Open Source Lab How To Build Your Own Hardware And Reduce Research Costs

Open Source has become a buzzword synonymous with growth and change in computing. This book examines the Open Source movement, what's worked and why, and explains the technology to the mainstream investor and manager looking to replicate the successes of the Open Source movement.

CIO magazine, launched in 1987, provides business technology leaders with award-winning analysis and insight on information technology trends and a keen understanding of IT's role in achieving business goals.

From the Internet's infrastructure to operating systems like GNU/Linux, the open source movement comprises some of the greatest accomplishments in computing over the past quarter century. Its story embraces technological advances, unprecedented global collaboration, and remarkable tools for facilitating distributed development. The evolution of the Internet enabled an enormous expansion of open development, allowing developers to exchange information and ideas without regard to constraints of space, time, or national boundary. The movement has had widespread impact on education and government, as well as historic cultural and commercial repercussions. Part I discusses key open source applications, platforms, and technologies used in open development. