

Acces PDF By Yair M Altman Accelerating Matlab Performance 1001 Tips To Speed Up Matlab Programs 1st First Edition Hardcover

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For a variety of reasons, the MATLAB®-Java interface was never fully documented. This is really quite unfortunate: Java is one of the most widely used programming languages, having many times the number of programmers and programming resources as MATLAB. Also unfortunate is the popular claim that while MATLAB is a fine programming platform for prototyping, it is not suitable for real-world, modern-looking applications. Undocumented Secrets of MATLAB®-Java Programming aims to correct this misconception. This book shows how using Java can significantly improve MATLAB program appearance and functionality, and that this can be done easily and even without any prior Java knowledge. Readers are led step-by-step from simple to complex customizations. Code snippets, screenshots, and numerous online references are provided to enable the utilization of this book as both a sequential tutorial and as a random-access reference suited for immediate use. Java-savvy readers will find it easy to tailor code samples for their particular needs; for Java newcomers, an introduction to Java and numerous online references are provided. This book demonstrates how The MATLAB programming environment relies on Java for numerous tasks, including networking, data-processing algorithms

and graphical user-interface (GUI) We can use MATLAB for easy access to external Java functionality, either third-party or user-created Using Java, we can extensively customize the MATLAB environment and application GUI, enabling the creation of visually appealing and usable applications

Praise for the Second Edition: "The authors present an intuitive and easy-to-read book. ... accompanied by many examples, proposed exercises, good references, and comprehensive appendices that initiate the reader unfamiliar with MATLAB." —Adolfo Alvarez Pinto, International Statistical Review "Practitioners of EDA who use MATLAB will want a copy of this book. ... The authors have done a great service by bringing together so many EDA routines, but their main accomplishment in this dynamic text is providing the understanding and tools to do EDA. —David A Huckaby, MAA Reviews Exploratory Data Analysis (EDA) is an important part of the data analysis process. The methods presented in this text are ones that should be in the toolkit of every data scientist. As computational sophistication has increased and data sets have grown in size and complexity, EDA has become an even more important process for visualizing and summarizing data before making assumptions to generate hypotheses and models. Exploratory Data Analysis with MATLAB, Third Edition presents EDA methods from a computational perspective and uses numerous examples and applications to show how the methods are used in practice. The authors use MATLAB code, pseudo-code, and algorithm descriptions to illustrate the concepts. The MATLAB code for

examples, data sets, and the EDA Toolbox are available for download on the book's website. New to the Third Edition Random projections and estimating local intrinsic dimensionality Deep learning autoencoders and stochastic neighbor embedding Minimum spanning tree and additional cluster validity indices Kernel density estimation Plots for visualizing data distributions, such as beanplots and violin plots A chapter on visualizing categorical data

Combat Stress Injury represents a definitive collection of the most current theory, research, and practice in the area of combat and operational stress management, edited by two experts in the field. In this book, Charles Figley and Bill Nash have assembled a wide-ranging group of authors (military / nonmilitary, American / international, combat veterans / trainers, and as diverse as psychiatrists / psychologists / social workers / nurses / clergy / physiologists / military scientists). The chapters in this volume collectively demonstrate that combat stress can effectively be managed through prevention and training prior to combat, stress reduction methods during operations, and desensitization programs immediately following combat exposure.

Accelerating MATLAB Performance 1001 tips to speed up MATLAB programs CRC Press

The MATLAB® programming environment is often perceived as a platform suitable for prototyping and modeling but not for "serious" applications. One of the main complaints is that MATLAB is just too slow.

