

Digital Processing Of Geophysical Data A Review Course Notes No 1

The Data Detective **Numbersense: How to Use Big Data to Your Advantage** **Build a Career in Data Science** *Storytelling with Data* **Python for Data Analysis** **Thinking with Data** **We Are Data** Big Data and Innovation in Tourism, Travel, and Hospitality **Non-Invasive Data Governance** Big Data Data Smart **Data Breaches** **Data Analysis for Business, Economics, and Policy** Advancing the Power of Learning Analytics and Big Data in Education *The Data Gaze* *Big Data in Practice* *Electronic Methods of Collecting Survey Data* *Linear Algebra and Learning from Data* **Competition Law and Big Data** Effective Data Visualization *The Art of Statistics* Cyber Privacy Data Feminism **Python for Finance** Visual Insights **Visualizing Data** **Data Science** *Semantic Modeling for Data Cooking* *Data* **Storytelling with Data** *PR Technology, Data and Insights* **Data Practices** Data Science from Scratch **Winning with Data** *Network Security Through Data Analysis* *The Efficiency Paradox* Knowledge-Intensive Economies and Opportunities for Social,

Organizational, and Technological Growth *Business Data Science: Combining Machine Learning and Economics to Optimize, Automate, and Accelerate Business Decisions*
Discriminating Data Big Data and Social Science

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Cooking Data Jun 03 2020 In Cooking Data Crystal Biruk offers an ethnographic account of research into the demographics of HIV and AIDS in Malawi to rethink the production of quantitative health data. While research practices are often understood within a clean/dirty binary, Biruk shows that data are never clean; rather, they are always “cooked” during their

production and inevitably entangled with the lives of those who produce them. Examining how the relationships among fieldworkers, supervisors, respondents, and foreign demographers shape data, Biruk examines the ways in which units of information—such as survey questions and numbers written onto questionnaires by fieldworkers—acquire value as statistics that go on to shape national AIDS policy. Her approach illustrates how on-the-ground dynamics and research cultures mediate the production of global health statistics in ways that impact local economies and formulations of power and expertise.

Data Analysis for Business, Economics, and Policy Oct 20 2021 A comprehensive textbook on data analysis for business, applied economics and public policy that uses case studies with real-world data.

Non-Invasive Data Governance Feb 21 2022 Data-governance programs focus on authority and accountability for the management of data as a valued organizational asset. Data Governance should not be about command-and-control, yet at times could become invasive or threatening to the work, people and culture of an organization. Non-Invasive Data Governance™ focuses on formalizing existing accountability for the management of data and improving formal communications, protection, and quality efforts through effective stewarding of data resources. Non-Invasive Data Governance will provide you with a complete set of tools to help you deliver a successful data governance program. Learn how:

- Steward responsibilities can be identified and recognized, formalized, and

engaged according to their existing responsibility rather than being assigned or handed to people as more work. • Governance of information can be applied to existing policies, standard operating procedures, practices, and methodologies, rather than being introduced or emphasized as new processes or methods. • Governance of information can support all data integration, risk management, business intelligence and master data management activities rather than imposing inconsistent rigor to these initiatives. • A practical and non-threatening approach can be applied to governing information and promoting stewardship of data as a cross-organization asset. • Best practices and key concepts of this non-threatening approach can be communicated effectively to leverage strengths and address opportunities to improve.

Network Security Through Data Analysis Nov 28 2019 Traditional intrusion detection and logfile analysis are no longer enough to protect today's complex networks. In this practical guide, security researcher Michael Collins shows you several techniques and tools for collecting and analyzing network traffic datasets. You'll understand how your network is used, and what actions are necessary to protect and improve it. Divided into three sections, this book examines the process of collecting and organizing data, various tools for analysis, and several different analytic scenarios and techniques. It's ideal for network administrators and operational security analysts familiar with scripting. Explore network, host, and service sensors for capturing security data Store data traffic with relational databases, graph

databases, Redis, and Hadoop Use SiLK, the R language, and other tools for analysis and visualization Detect unusual phenomena through Exploratory Data Analysis (EDA) Identify significant structures in networks with graph analysis Determine the traffic that's crossing service ports in a network Examine traffic volume and behavior to spot DDoS and database raids Get a step-by-step process for network mapping and inventory

The Art of Statistics Feb 09 2021 In this "important and comprehensive" guide to statistical thinking (New Yorker), discover how data literacy is changing the world and gives you a better understanding of life's biggest problems. Statistics are everywhere, as integral to science as they are to business, and in the popular media hundreds of times a day. In this age of big data, a basic grasp of statistical literacy is more important than ever if we want to separate the fact from the fiction, the ostentatious embellishments from the raw evidence -- and even more so if we hope to participate in the future, rather than being simple bystanders. In *The Art of Statistics*, world-renowned statistician David Spiegelhalter shows readers how to derive knowledge from raw data by focusing on the concepts and connections behind the math. Drawing on real world examples to introduce complex issues, he shows us how statistics can help us determine the luckiest passenger on the Titanic, whether a notorious serial killer could have been caught earlier, and if screening for ovarian cancer is beneficial. *The Art of Statistics* not only shows us how mathematicians have used statistical science to solve these problems -- it teaches us how we too can think like

statisticians. We learn how to clarify our questions, assumptions, and expectations when approaching a problem, and -- perhaps even more importantly -- we learn how to responsibly interpret the answers we receive. Combining the incomparable insight of an expert with the playful enthusiasm of an aficionado, *The Art of Statistics* is the definitive guide to stats that every modern person needs.

Data Practices Mar 01 2020 How EU data practices establish and assign people to categories, and how this matters in enacting--"making up"--Europe as a population and people. What is "Europe" and who are "Europeans"? *Data Practices* approaches this contemporary political and theoretical question by treating it as a practical problem of counting. Only through the myriad data practices that make up methods such as censuses can EU member states know their national populations, and this in turn is utilized by the EU to understand the population of Europe. But this volume approaches data practices not simply as reflecting populations but as performative in two senses: they simultaneously enact--that is, "make up"--a European population and, by so doing--intentionally or otherwise--also contribute to making up a European people. The book develops a conception of data practices to analyze and interpret findings from collaborative ethnographic multisite fieldwork conducted by an interdisciplinary team of social science researchers as part of a five-year project, *Peopling Europe: How Data Make a People*. The book focuses on data practices that involve establishing and assigning people to categories

and how this matters in enacting Europe as a population and people. Five core chapters explore key categories of people--usual residents, refugees, homeless people, migrants, and ethnic minorities--and how they come into being through specific data practices such as defining, estimating, recalibrating and inferring. Two additional chapters address two key subject positions that data practices produce and require: the data subject and the statistician subject.

Knowledge-Intensive Economies and Opportunities for Social, Organizational, and Technological Growth Sep 26 2019 The modern world is developing at a pace where few can thoroughly keep track of its progress. More advancements in technology, evolving standards of education, and ongoing cultural and societal developments are leading to a need for improved pathways of knowledge discovery and dissemination. Knowledge-Intensive Economies and Opportunities for Social, Organizational, and Technological Growth provides emerging research exploring how academic research can represent both a bold response to the problems society faces today and a source of alternative solutions to those problems. This publication is derived from the basic understanding that education plays the role of the key enabler in the process of navigating these contemporary challenges. Featuring coverage on a broad range of topics such as e-service exploration, progressive online learning in urban areas, and advances in multimedia sharing, this book is ideally designed for consultants, academics, industry professionals, policymakers, politicians, and

government officials seeking current research on the impact of information technology and the knowledge-based era.

Discriminating Data Jul 25 2019 "Chun investigates the centrality of race, gender, class, and sexuality to "Big Data" and network analytics"--

Electronic Methods of Collecting Survey Data Jun 15 2021

Linear Algebra and Learning from Data May 15 2021 Linear algebra and the foundations of deep learning, together at last! From Professor Gilbert Strang, acclaimed author of Introduction to Linear Algebra, comes Linear Algebra and Learning from Data, the first textbook that teaches linear algebra together with deep learning and neural nets. This readable yet rigorous textbook contains a complete course in the linear algebra and related mathematics that students need to know to get to grips with learning from data. Included are: the four fundamental subspaces, singular value decompositions, special matrices, large matrix computation techniques, compressed sensing, probability and statistics, optimization, the architecture of neural nets, stochastic gradient descent and backpropagation.

Visualizing Data Sep 06 2020 Provides information on the methods of visualizing data on the Web, along with example projects and code.

Effective Data Visualization Mar 13 2021 NOW IN FULL COLOR! Written by sought-after speaker, designer, and researcher Stephanie D. H. Evergreen, Effective Data Visualization shows readers how to create Excel charts and graphs that best communicate

their data findings. This comprehensive how-to guide functions as a set of blueprints—supported by both research and the author’s extensive experience with clients in industries all over the world—for conveying data in an impactful way. Delivered in Evergreen’s humorous and approachable style, the book covers the spectrum of graph types available beyond the default options, how to determine which one most appropriately fits specific data stories, and easy steps for building the chosen graph in Excel. Now in full color with new examples throughout, the Second Edition includes a revamped chapter on qualitative data, nine new quantitative graph types, new shortcuts in Excel, and an entirely new chapter on Sharing Your Data With the World, which provides advice on using dashboards. New from Stephanie Evergreen! The Data Visualization Sketchbook provides advice on getting started with sketching and offers tips, guidance, and completed sample sketches for a number of reporting formats. Bundle Effective Data Visualization, 2e, and The Data Visualization Sketchbook, using ISBN 978-1-5443-7178-8!

