davis). Expert-System Tools andTechniques (Peter Szolovits). Medical Diagnosis: Evolution of Systems Building Expertise (Ramesh S.Patil). Artificial Intelligence and Software Engineering (Charles Rich and Richard C. Waters).Intelligent Natural Language Processing (Robert C. Berwick). Automatic Speech Recognition andUnderstanding (Victor W. Zue). Robot Programming and Artificial Intelligence (Tomas Lozano-Perez).Robot Hands and Tactile Sensing (John M. Hollerbach). Intelligent Vision (Michael Brady). MakingRobots See (W. Eric L. Grimson). Autonomous Mobile Robots (Rodney A. Brooks).W. Eric L. Grimson,author of From Images to Surfaces: A Computational Study of the Human Early Vision System (MIT Press1981), and Ramesh S. Patil are both Assistant Professors in the Department of Electrical Engineeringand Computer Science at MIT. AI in the 1980s and Beyond is included in the Artificial IntelligenceSeries, edited by Patrick H. Winston and Michael Brady.

This book reports on the results of the third edition of the premier conference in the field of philosophy of artificial intelligence, PT-AI 2017, held on November 4 - 5, 2017 at the University of Leeds, UK. It covers: advanced knowledge on key AI concepts, including complexity, computation, creativity, embodiment, representation and superintelligence; cutting-edge ethical issues, such as the AI impact on human dignity and society, responsibilities and rights of machines, as well as AI threats to humanity and AI safety; and cutting-edge developments in techniques to achieve AI, including machine learning, neural networks, dynamical systems. The book also discusses important applications of AI, including big data analytics, expert systems, cognitive architectures, and robotics. It offers a timely, yet very comprehensive snapshot of what is going on in the field of AI, especially at the interfaces between philosophy, cognitive science, ethics and computing.

Exploring Artificial Intelligence

The Applications of Artificial Intelligence to Law

An MIT Survey

Survey on Computers for Artificial Intelligence

A Survey of Constraint-based Scheduling Systems Using an Artificial Intelligence Approach

Implications of Consumer Financial Services

A Survey of Artificial IntelligenceExploring Artificial IntelligenceSurvey Talks from the National Conferences on Artificial IntelligenceMorgan Kaufmann

Exploring Artificial Intelligence: Survey Talks from the National Conference on Artificial Intelligence provides information pertinent to the distinct subareas of artificial intelligence research. This book discusses developments in machine learning techniques. Organized into six parts encompassing 16 chapters, this book begins with an overview of intelligent tutoring systems, which describes how to guide a student to learn new concepts. This text then links closely with one of the concerns of intelligent tutoring systems, namely how to interact through the utilization of natural language. Other chapters consider the various aspects of natural language understanding and survey the huge body of work that tries to characterize heuristic search programs. This book discusses as well how computer programs can create plans to satisfy goals. The final chapter deals with computational facilities that support. This book is a valuable resource for cognitive scientists, psychologists, domain experts, computer scientists, instructional designers, expert teachers, and research workers.

Machine learning (ML) algorithms and the artificial intelligence (AI) systems that they enable are powerful technologies that have inspired a lot of excitement, especially within large business and governmental organizations. In an era when increasingly concentrated computing power enables the creation, collection, and storage of "big data," ML algorithms have the capacity to identify non-intuitive correlations in massive datasets, and as such can theoretically be more efficient and effective than humans at using those correlations to make accurate predictions. However, biases can be encoded in the datasets on which ML algorithms are trained, arising from poor sampling strategies, incomplete or erroneous information, and the social inequalities that exist in the actual world. Additionally, the inherent complexities of ML algorithms that defy explanation even for the most expert practitioners can make it difficult, if not impossible, to identify the root causes of unfair decisions. That same opacity also presents an obstacle for individuals who believe that they have been evaluated unfairly, want to challenge a decision, or try to determine who should--or even could--be held accountable for mistakes.This paper surveys current research in and around ML and AI, drawing primarily from work in computer science, social sciences, and the law. Although it examines material across several contexts, the underlying intention is to consider how insights and lessons from a number of different domains can be applied within consumer financial services. And while there are certainly implications for organizational planning and strategy, the analytical focus rests primarily on the individuals and groups who are impacted directly by AI systems' decision-making processes. This paper is organized as follows: Section I explores the social contexts with which ML and AI technologies are integrated, and the structural inequalities that influence--and are in turn influenced by--those integrations. Section II surveys ongoing research into data quality, fairness, transparency, and accountability; specific examples of problems that have emerged around these issues; and some of the methods and tools that have been proposed for managing those problems. Finally, the conclusion examines several actual-world cases of ML and AI's human impacts and the challenges and opportunities posed by algorithmic governance.

Artificial Intelligence at the JRC

A Survey of Artificial Intelligence

SURVEY OF LAW LIBERTY USE OF ARTIFICIAL INTELLIGENCE

Philosophy and Theory of Artificial Intelligence 2017

An Ecosystem Perspective on the Ethics of AI and Emerging Digital Technologies

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.

We conclude with a survey of approaches used to control inference processes, to mediate their access to real world information, and to schedule their activities."