Accelerating MATLAB Performance aims to correct this perception by describing multiple ways to greatly

improve MATLAB program speed. Packed with thousands of helpful tips, it leaves no stone unturned, discussing every aspect of MATLAB. Ideal for novices and professionals alike, the book describes MATLAB performance in a scale and depth never before published. It takes a comprehensive approach to MATLAB performance, illustrating numerous ways to attain the desired speedup. The book covers MATLAB, CPU, and memory profiling and discusses various tradeoffs in performance tuning. It describes both the application of standard industry techniques in MATLAB, as well as methods that are specific to MATLAB such as using different data types or built-in functions. The book covers MATLAB vectorization, parallelization (implicit and explicit), optimization, memory management, chunking, and caching. It explains MATLAB's memory model and details how it can be leveraged. It describes the use of GPU, MEX, FPGA, and other forms of compiled code, as well as techniques for speeding up deployed applications. It details specific tips for MATLAB GUI, graphics, and I/O. It also reviews a wide variety of utilities, libraries, and toolboxes that can help to improve performance. Sufficient information is provided to allow readers to immediately apply the suggestions to their own MATLAB programs. Extensive references are also included to allow those who wish to expand the treatment of a particular topic to do so easily. Supported by an active website, and numerous code examples, the book will help readers rapidly attain significant reductions in development costs and program run times.

This introduction to the discrete wavelet transform and its

applications is based on a novel approach to discrete wavelets called lifting. After an elementary introduction, connections of filter theory are presented, and wavelet packet transforms are defined. The time-frequency plane is used for interpretation of signals, problems with finite length signals are detailed, and MATLAB is used for examples and implementation of transforms.

One of the world's top experts in behavioral finance offers innovative strategies for improving 401(k) plans. Half of Americans do not have access to a retirement saving plan at their workplace. Of those who do about a third fail to join. And those who do join tend to save too little and often make unwise investment decisions. In short, the 401(k) world is in crisis, and workers need help. *Save More Tomorrow* provides that help by focusing on the behavioral challenges that led to this crisis inertia, limited self-control, loss aversion, and myopia—and transforms them into behavioral solutions. These solutions, or tools, are based on cutting edge behavioral finance research and they can dramatically improve outcomes by, for example, helping employees:

- Save, even if they aren't ready to do so now, by using future enrollment.
- Save more by showing them images of their future selves.
- Save smarter by reshuffling the order of funds on the investment menu.

Save More Tomorrow is the first comprehensive application of behavioral finance to improve retirement outcomes. It also makes it easy for plan sponsors and their advisers to apply these behavioral tools using its innovative Behavioral Audit process.

This book is written for beginners and students who wish

to learn MATLAB. One of the objectives of writing this book is to introduce MATLAB to students in high schools. The material presented is very easy and simple to understand - written in a gentle manner. The topics covered in the book include arithmetic operations, variables, mathematical functions, complex numbers, vectors, matrices, programming, graphs, solving equations, and an introduction to calculus. In addition, the MATLAB Symbolic Math Toolbox is emphasized in this book. There are also over 230 exercises at the ends of chapters for students to practice. Detailed solutions to all the exercises are provided in the second half of the book. The author has been using MATLAB for the past fifteen years and is the author of the best selling book "MATLAB Guide to Finite Elements". For the paperback edition, visit Amazon.com.

Progress in the application of machine learning (ML) to the physical and life sciences has been rapid. A decade ago, the method was mainly of interest to those in computer science departments, but more recently ML tools have been developed that show significant potential across wide areas of science. There is a growing consensus that ML software, and related areas of artificial intelligence, may, in due course, become as fundamental to scientific research as computers themselves. Yet a perception remains that ML is obscure or esoteric, that only computer scientists can really understand it, and that few meaningful applications in scientific research exist. This book challenges that view. With contributions from leading research groups, it presents in-depth examples to illustrate how ML can be

applied to real chemical problems. Through these examples, the reader can both gain a feel for what ML can and cannot (so far) achieve, and also identify characteristics that might make a problem in physical science amenable to a ML approach. This text is a valuable resource for scientists who are intrigued by the power of machine learning and want to learn more about how it can be applied in their own field.

Science and technology are embedded in virtually every aspect of modern life. As a result, people face an increasing need to integrate information from science with their personal values and other considerations as they make important life decisions about medical care, the safety of foods, what to do about climate change, and many other issues. Communicating science effectively, however, is a complex task and an acquired skill. Moreover, the approaches to communicating science that will be most effective for specific audiences and circumstances are not obvious. Fortunately, there is an expanding science base from diverse disciplines that can support science communicators in making these determinations. *Communicating Science Effectively* offers a research agenda for science communicators and researchers seeking to apply this research and fill gaps in knowledge about how to communicate effectively about science, focusing in particular on issues that are contentious in the public sphere. To inform this research agenda, this publication identifies important influences " psychological, economic, political, social, cultural, and media-related " on how science related to such issues is understood, perceived, and used.

When the stream of plasma emitted from the Sun (the solar wind) encounters Earth's magnetic field, it slows down and flows around it, leaving behind a cavity, the magnetosphere. The magnetopause is the surface that separates the solar wind on the outside from the Earth's magnetic field on the inside. Because the solar wind moves at supersonic speed, a bow shock must form ahead of the magnetopause that acts to slow the solar wind to subsonic speeds. Magnetopause, bow shock and their environs are rich in exciting processes in collisionless plasmas, such as shock formation, magnetic reconnection, particle acceleration and wave-particle interactions. They are interesting in their own right, as part of Earth's environment, but also because they are prototypes of similar structures and phenomena that are ubiquitous in the universe, having the unique advantage that they are accessible to in situ measurements. The boundaries of the magnetosphere have been the target of direct in-situ measurements since the beginning of the space age. But because they are constantly moving, changing their orientation, and undergoing evolution, the interpretation of single-spacecraft measurements has been plagued by the fundamental inability of a single observer to unambiguously distinguish spatial from temporal changes. The boundaries are thus a prime target for the study by a closely spaced fleet of spacecraft. Thus the Cluster mission, with its four spacecraft in a three-dimensional configuration at variable separation distances, represents a giant step forward. The present 20th volume of the ISSI Space Science Series represents the first synthesis of the

exciting new results obtained in the first few years of the Cluster mission.

Several people have asked what motivated us to write a book about commut ing, something that we all do but over which we have very little control. As a matter of fact, the general reaction from professional colleagues and friends alike was first a sort of knowing smile followed by some story. Everyone has a story about a personal commuting experience. Whether it was a problem with a delayed bus, a late arrival, broken-down automobiles, hot trains or subways, during the past year we have heard it all. Many of these stories must be apocryphal because, if they were all true, it is amazing that anyone ever arrived at work on time, at home, or at some other destination. The interest for us likely stems from many factors that over the years have probably influenced our thinking. All of the authors studied and/or grew up in the New York City metropolitan area. For illustration, let's devote a few paragraphs to describing some of the senior author's (Koslowsky's) life experiences. As a young man in New York City, he was a constant user of the New York City subway system. The whole network was and still is quite impressive. For a relatively small sum, one can spend the whole day and night in an underground world (growing up in New York often makes one think that the whole world is contained in its five boroughs).

In-depth coverage is given of the emerging POSIX Threads library for UNIX and how to code with it. These pages explain the concepts and foundations of threads programming, including real-life constructions. The book

compares and contrasts the Pthreads library with those for OS/2 and Windows NT throughout.

This book constitutes the refereed proceedings of the First International Workshop on Internet and Network Economics, WINE 2005, held in Hong Kong, China in December 2005. The 108 revised full papers presented together with 2 invited talks were carefully reviewed and selected from 372 submissions. There are 31 papers in the main program and 77 papers presented in 16 special tracks covering the areas of internet and algorithmic economics, e-commerce protocols, security, collaboration, reputation and social networks, algorithmic mechanism, financial computing, auction algorithms, online algorithms, collective rationality, pricing policies, web mining strategies, network economics, coalition strategies, internet protocols, price sequence, and equilibrium.

Biomedical Natural Language Processing is a comprehensive tour through the classic and current work in the field. It discusses all subjects from both a rule-based and a machine learning approach, and also describes each subject from the perspective of both biological science and clinical medicine. The intended audience is readers who already have a background in natural language processing, but a clear introduction makes it accessible to readers from the fields of bioinformatics and computational biology, as well. The book is suitable as a reference, as well as a text for advanced courses in biomedical natural language processing and text mining.