Cyber Privacy Jan 11 2021 "Chilling, eye-opening, and timely, Cyber Privacy makes a strong case for the urgent need to reform the laws and policies that protect our personal data. If your reaction to that statement is to shrug your shoulders, think again. As April Falcon Doss expertly explains, data tracking is a real problem that affects every single one of us on a daily basis." —General Michael V. Hayden, USAF, Ret., former Director of CIA and NSA and former Principal Deputy Director of National Intelligence You're being

tracked. Amazon, Google, Facebook, governments. No matter who we are or where we go, someone is collecting our data: to profile us, target us, assess us; to predict our behavior and analyze our attitudes; to influence the things we do and buy—even to impact our vote. If this makes you uneasy, it should. We live in an era of unprecedented data aggregation, and it's never been more difficult to navigate the trade-offs between individual privacy, personal convenience, national security, and corporate profits. Technology is evolving quickly, while laws and policies are changing slowly. You shouldn't have to be a privacy expert to understand what happens to your data. April Falcon Doss, a privacy expert and former NSA and Senate lawyer, has seen this imbalance in action. She wants to empower individuals and see policy catch up. In *Cyber Privacy*, Doss demystifies the digital footprints we leave in our daily lives and reveals how our data is being used—sometimes against us—by the private sector, the government, and even our employers and schools. She explains the trends in data science, technology, and the law that impact our everyday privacy. She tackles big questions: how data aggregation undermines personal autonomy, how to measure what privacy is worth, and how society can benefit from big data while managing its risks and being clear-eyed about its cost. It's high time to rethink notions of privacy and what, if anything, limits the power of those who are constantly watching, listening, and learning about us. This book is for readers who want answers to three questions: Who has your data? Why should you care? And most important, what can you do about it?

Big Data and Social Science Jun 23 2019 Both Traditional Students and Working Professionals Acquire the Skills to Analyze Social Problems. Big Data and Social Science: A Practical Guide to Methods and Tools shows how to apply data science to real-world problems in both research and the practice. The book provides practical guidance on combining methods and tools from computer science, statistics, and social science. This concrete approach is illustrated throughout using an important national problem, the quantitative study of innovation. The text draws on the expertise of prominent leaders in statistics, the social sciences, data science, and computer science to teach students how to use modern social science research principles as well as the best analytical and computational tools. It uses a real-world challenge to introduce how these tools are used to identify and capture appropriate data, apply data science models and tools to that data, and recognize and respond to data errors and limitations. For more information, including sample chapters and news, please visit the author's website.

Data Science from Scratch Jan 29 2020 Data science libraries, frameworks, modules, and toolkits are great for doing data science, but they're also a good way to dive into the discipline without actually understanding data science. In this book, you'll learn how many of the most fundamental data science tools and algorithms work by implementing them from scratch. If you have an aptitude for mathematics and some programming skills, author Joel Grus will help you get comfortable with the math and statistics at the core of data

science, and with hacking skills you need to get started as a data scientist. Today's messy glut of data holds answers to questions no one's even thought to ask. This book provides you with the know-how to dig those answers out. Get a crash course in Python Learn the basics of linear algebra, statistics, and probability—and understand how and when they're used in data science Collect, explore, clean, munge, and manipulate data Dive into the fundamentals of machine learning Implement models such as k-nearest Neighbors, Naive Bayes, linear and logistic regression, decision trees, neural networks, and clustering Explore recommender systems, natural language processing, network analysis, MapReduce, and databases

Build a Career in Data Science Aug 30 2022 Summary You are going to need more than technical knowledge to succeed as a data scientist. Build a Career in Data Science teaches you what school leaves out, from how to land your first job to the lifecycle of a data science project, and even how to become a manager. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology What are the keys to a data scientist's long-term success? Blending your technical know-how with the right "soft skills" turns out to be a central ingredient of a rewarding career. About the book Build a Career in Data Science is your guide to landing your first data science job and developing into a valued senior employee. By following clear and simple instructions, you'll learn to craft an amazing resume and ace your interviews. In this

demanding, rapidly changing field, it can be challenging to keep projects on track, adapt to company needs, and manage tricky stakeholders. You'll love the insights on how to handle expectations, deal with failures, and plan your career path in the stories from seasoned data scientists included in the book. What's inside

Creating a portfolio of data science projects
Assessing and negotiating an offer
Leaving gracefully and moving up the ladder
Interviews with professional data scientists
About the reader
For readers who want to begin or advance a data science career.

About the author
Emily Robinson is a data scientist at Warby Parker.
Jacqueline Nolis is a data science consultant and mentor.