Offers a clear view of the utility and place for survey data within the broader Big Data ecosystem This book presents a collection of snapshots from two sides of the Big Data perspective. It assembles an array of tangible tools, methods, and approaches that illustrate how Big Data sources and methods are being used in the survey and social sciences to improve official statistics and estimates for human populations. It also provides examples of how survey data are being used to evaluate and improve the quality of insights derived from Big Data. Big Data Meets Survey Science: A Collection of Innovative Methods shows how survey data and Big Data are used together for the benefit of one or more sources of data, with numerous chapters providing consistent illustrations and examples of survey data enriching the evaluation of Big Data sources. Examples of how machine learning, data mining, and other data science techniques are inserted into virtually every stage of the survey lifecycle are presented. Topics covered include: Total Error Frameworks for Found Data; Performance and Sensitivities of Home Detection on Mobile Phone Data; Assessing Community Wellbeing Using Google Street View and Satellite Imagery; Using Surveys to Build and Assess RBS Religious Flag; and more. Presents groundbreaking survey methods being utilized today in the field of Big Data Explores how machine learning methods can be applied to the design, collection, and analysis of social science data Filled with examples and illustrations that show how survey data benefits Big Data evaluation Covers methods and applications used in combining Big Data with survey statistics Examines regulations as well as ethical and privacy issues Big Data Meets Survey Science: A Collection of Innovative Methods is an excellent book for both the survey and social science communities as they learn to capitalize on this new revolution. It will also appeal to the broader data and computer science communities looking for new areas of application for emerging methods and data sources.

Artificial Intelligence for a Better Future

Artificial Intelligence

Within the Lack of Chest COVID-19 X-ray Dataset: A Novel Detection Model Based on GAN and Deep Transfer Learning

Fundamental Issues of Artificial Intelligence

Readings in Artificial Intelligence and Databases

Artificial Intelligence Needs Assessment Survey in Africa

The implementation of network-centric warfare (NCW) and network-centric operations (NCO) is of paramount importance to the DoD. Fundamentally, the key to implementing NCW/NCO is the accurate obtainment and analysis of critical information to the warfighter. Additionally, the proliferation of sensors, in both types and numbers, is making it apparent that there will simply not be enough military personnel to monitor, analyze and synthesize all pertinent data. It is apparent that a "smart sensor network," or a network of sensors with data analyzed by artificial intelligence (AI), is needed to better facilitate the attainment of the full realization of network-centric operations. This thesis presents a survey of the information required for individuals who will be involved in the design and acquisition of smart sensor networks, with a focus on systems engineering. The foundations of smart sensor networks are in AI, Distributed AI, multiagent systems, sensor basics, and data fusion. In addition to an examination of the previous topics, this thesis examines what must be done to further the preparedness of systems engineers for better understanding and designing of smart sensor networks.

Explains how artificial intelligence methods can be used to aid conservation of wildlife, forests, coral reefs, rivers, and other natural resources.

Can we make machines that think and act like humans or other natural intelligent agents? The answer to this question depends on how we see ourselves and how we see the machines in question. Classical AI and cognitive science had claimed that cognition is computation, and can thus be reproduced on other computing machines, possibly surpassing the abilities of human intelligence. This consensus has now come under threat and the agenda for the philosophy and theory of AI must be set anew, re-defining the relation between AI and Cognitive Science. We can re-claim the original vision of general AI from the technical AI disciplines; we can reject classical cognitive science and replace it with a new theory (e.g. embodied); or we can try to find new ways to approach AI, for example from neuroscience or from systems theory. To do this, we must go back to the basic questions on computing, cognition and ethics for AI. The 30 papers in this volume provide cutting-edge work from leading researchers that define where we stand and where we should go from here.

A Systems Engineering Survey of Artificial Intelligence and Smart Sensor Networks in a Network-Centric Environment

Forensic Human Identification

Artificial Intelligence and Conservation

a survey of possibilities

Life 3.0

Artificial Intelligence in Medicine

Global Health sometimes faces pandemics as are currently facing COVID-19 disease. The spreading and infection factors of this disease are very high. A huge number of people from most of the countries are infected within six months from its rst report of appearance and it keeps spreading. The required systems are not ready up to some stages for any pandemic; therefore, mitigation with existing capacity becomes necessary. On the other hand, modern-era largely depends on Artificial Intelligence(AI) including Data Science; Deep Learning(DL) is one of the current ag-bearer of these techniques. It could use to mitigate COVID-19 like pandemics in terms of stop spread, diagnosis of the disease, drug & vaccine discovery, treatment, and many more.

Artificial Intelligence presents a practical guide to AI, including agents, machine learning and problem-solving simple and complex domains.

The coronavirus (COVID-19) pandemic is putting healthcare systems across the world under unprecedented and increasing pressure according to theWorld Health Organization (WHO). With the advances in computer algorithms and especially Artificial Intelligence, the detection of this type of virus in the early stages will help in fast recovery and help in releasing the pressure off healthcare systems.

A Survey of Six Current Projects

Survey of Law Library Use of Artificial Intelligence

Being Human in the Age of Artificial Intelligence

Philosophy and Theory of Artificial Intelligence