This book explores a number of important issues in the

area of occupational safety and hygiene. Presenting both research and best practices for the evaluation of occupational risk, safety and health in various types of industry, it particularly focuses on occupational safety in automated environments, innovative management systems and occupational safety in a global context. The different chapters examine the perspectives of all those involved, such as managers, workers and OSH professionals. Based on selected contributions presented at the 15th International Symposium on Occupational Safety and Hygiene (SHO 2019), held on 15–16 April, 2019, in Guimarães, Portugal, the book serves as a timely reference guide and source of inspiration to OSH researchers, practitioners and organizations operating in a global context.

Depicts the Nazi persecution of the Jewish community of Warsaw and traces the development of the Jewish armed resistance movement in the Warsaw ghetto

This book presents 16 selected papers from the 7th International Conference on The Application of Physical Modelling in Coastal and Port Engineering and Science, Coastlab18. The conference was organized in Santander, Spain, from 22 to 26 May, 2018, by the Instituto de Hidráulica Ambiental de la Universidad de Cantabria, IHCantabria. Coastlab18 welcomed 175 attendees from 18 different countries. The technical program included three renowned keynote lectures and 120 presentations focused on theoretical and practical aspects related to physical

modelling in the field of coastal and ocean engineering. Coastal and ocean structures, breakwaters, revetments, laboratory technologies, measurement systems, coastal field measurement and monitoring, combined physical and numerical modelling, physical modelling case studies, tsunamis, and coastal hydrodynamics were the main topics covered in the conference. This book attempts to cover, as completely as possible, all the topics presented during the conference. The papers were accepted after a peer-review process based on their full text.

GPU programming in MATLAB is intended for scientists, engineers, or students who develop or maintain applications in MATLAB and would like to accelerate their codes using GPU programming without losing the many benefits of MATLAB. The book starts with coverage of the Parallel Computing Toolbox and other MATLAB toolboxes for GPU computing, which allow applications to be ported straightforwardly onto GPUs without extensive knowledge of GPU programming. The next part covers built-in, GPU-enabled features of MATLAB, including options to leverage GPUs across multicore or different computer systems. Finally, advanced material includes CUDA code in MATLAB and optimizing existing GPU applications. Throughout the book, examples and source codes illustrate every concept so that readers can immediately apply

them to their own development. Provides in-depth, comprehensive coverage of GPUs with MATLAB, including the parallel computing toolbox and built-in features for other MATLAB toolboxes Explains how to accelerate computationally heavy applications in MATLAB without the need to re-write them in another language Presents case studies illustrating key concepts across multiple fields Includes source code, sample datasets, and lecture slides

This book presents computer programming as a key method for solving mathematical problems. There are two versions of the book, one for MATLAB and one for Python. The book was inspired by the Springer book TCSE 6: A Primer on Scientific Programming with Python (by Langtangen), but the style is more accessible and concise, in keeping with the needs of engineering students. The book outlines the shortest possible path from no previous experience with programming to a set of skills that allows the students to write simple programs for solving common mathematical problems with numerical methods in engineering and science courses. The emphasis is on generic algorithms, clean design of programs, use of functions, and automatic tests for verification.

This book, written by world authorities in the field, is a comprehensive, up-to-date guide to the specialty of Oral Medicine, which is concerned with the diagnosis, prevention, and predominantly non-

surgical management of medically related disorders and conditions affecting the oral and maxillofacial region. The pathophysiology, clinical presentation, diagnostic evaluation, and treatment of all relevant diseases and disorders are described with the aid of a wealth of clinical cases and illustrations that enable the reader to appreciate the diversity and potential complexity of Oral Medicine. In addition to the wide-ranging coverage of oral conditions, separate sections are devoted to bone and cutaneous pathology and to orofacial pain and its management, in addition to dental sleep medicine. The clinician who treats Oral Medicine patients will find this book to be an excellent aid to optimal management grounded in a sound knowledge of basic science and the dental and medical aspects of each disorder. In addition, it will serve as an outstanding textbook for undergraduate and postgraduate students.