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Storytelling with Data Jul 29 2022 Don't simply show your data—tell a story with it!
Storytelling with Data teaches you the fundamentals of data visualization and how to

communicate effectively with data. You'll discover the power of storytelling and the way to make data a pivotal point in your story. The lessons in this illuminative text are grounded in theory, but made accessible through numerous real-world examples—ready for immediate application to your next graph or presentation. Storytelling is not an inherent skill, especially when it comes to data visualization, and the tools at our disposal don't make it any easier. This book demonstrates how to go beyond conventional tools to reach the root of your data, and how to use your data to create an engaging, informative, compelling story. Specifically, you'll learn how to:

- Understand the importance of context and audience
- Determine the appropriate type of graph for your situation
- Recognize and eliminate the clutter clouding your information
- Direct your audience's attention to the most important parts of your data
- Think like a designer and utilize concepts of design in data visualization
- Leverage the power of storytelling to help your message resonate with your audience

Together, the lessons in this book will help you turn your data into high impact visual stories that stick with your audience. Rid your world of ineffective graphs, one exploding 3D pie chart at a time. There is a story in your data—Storytelling with Data will give you the skills and power to tell it!

Data Breaches Nov 20 2021 Protect Your Organization Against Massive Data Breaches and Their Consequences Data breaches can be catastrophic, but they remain mysterious because victims don't want to talk about them. In *Data Breaches*, world-renowned

cybersecurity expert Sherri Davidoff shines a light on these events, offering practical guidance for reducing risk and mitigating consequences. Reflecting extensive personal experience and lessons from the world's most damaging breaches, Davidoff identifies proven tactics for reducing damage caused by breaches and avoiding common mistakes that cause them to spiral out of control. You'll learn how to manage data breaches as the true crises they are; minimize reputational damage and legal exposure; address unique challenges associated with health and payment card data; respond to hacktivism, ransomware, and cyber extortion; and prepare for the emerging battlefield of cloud-based breaches. Understand what you need to know about data breaches, the dark web, and markets for stolen data Limit damage by going beyond conventional incident response Navigate high-risk payment card breaches in the context of PCI DSS Assess and mitigate data breach risks associated with vendors and third-party suppliers Manage compliance requirements associated with healthcare and HIPAA Quickly respond to ransomware and data exposure cases Make better decisions about cyber insurance and maximize the value of your policy Reduce cloud risks and properly prepare for cloud-based data breaches Data Breaches is indispensable for everyone involved in breach avoidance or response: executives, managers, IT staff, consultants, investigators, students, and more. Read it before a breach happens! Register your book for convenient access to downloads, updates, and/or corrections as they become available. See inside book for details.

Numbersense: How to Use Big Data to Your Advantage Sep 30 2022 Explains when to accept the data interpretations of "experts" and when to question, covering such topics as how the college ranking system works, improving fantasy sports teams, and data collection by businesses.

Big Data Jan 23 2022 New and expanded edition. An International Bestseller - Over One Million Copies Sold! Shortlisted for the Financial Times/Goldman Sachs Business Book of the Year Award. Since Aristotle, we have fought to understand the causes behind everything. But this ideology is fading. In the age of big data, we can crunch an incomprehensible amount of information, providing us with invaluable insights about the what rather than the why. We're just starting to reap the benefits: tracking vital signs to foresee deadly infections, predicting building fires, anticipating the best moment to buy a plane ticket, seeing inflation in real time and monitoring social media in order to identify trends. But there is a dark side to big data. Will it be machines, rather than people, that make the decisions? How do you regulate an algorithm? What will happen to privacy? Will individuals be punished for acts they have yet to commit? In this groundbreaking and fascinating book, two of the world's most-respected data experts reveal the reality of a big data world and outline clear and actionable steps that will equip the reader with the tools needed for this next phase of human evolution.

Winning with Data Dec 30 2019 Crest the data wave with a deep cultural shift Winning

with Data explores the cultural changes big data brings to business, and shows you how to adapt your organization to leverage data to maximum effect. Authors Tomasz Tunguz and Frank Bien draw on extensive background in big data, business intelligence, and business strategy to provide a blueprint for companies looking to move head-on into the data wave. Instrumentation is discussed in detail, but the core of the change is in the culture—this book provides sound guidance on building the type of organizational culture that creates and leverages data daily, in every aspect of the business. Real-world examples illustrate these important concepts at work: you'll learn how data helped Warby-Parker disrupt a \$13 billion monopolized market, how ThredUp uses data to process more than 20 thousand items of clothing every day, how Venmo leverages data to build better products, how HubSpot empowers their salespeople to be more productive, and more. From decision making and strategy to shipping and sales, this book shows you how data makes better business. Big data has taken on buzzword status, but there is little real guidance for companies seeking everyday business data solutions. This book takes a deeper look at big data in business, and shows you how to shift internal culture ahead of the curve. Understand the changes a data culture brings to companies Instrument your company for maximum benefit Utilize data to optimize every aspect of your business Improve decision making and transform business strategy Big data is becoming the number-one topic in business, yet no one is asking the right questions. Leveraging the full power of data requires more than good

IT—organization-wide buy-in is essential for long-term success. *Winning with Data* is the expert guide to making data work for your business, and your needs.

