

Download Free Innovations In Data Methodologies And Computational Algorithms For Medical Applications

Medicine has, until recently, been slow to adapt to information technologies and systems for many reasons, but the future lies therein. Innovations in Data Methodologies and Computational Algorithms for Medical Applications offers the most cutting-edge research in the field, offering insights into case studies and methodologies from around the world. The text details the latest developments and will serve as a vital resource to practitioners and academics alike in the burgeoning field of medical applications of technologies. As security and privacy improve, Electronic Health Records and informatics in the medical field are becoming ubiquitous, and staying abreast of the latest information can be difficult. This volume serves as a reference handbook and theoretical framework for the future of the field.

Philosophical paradigms, theoretical frameworks, and methodologies make up the answering and problem solving systems that define current research approaches. While there are multiple research method books, the subject lacks an update and integrated source of reference for graduate courses. Research Methodologies, Innovations and Philosophies in Software Systems Engineering and Information Systems aims to advance scientific knowledge on research approaches used in systems engineering, software engineering, and information systems and to update and integrate dispersed and valuable knowledge on research approaches. This aims to be a collection of knowledge for PhD students, research-oriented faculty, and instructors of graduate courses.

The book brings together experts working in public health and multi-disciplinary areas to present recent issues in statistical methodological development and their applications. This timely book will impact model development and data analyses of public health research across a wide spectrum of analysis. Data and software used in the studies are available for the reader to replicate the models and outcomes. The fifteen chapters range in focus from techniques for dealing with missing data with Bayesian estimation, health surveillance and population definition and implications in applied latent class analysis, to multiple comparison and meta-analysis in public health data. Researchers in biomedical and public health research will find this book to be a useful reference and it can be used in graduate level classes.

Vast amounts of digital data are now generated daily by people as they go about their lives, yet social researchers are struggling to exploit it. At the same time, the challenges faced by society in the 21st century are growing ever more complex, and demands research that is bigger in scale, more collaborative and multi-disciplinary than ever before. This cutting-edge volume provides an accessible introduction to innovative digital social research tools and methods that harness this "data deluge" and successfully tackle key research challenges. Contributions from leading international researchers cover topics such as: Qualitative, quantitative and mixed methods research Data management Social media and social network analysis Modeling and simulation Survey methods Visualizing social data Ethics and e-research The future of social research in the digital age This vibrant introduction to innovative digital research methods is essential reading for anyone conducting social research today.

Innovation in Clinical Trial Methodologies: Lessons Learned during the Corona Pandemic presents a selection of updated chapters from Re-Engineering Clinical Trials that feature innovative options and methods in clinical trials. The Coronavirus pandemic is an accelerator for digitalization in many industries, including clinical trials. This book considers best practices, alternative study concepts requiring fewer patients, studies with less patient interaction, the design of "virtualized" protocols, and moving from data to decisions. This book will be helpful to pharmacologists, physicians and clinical researchers involved in the process of clinical development and clinical trial design. Considers multiple digital and virtual strategies Explores best practices, including the use of reduced patient involvement Brings together expert, trusted information to increase the efficiency and effectiveness of clinical trials

"This book discusses advances in modern data mining research in today's rapidly growing global and technological environment"--Provided by publisher.

"This open access book addresses an urgent issue on which little organized information exists. It reflects experience in Africa but is highly relevant to other fragile states as well." --Constantine Michalopoulos, John Hopkins University, USA and former Director of Economic Policy and Co-ordination at the World Bank Fragile countries face a triple data challenge. Up-to-date information is needed to deal with rapidly changing circumstances and to design adequate responses. Yet, fragile countries are among the most data deprived, while collecting new information in such circumstances is very challenging. This open access book presents innovations in data collection developed with decision makers in fragile countries in mind. Looking at innovations in Africa from mobile phone surveys monitoring the Ebola crisis, to tracking displaced people in Mali, this collection highlights the challenges in data collection researchers face and how they can be overcome.

This book seeks to promote the exploitation of data science in healthcare systems. The focus is on advancing the automated analytical methods used to extract new knowledge from data for healthcare applications. To do so, the book draws on several interrelated disciplines, including machine learning, big data analytics, statistics, pattern recognition, computer vision, and Semantic Web technologies, and focuses on their direct application to healthcare. Building on three tutorial-like chapters on data science in healthcare, the following eleven chapters highlight success stories on the application of data science in healthcare, where data science and artificial intelligence technologies have proven to be very promising. This book is primarily intended for data scientists involved in the healthcare or medical sector. By reading this book, they will gain essential insights into the modern data science technologies needed to advance innovation for both healthcare businesses and patients. A basic grasp of data science is recommended in order to fully benefit from this book.

Diffusing Software Product and Process Innovations addresses the problems and issues surrounding successful diffusion of innovations in software. Everett Rogers' classic text, Diffusion of Innovations, provides a valuable framework for evaluating and applying technology transfer methods. In today's new economy, the most important innovations may well be new software products and processes. Topics covered in this valuable new book include: Implementation and coordination issues; New interpretations of diffusion theory; Diffusion of software processes; Contextual factors; Communication of information; Experience reports. This volume contains the edited proceedings of the Fourth Working Conference on Diffusing Software Product and Process Innovations, which was sponsored by the International Federation for Information Processing (IFIP) Working Group 8.6, and held in Banff, Canada in April 2001. It reflects the latest experiences of practitioners and theories of academics in this fast-changing field.

This book draws upon economic and sociological theory to provide a comprehensive discussion of economic space for social innovation, addressing especially marginalized groups and the long-term projects, programmes, and policies that have emerged and evolved within and across European states. It approaches the explanatory and normative questions raised by this topic via a novel approach: the Extended Social Grid Model (ESGM). Taking inspiration from the fields of economic sociology and ethics, this model shows that social innovation processes must be structural, and require change in power relations, if marginalization is to be effectively dealt with via social innovation. Part I of the book sets out the ESGM, including an exposition on the model along with background chapters on innovation, power and

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marginalization, ethics and social innovation, and empirical methods. Part II explores the model with a focus on social innovation trajectories of social housing, drinking water provision, employment, education, and food provision. It also explores the operationalization of the model with a view to agency and empowerment, as well as social innovation policy in Europe and the use of social impact bonds as a tool for financing social innovation. Part III revisits the ESGM and considers the explanatory adequacy and fruitfulness of the model for innovation research and for theorizing social innovation, addressing questions on the role and limitations of participation in social innovation for the marginalized, the role of capital for creating economic space for capabilities, and how we can approach the social impact of social innovation. This collection of essays presents a diverse range of perspectives on understanding and addressing the key issue of marginalization, and offers key recommendations for policy makers engaging with social innovation across the European Union and beyond.

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