MATLAB is an interactive system for numerical computation that is widely used for teaching and research in industry and academia. It provides a modern programming language and problem solving environment, with powerful data structures, customizable graphics, and easy-to-use editing and debugging tools. This third edition of MATLAB Guide completely revises and updates the best-selling second edition and is more than 30 percent longer. The book remains a lively, concise introduction to the most popular and important features of MATLAB

and the Symbolic Math Toolbox. Key features are a tutorial in Chapter 1 that gives a hands-on overview of MATLAB; a thorough treatment of MATLAB mathematics, including the linear algebra and numerical analysis functions and the differential equation solvers; and a web page at <http://www.siam.org/books/ot150> that provides example program files, updates, and links to MATLAB resources. The new edition contains color figures throughout; includes pithy discussions of related topics in new "Asides" boxes that augment the text; has new chapters on the Parallel Computing Toolbox, object-oriented programming, graphs, and large data sets; covers important new MATLAB data types such as categorical arrays, string arrays, tall arrays, tables, and timetables; contains more on MATLAB workflow, including the Live Editor and unit tests; and fully reflects major updates to the MATLAB graphics system. This book is suitable for both beginners and more experienced users, including students, researchers, and practitioners. The first aim is to provide well-articulated concepts by thinking through elementary phenomena of today's world, focusing on privacy and the digital, to clarify who we are in the cyberworld — hence a phenomenology of digital whoness. The second aim is to engage critically, hermeneutically with older and current literature on privacy, including in today's emerging cyberworld. Phenomenological results

include concepts of i) self-identity through interplay with the world, ii) personal privacy in contradistinction to the privacy of private property, iii) the cyberworld as an artificial, digital dimension in order to discuss iv) what freedom in the cyberworld can mean, whilst not neglecting v) intercultural aspects and vi) the EU context.

As the power and sophistication of 'big data' and predictive analytics has continued to expand, so too has policy and public concern about the use of algorithms in contemporary life. This is hardly surprising given our increasing reliance on algorithms in daily life, touching policy sectors from healthcare, transport, finance, consumer retail, manufacturing education, and employment through to public service provision and the operation of the criminal justice system. This has prompted concerns about the need and importance of holding algorithmic power to account, yet it is far from clear that existing legal and other oversight mechanisms are up to the task. This collection of essays, edited by two leading regulatory governance scholars, offers a critical exploration of 'algorithmic regulation', understood both as a means for co-ordinating and regulating social action and decision-making, as well as the need for institutional mechanisms through which the power of algorithms and algorithmic systems might themselves be regulated. It offers a unique perspective that is likely to become a

significant reference point for the ever-growing debates about the power of algorithms in daily life in the worlds of research, policy and practice. The range of contributors are drawn from a broad range of disciplinary perspectives including law, public administration, applied philosophy, data science and artificial intelligence. Taken together, they highlight the rise of algorithmic power, the potential benefits and risks associated with this power, the way in which Sheila Jasanoff's long-standing claim that 'technology is politics' has been thrown into sharp relief by the speed and scale at which algorithmic systems are proliferating, and the urgent need for wider public debate and engagement of their underlying values and value trade-offs, the way in which they affect individual and collective decision-making and action, and effective and legitimate mechanisms by and through which algorithmic power is held to account.