Big Data in Practice Jul 17 2021 The best-selling author of *Big Data* is back, this time with a unique and in-depth insight into how specific companies use big data. Big data is on the tip of everyone's tongue. Everyone understands its power and importance, but many fail to grasp the actionable steps and resources required to utilise it effectively. This book fills the knowledge gap by showing how major companies are using big data every day, from an up-close, on-the-ground perspective. From technology, media and retail, to sport teams, government agencies and financial institutions, learn the actual strategies and processes being used to learn about customers, improve manufacturing, spur innovation, improve safety and so much more. Organised for easy dip-in navigation, each chapter follows the same structure to give you the information you need quickly. For each company profiled, learn what data was used, what problem it solved and the processes put it place to make it practical, as well as the technical details, challenges and lessons learned from each unique scenario. Learn how predictive analytics helps Amazon, Target, John Deere and Apple understand their customers Discover how big data is behind the success of Walmart, LinkedIn, Microsoft and more Learn how big data is changing medicine, law enforcement, hospitality, fashion, science and banking Develop your own big data strategy by accessing additional reading materials at the end of each chapter

We Are Data Apr 25 2022 What identity means in an algorithmic age: how it works, how our lives are controlled by it, and how we can resist it Algorithms are everywhere, organizing the near limitless data that exists in our world. Derived from our every search, like, click, and purchase, algorithms determine the news we get, the ads we see, the information accessible to us and even who our friends are. These complex configurations not only form knowledge and social relationships in the digital and physical world, but also determine who we are and who we can be, both on and offline. Algorithms create and recreate us, using our data to assign and reassign our gender, race, sexuality, and citizenship status. They can recognize us as celebrities or mark us as terrorists. In this era of ubiquitous surveillance, contemporary data collection entails more than gathering information about us. Entities like Google, Facebook, and the NSA also decide what that information means, constructing our worlds and the identities we inhabit in the process. We have little control over who we algorithmically are. Our identities are made useful not for us—but for someone else. Through a series of entertaining and engaging examples, John Cheney-Lippold draws on the social constructions of identity to advance a new understanding of our algorithmic identities. We Are Data will educate and inspire readers who want to wrest back some freedom in our increasingly surveilled and algorithmically-constructed world.

Data Feminism Dec 10 2020 A new way of thinking about data science and data ethics that is informed by the ideas of intersectional feminism. Today, data science is a form of power.

It has been used to expose injustice, improve health outcomes, and topple governments. But it has also been used to discriminate, police, and surveil. This potential for good, on the one hand, and harm, on the other, makes it essential to ask: Data science by whom? Data science for whom? Data science with whose interests in mind? The narratives around big data and data science are overwhelmingly white, male, and techno-heroic. In *Data Feminism*, Catherine D'Ignazio and Lauren Klein present a new way of thinking about data science and data ethics—one that is informed by intersectional feminist thought. Illustrating data feminism in action, D'Ignazio and Klein show how challenges to the male/female binary can help challenge other hierarchical (and empirically wrong) classification systems. They explain how, for example, an understanding of emotion can expand our ideas about effective data visualization, and how the concept of invisible labor can expose the significant human efforts required by our automated systems. And they show why the data never, ever “speak for themselves.” *Data Feminism* offers strategies for data scientists seeking to learn how feminism can help them work toward justice, and for feminists who want to focus their efforts on the growing field of data science. But *Data Feminism* is about much more than gender. It is about power, about who has it and who doesn't, and about how those differentials of power can be challenged and changed.

Semantic Modeling for Data Jul 05 2020 What value does semantic data modeling offer? As an information architect or data science professional, let's say you have an abundance of the

right data and the technology to extract business gold—but you still fail. The reason? Bad data semantics. In this practical and comprehensive field guide, author Panos Alexopoulos takes you on an eye-opening journey through semantic data modeling as applied in the real world. You'll learn how to master this craft to increase the usability and value of your data and applications. You'll also explore the pitfalls to avoid and dilemmas to overcome for building high-quality and valuable semantic representations of data. Understand the fundamental concepts, phenomena, and processes related to semantic data modeling Examine the quirks and challenges of semantic data modeling and learn how to effectively leverage the available frameworks and tools Avoid mistakes and bad practices that can undermine your efforts to create good data models Learn about model development dilemmas, including representation, expressiveness and content, development, and governance Organize and execute semantic data initiatives in your organization, tackling technical, strategic, and organizational challenges

Big Data and Innovation in Tourism, Travel, and Hospitality Mar 25 2022 This book brings together multi-disciplinary research and practical evidence about the role and exploitation of big data in driving and supporting innovation in tourism. It also provides a consolidated framework and roadmap summarising the major issues that both researchers and practitioners have to address for effective big data innovation. The book proposes a process-based model to identify and implement big data innovation strategies in tourism. This

process framework consists of four major parts: 1) inputs required for big data innovation; 2) processes required to implement big data innovation; 3) outcomes of big data innovation; and 4) contextual factors influencing big data exploitation and advances in big data exploitation for business innovation.

Visual Insights Oct 08 2020 A guide to the basics of information visualization that teaches nonprogrammers how to use advanced data mining and visualization techniques to design insightful visualizations. In the age of Big Data, the tools of information visualization offer us a microscope to help us make sense of the avalanche of data available on every subject. This book offers a gentle introduction to the design of insightful information visualizations. It is the only book on the subject that teaches nonprogrammers how to use open code and open data to design insightful visualizations. Readers will learn to apply advanced data mining and visualization techniques to make sense of temporal, geospatial, topical, and network data. The book, developed for use in an information visualization MOOC, covers data analysis algorithms that enable extraction of patterns and trends in data, with chapters devoted to “when” (temporal data), “where” (geospatial data), “what” (topical data), and “with whom” (networks and trees); and to systems that drive research and development. Examples of projects undertaken for clients include an interactive visualization of the success of game player activity in World of Warcraft; a visualization of 311 number adoption that shows the diffusion of non-emergency calls in the United States; a return on

investment study for two decades of HIV/AIDS research funding by NIAID; and a map showing the impact of the HiveNYC Learning Network. Visual Insights will be an essential resource on basic information visualization techniques for scholars in many fields, students, designers, or anyone who works with data.

The Efficiency Paradox Oct 27 2019 A bold challenge to our obsession with efficiency—and a new understanding of how to benefit from the powerful potential of serendipity. Algorithms, multitasking, the sharing economy, life hacks: our culture can't get enough of efficiency. One of the great promises of the Internet and big data revolutions is the idea that we can improve the processes and routines of our work and personal lives to get more done in less time than we ever have before. There is no doubt that we're performing at higher levels and moving at unprecedented speed, but what if we're headed in the wrong direction? Melding the long-term history of technology with the latest headlines and findings of computer science and social science, *The Efficiency Paradox* questions our ingrained assumptions about efficiency, persuasively showing how relying on the algorithms of digital platforms can in fact lead to wasted efforts, missed opportunities, and, above all, an inability to break out of established patterns. Edward Tenner offers a smarter way of thinking about efficiency, revealing what we and our institutions, when equipped with an astute combination of artificial intelligence and trained intuition, can learn from the random and unexpected.

The Data Detective Nov 01 2022 From “one of the great (greatest?) contemporary popular writers on economics” (Tyler Cowen) comes a smart, lively, and encouraging rethinking of how to use statistics. Today we think statistics are the enemy, numbers used to mislead and confuse us. That’s a mistake, Tim Harford says in *The Data Detective*. We shouldn’t be suspicious of statistics—we need to understand what they mean and how they can improve our lives: they are, at heart, human behavior seen through the prism of numbers and are often “the only way of grasping much of what is going on around us.” If we can toss aside our fears and learn to approach them clearly—understanding how our own preconceptions lead us astray—statistics can point to ways we can live better and work smarter. As “perhaps the best popular economics writer in the world” (New Statesman), Tim Harford is an expert at taking complicated ideas and untangling them for millions of readers. In *The Data Detective*, he uses new research in science and psychology to set out ten strategies for using statistics to erase our biases and replace them with new ideas that use virtues like patience, curiosity, and good sense to better understand ourselves and the world. As a result, *The Data Detective* is a big-idea book about statistics and human behavior that is fresh, unexpected, and insightful.

Competition Law and Big Data Apr 13 2021 In this timely book, Beata Mäihäniemi analyses and evaluates how the characteristics of information as a good, as well as the characteristics of digital platforms, affect the application of competition law in both theory

and practice.

Business Data Science: Combining Machine Learning and Economics to Optimize, Automate, and Accelerate Business Decisions Aug 25 2019 Publisher's Note: Products purchased from Third Party sellers are not guaranteed by the publisher for quality, authenticity, or access to any online entitlements included with the product. Use machine learning to understand your customers, frame decisions, and drive value The business analytics world has changed, and Data Scientists are taking over. Business Data Science takes you through the steps of using machine learning to implement best-in-class business data science. Whether you are a business leader with a desire to go deep on data, or an engineer who wants to learn how to apply Machine Learning to business problems, you'll find the information, insight, and tools you need to flourish in today's data-driven economy. You'll learn how to:

- Use the key building blocks of Machine Learning: sparse regularization, out-of-sample validation, and latent factor and topic modeling
- Understand how use ML tools in real world business problems, where causation matters more than correlation
- Solve data science programs by scripting in the R programming language

Today's business landscape is driven by data and constantly shifting. Companies live and die on their ability to make and implement the right decisions quickly and effectively. Business Data Science is about doing data science right. It's about the exciting things being done around Big Data to run a flourishing business. It's about the precepts, principals, and

best practices that you need know for best-in-class business data science.

Data Science Aug 06 2020 A concise introduction to the emerging field of data science, explaining its evolution, relation to machine learning, current uses, data infrastructure issues, and ethical challenges. The goal of data science is to improve decision making through the analysis of data. Today data science determines the ads we see online, the books and movies that are recommended to us online, which emails are filtered into our spam folders, and even how much we pay for health insurance. This volume in the MIT Press Essential Knowledge series offers a concise introduction to the emerging field of data science, explaining its evolution, current uses, data infrastructure issues, and ethical challenges. It has never been easier for organizations to gather, store, and process data. Use of data science is driven by the rise of big data and social media, the development of high-performance computing, and the emergence of such powerful methods for data analysis and modeling as deep learning. Data science encompasses a set of principles, problem definitions, algorithms, and processes for extracting non-obvious and useful patterns from large datasets. It is closely related to the fields of data mining and machine learning, but broader in scope. This book offers a brief history of the field, introduces fundamental data concepts, and describes the stages in a data science project. It considers data infrastructure and the challenges posed by integrating data from multiple sources, introduces the basics of machine learning, and discusses how to link machine learning expertise with real-world

problems. The book also reviews ethical and legal issues, developments in data regulation, and computational approaches to preserving privacy. Finally, it considers the future impact of data science and offers principles for success in data science projects.

Thinking with Data May 27 2022 Many analysts are too concerned with tools and techniques for cleansing, modeling, and visualizing datasets and not concerned enough with asking the right questions. In this practical guide, data strategy consultant Max Shron shows you how to put the why before the how, through an often-overlooked set of analytical skills. Thinking with Data helps you learn techniques for turning data into knowledge you can use. You'll learn a framework for defining your project, including the data you want to collect, and how you intend to approach, organize, and analyze the results. You'll also learn patterns of reasoning that will help you unveil the real problem that needs to be solved. Learn a framework for scoping data projects Understand how to pin down the details of an idea, receive feedback, and begin prototyping Use the tools of arguments to ask good questions, build projects in stages, and communicate results Explore data-specific patterns of reasoning and learn how to build more useful arguments Delve into causal reasoning and learn how it permeates data work Put everything together, using extended examples to see the method of full problem thinking in action

Python for Data Analysis Jun 27 2022 Get complete instructions for manipulating, processing, cleaning, and crunching datasets in Python. Updated for Python 3.6, the second

edition of this hands-on guide is packed with practical case studies that show you how to solve a broad set of data analysis problems effectively. You'll learn the latest versions of pandas, NumPy, IPython, and Jupyter in the process. Written by Wes McKinney, the creator of the Python pandas project, this book is a practical, modern introduction to data science tools in Python. It's ideal for analysts new to Python and for Python programmers new to data science and scientific computing. Data files and related material are available on GitHub. Use the IPython shell and Jupyter notebook for exploratory computing

Learn basic and advanced features in NumPy (Numerical Python) Get started with data analysis tools in the pandas library Use flexible tools to load, clean, transform, merge, and reshape data Create informative visualizations with matplotlib Apply the pandas groupby facility to slice, dice, and summarize datasets Analyze and manipulate regular and irregular time series data Learn how to solve real-world data analysis problems with thorough, detailed examples

Advancing the Power of Learning Analytics and Big Data in Education Sep 18 2021 The term learning analytics is used in the context of the use of analytics in e-learning environments. Learning analytics is used to improve quality. It uses data about students and their activities to provide better understanding and to improve student learning. The use of learning management systems, where the activity of the students can be easily accessed, potentiated the use of learning analytics to understand their route during the learning process, help students be aware of their progress, and detect situations where students can

give up the course before its completion, which is a growing problem in e-learning environments. *Advancing the Power of Learning Analytics and Big Data in Education* provides insights concerning the use of learning analytics, the role and impact of analytics on education, and how learning analytics are designed, employed, and assessed. The chapters will discuss factors affecting learning analytics such as human factors, geographical factors, technological factors, and ethical and legal factors. This book is ideal for teachers, administrators, teacher educators, practitioners, stakeholders, researchers, academicians, and students interested in the use of big data and learning analytics for improved student success and educational environments.