Image understanding is an attempt to extract knowledge about a 3D scene from 20 images. The recent development of computers has made it possible to automate a wide range of systems and operations, not only in the industry, military, and special environments (space, sea, atomic plants, etc.), but also in daily life. As we now try to build ever more intelligent systems, the need for "visual" control has been strongly recognized, and the interest in image under standing has grown rapidly. Already,

there exists a vast body of literature-ranging from general philosophical discourses to processing techniques. Compared with other works, however, this book may be unique in that its central focus is on "mathematical" principles-Lie groups and group representation theory, in particular. In the study of the relationship between the 3D scene and the 2D image, "geometry" naturally plays a central role. Today, so many branches are inter woven in geometry that we cannot truly regard it as a single subject. Neverthe less, as Felix Klein declared in his Erlangen Program, the central principle of geometry is group theory, because geometrical concepts are abstractions of properties that are "invariant" with respect to some group of transformations. In this text, we specifically focus on two groups of transformations. One is 2D rotations of the image coordinate system around the image origin. Such coordinate rotations are indeed irrelevant when we look for intrinsic image properties.

Regenerative medicine – stem cell and gene-based therapy – offers a new approach for restoring function of damaged organs and tissues. This is the first book to cover the major new aspects and field of regenerative medicine. This title is therefore a timely addition to the literature. It brings together the major approaches to regenerative medicine in one text, which ensures that techniques learnt in one discipline are disseminated across other areas of

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Covering formulation, algorithms, and structural results, and linking theory to real-world applications in controlled sensing (including social learning, adaptive radars and sequential detection), this book focuses on the conceptual foundations of partially observed Markov decision processes (POMDPs). It emphasizes structural results in stochastic dynamic programming, enabling graduate students and researchers in engineering, operations research, and economics to understand the underlying unifying themes without getting weighed down by mathematical technicalities. Bringing together research from across the literature, the book provides an introduction to nonlinear filtering followed by a systematic development of stochastic dynamic programming, lattice programming and reinforcement learning for POMDPs. Questions addressed in the book include: when does a POMDP have a threshold optimal policy? When are myopic policies optimal? How do local and global decision makers interact in adaptive decision making in multi-agent social learning where there is herding and data incest? And how can sophisticated radars and sensors adapt their sensing in real time?

Wheeled Mobile Robotics: From Fundamentals Towards Autonomous Systems covers the main topics from the wide area of mobile robotics, explaining all applied theory and application. The

book gives the reader a good foundation, enabling them to continue to more advanced topics. Several examples are included for better understanding, many of them accompanied by short MATLAB® script code making it easy to reuse in practical work. The book includes several examples of discussed methods and projects for wheeled mobile robots and some advanced methods for their control and localization. It is an ideal resource for those seeking an understanding of robotics, mechanics, and control, and for engineers and researchers in industrial and other specialized research institutions in the field of wheeled mobile robotics. Beginners with basic math knowledge will benefit from the examples, and engineers with an understanding of basic system theory and control will find it easy to follow the more demanding fundamental parts and advanced methods explained. Offers comprehensive coverage of the essentials of the field that are suitable for both academics and practitioners Includes several examples of the application of algorithms in simulations and real laboratory projects Presents foundation in mobile robotics theory before continuing with more advanced topics Self-sufficient to beginner readers, covering all important topics in the mobile robotics field Contains specific topics on modeling, control, sensing, path planning, localization, design architectures, and multi-agent systems

Since the first attempts at structure-based drug design about four decades ago, molecular modelling techniques for drug design have developed enormously, along with the increasing computational power and structural and biological information of active compounds and potential target molecules. Nowadays, molecular modeling can be considered to be an integral component of the modern drug discovery and development toolbox. Nevertheless, there are still many methodological challenges to be overcome in the application of molecular modeling approaches to drug discovery. The eight original research and five review articles collected in this book provide a snapshot of the state-of-the-art of molecular modeling in drug design, illustrating recent advances and critically discussing important challenges. The topics covered include virtual screening and pharmacophore modelling, chemoinformatic applications of artificial intelligence and machine learning, molecular dynamics simulation and enhanced sampling to investigate contributions of molecular flexibility to drug–receptor interactions, the modeling of drug–receptor solvation, hydrogen bonding and polarization, and drug design against protein–protein interfaces and membrane protein receptors.

John Roemer has written a unique book that critiques economists' conceptions of justice from a philosophical perspective and philosophical theories

of distributive justice from an economic one.

This book explores comorbidity in patients with rheumatic diseases and details both care and treatment options in standard clinical practice. Patients with rheumatic diseases are clinically complex, and the interplay of their disease activity with associated conditions may lead to increased morbidity and mortality. Recently there have been major advances in the management of rheumatic diseases, however, without addressing the potential comorbid conditions, including cardiovascular disease; pulmonary disease; and depression; outcomes remain poor. ??? With its 19 chapters, covering the management of major rheumatic diseases (e.g. rheumatoid arthritis, systemic lupus erythematosus , and osteoarthritis), potential comorbidities and treatment recommendations, as well as possible interactions between conditions; this book addresses the gap between textbook medicine and day to day patients' care. Authors also discuss the new hot issue of the comorbidity index, comparing the standard tools to the recently developed indices and how they can assist the rheumatologists in determining disease burden, prognosis, and comorbidity probability. This book is an ideal clinical guide and reference that enables rheumatologists, internal medicine physicians, and residents to address the full clinical expression of these rheumatic diseases with views towards

prevention or early management of comorbid conditions.

A Primer with MATLAB® and Python™ present important information on the emergence of the use of Python, a more general purpose option to MATLAB, the preferred computation language for scientific computing and analysis in neuroscience. This book addresses the snake in the room by providing a beginner's introduction to the principles of computation and data analysis in neuroscience, using both Python and MATLAB, giving readers the ability to transcend platform tribalism and enable coding versatility. Includes discussions of both MATLAB and Python in parallel Introduces the canonical data analysis cascade, standardizing the data analysis flow Presents tactics that strategically, tactically, and algorithmically help improve the organization of code

This book explores numerical implementation of Finite Element Analysis using MATLAB. Stressing interactive use of MATLAB, it provides examples and exercises from mechanical, civil and aerospace engineering as well as materials science. The text includes a short MATLAB tutorial. An extensive solutions manual offers detailed solutions to all problems in the book for classroom use. The second edition includes a new brick (solid) element with eight nodes and a one-dimensional fluid flow element. Also added is a review of applications of finite elements in fluid flow, heat transfer, structural dynamics and electro-magnetics. The accompanying CD-ROM presents more than fifty MATLAB functions.

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The First Book to Explain How a User of R or MATLAB Can Benefit from the Other In today's increasingly interdisciplinary world, R and MATLAB® users from different backgrounds must often work together and share code. R and MATLAB® is designed for users who already know R or MATLAB and now need to learn the other platform. The book makes the transition from one platform to the other as quick and painless as possible. Enables R and MATLAB Users to Easily Collaborate and Share Code The author covers essential tasks, such as working with matrices and vectors, writing functions and other programming concepts, graphics, numerical computing, and file input/output. He highlights important differences between the two platforms and explores common mistakes that are easy to make when transitioning from one platform to the other.

The book provides details on 22 probability distributions. Each distribution section provides a graphical visualization and formulas for distribution parameters, along with distribution formulas. Common statistics such as moments and percentile formulas are followed by likelihood functions and in many cases the derivation of maximum likelihood estimates. Bayesian non-informative and conjugate priors are provided followed by a discussion on the distribution characteristics and applications in reliability engineering. Praise for The Center for Creative Leadership Handbook of Leadership Development "The most authoritative, comprehensive, and practical source for developing leadership capability in any organization. The handbook integrates the very best of theory and practice, and serves as a valuable road map to creating a foundation of systemic leadership excellence, now and for the future." —Thomas J. Griffin, vice president, organizational learning and chief teaching officer, U.S. Cellular "Only from the Center for Creative Leadership could we expect to see such a rich,