Storytelling with Data May 03 2020 Influence action through data! This is not a book. It is a one-of-a-kind immersive learning experience through which you can become—or teach others to be—a powerful data storyteller. *Let's practice!* helps you build confidence and credibility to create graphs and visualizations that make sense and weave them into action-inspiring stories. Expanding upon best seller *storytelling with data's* foundational lessons, *Let's practice!* delivers fresh content, a plethora of new examples, and over 100 hands-on exercises. Author and data storytelling maven Cole Nussbaumer Knaflic guides you along the path to hone core skills and become a well-practiced data communicator. Each chapter includes: ? Practice with Cole: exercises based on real-world examples first posed for you to consider and solve, followed by detailed step-by-step illustration and explanation ? Practice

on your own: thought-provoking questions and even more exercises to be assigned or worked through individually, without prescribed solutions ? Practice at work: practical guidance and hands-on exercises for applying storytelling with data lessons on the job, including instruction on when and how to solicit useful feedback and refine for greater impact The lessons and exercises found within this comprehensive guide will empower you to master—or develop in others—data storytelling skills and transition your work from acceptable to exceptional. By investing in these skills for ourselves and our teams, we can all tell inspiring and influential data stories!

PR Technology, Data and Insights Apr 01 2020 Data, technology and insights have forever changed the public relations and corporate communications function. Failure to adapt is more a matter of willingness than inability. Now, technology, data and insights inform more meaningful objectives and elevate performance evaluation. The result is a positive return on PR investment, reduced reputational risk and optimal efficiency. By ignoring these essential assets, PR professionals risk losing executive attention and organizational investment. While "building buzz" or "breaking through the media clutter" may have been adequate measures of success in the past, the top executives who fund and evaluate corporate communications expect much more, including a quantifiable and positive return on PR investment. Leaders assume that corporate communications and PR professionals already understand the fundamentals of business, and they expect an ability to contextualize PR

objectives, outputs and outcomes in the language of business. PR Technology, Data and Insights helps communications professionals understand the purpose-built technologies, data assets and actionable insights available to them while sharing best practices to apply these assets for improved PR performance over time, versus objectives and against competitors. Using case studies from industries as varied as financial services, technology, travel, automotive and more, along with best practice examples from Adobe, Mastercard, Southwest, Ford and other world class organizations, PR Technology, Data and Insights shows professional communicators how to optimize technology, lead with data, quantify PR's ability to convert public relations outputs to business outcomes, and deliver insights that empower executive decision-making.

Data Smart Dec 22 2021 Data Science gets thrown around in the press like it's magic. Major retailers are predicting everything from when their customers are pregnant to when they want a new pair of Chuck Taylors. It's a brave new world where seemingly meaningless data can be transformed into valuable insight to drive smart business decisions. But how does one exactly do data science? Do you have to hire one of these priests of the dark arts, the "data scientist," to extract this gold from your data? Nope. Data science is little more than using straight-forward steps to process raw data into actionable insight. And in Data Smart, author and data scientist John Foreman will show you how that's done within the familiar environment of a spreadsheet. Why a spreadsheet? It's comfortable! You get to look at the

data every step of the way, building confidence as you learn the tricks of the trade. Plus, spreadsheets are a vendor-neutral place to learn data science without the hype. But don't let the Excel sheets fool you. This is a book for those serious about learning the analytic techniques, the math and the magic, behind big data. Each chapter will cover a different technique in a spreadsheet so you can follow along: Mathematical optimization, including non-linear programming and genetic algorithms Clustering via k-means, spherical k-means, and graph modularity Data mining in graphs, such as outlier detection Supervised AI through logistic regression, ensemble models, and bag-of-words models Forecasting, seasonal adjustments, and prediction intervals through monte carlo simulation Moving from spreadsheets into the R programming language You get your hands dirty as you work alongside John through each technique. But never fear, the topics are readily applicable and the author laces humor throughout. You'll even learn what a dead squirrel has to do with optimization modeling, which you no doubt are dying to know.

Python for Finance Nov 08 2020 The financial industry has recently adopted Python at a tremendous rate, with some of the largest investment banks and hedge funds using it to build core trading and risk management systems. Updated for Python 3, the second edition of this hands-on book helps you get started with the language, guiding developers and quantitative analysts through Python libraries and tools for building financial applications and interactive financial analytics. Using practical examples throughout the book, author

Yves Hilpisch also shows you how to develop a full-fledged framework for Monte Carlo simulation-based derivatives and risk analytics, based on a large, realistic case study. Much of the book uses interactive IPython Notebooks.

The Data Gaze Aug 18 2021 A significant new way of understanding contemporary capitalism is to understand the intensification and spread of data analytics. This text is about the powerful promises and visions that have led to the expansion of data analytics and data-led forms of social ordering. It is centrally concerned with examining the types of knowledge associated with data analytics and shows that how these analytics are envisioned is central to the emergence and prominence of data at various scales of social life. This text aims to understand the powerful role of the data analytics industry and how this industry facilitates the spread and intensification of data-led processes. As such, *The Data Gaze* is concerned with understanding how data-led, data-driven and data-reliant forms of capitalism pervade organisational and everyday life. Using a clear theoretical approach derived from Foucault and critical data studies the text develops the concept of the data gaze and shows how powerful and persuasive it is. It's an essential and subversive guide to data analytics and data capitalism.