authoritative, and actionable set of the latest resources for developing leaders. All those who have responsibility for developing leaders (senior executives, leader development professionals, and leaders themselves), as well as those who study leadership, need to read this book." —Douglas T. "Tim" Hall, founding director, Executive Development Roundtable, Boston University "The changes in the third edition of *The Handbook of Leadership Development* make a good book even better. The authors provide a broad perspective on the most relevant topics for academics and practitioners. The emphasis on development of collective leadership capacity as well as development of individual leaders is consistent with the growing recognition that strategic leadership, shared leadership, and flexible change leadership are essential for sustained organizational effectiveness in a dynamic global economy. The book is a valuable source of knowledge and practical advice for anyone who is responsible for providing or managing leadership development." —Gary Yukl, professor of management, University at Albany-SUNY "We consider leadership to be the single most important factor influencing the performance of our organization. This book is brilliant in defining what we need to do and what capabilities we need to assist our leaders to grow and develop." —Morten Raabe, vice president of Organisation Development, WW ASA, Oslo, Norway Note: CD-ROM/DVD and other supplementary materials are not included as part of eBook file.

The Book of R is a comprehensive, beginner-friendly guide to R, the world's most popular programming language for statistical analysis. Even if you have no programming experience and little more than a grounding in the basics of mathematics, you'll find everything you need to begin using R effectively for statistical analysis. You'll start with the basics, like how to handle data and write simple programs, before moving on to more advanced topics, like producing

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statistical summaries of your data and performing statistical tests and modeling. You'll even learn how to create impressive data visualizations with R's basic graphics tools and contributed packages, like ggplot2 and ggvis, as well as interactive 3D visualizations using the rgl package. Dozens of hands-on exercises (with downloadable solutions) take you from theory to practice, as you learn:

- The fundamentals of programming in R, including how to write data frames, create functions, and use variables, statements, and loops
- Statistical concepts like exploratory data analysis, probabilities, hypothesis tests, and regression modeling, and how to execute them in R
- How to access R's thousands of functions, libraries, and data sets
- How to draw valid and useful conclusions from your data
- How to create publication-quality graphics of your results

Combining detailed explanations with real-world examples and exercises, this book will provide you with a solid understanding of both statistics and the depth of R's functionality. Make The Book of R your doorway into the growing world of data analysis. Go from total MATLAB newbie to plotting graphs and solving equations in a flash! MATLAB is one of the most powerful and commonly used tools in the STEM field. But did you know it doesn't take an advanced degree or a ton of computer experience to learn it? MATLAB For Dummies is the roadmap you've been looking for to simplify and explain this feature-filled tool. This handy reference walks you through every step of the way as you learn the MATLAB language and environment inside-and-out. Starting with straightforward basics before moving on to more advanced material like Live Functions and Live Scripts, this easy-to-read guide shows you how to make your way around MATLAB with screenshots and newly updated procedures. It includes: A comprehensive introduction to installing MATLAB, using its interface, and creating and saving your first file Fully updated to include the

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2020 and 2021 updates to MATLAB, with all-new screenshots and up-to-date procedures Enhanced debugging procedures and use of the Symbolic Math Toolbox Brand new instruction on working with Live Scripts and Live Functions, designing classes, creating apps, and building projects Intuitive walkthroughs for MATLAB's advanced features, including importing and exporting data and publishing your work Perfect for STEM students and new professionals ready to master one of the most powerful tools in the fields of engineering, mathematics, and computing, MATLAB For Dummies is the simplest way to go from complete newbie to power user faster than you would have thought possible. The “exhilarating” definitive account of the 1943 uprising in Poland’s capital, named a Best Book of the Year by Publishers Weekly and the Jewish Observer (Los Angeles Times). No act of Jewish resistance during the Holocaust fired the imagination quite as much as the Warsaw Ghetto Uprising of April 1943. It was an event of epic proportions in which a group of relatively unarmed, untrained Jews managed to lead a military revolt against the Nazi war machine. In this riveting, authoritative history, a Holocaust scholar and survivor of the battle draws on diaries, letters, underground press reports, and his own personal experience to bring a landmark moment in Jewish history to life—offering “a dramatic and memorable picture of the ghetto” and showing how a vibrant culture shaped the young fighters whose defiance would have far-reaching implications for the Jewish people (Library Journal). “Superb, moving, richly informative history.” —Publishers Weekly Note: Some photos and maps contained in the print edition of this book have been excluded from the ebook edition.

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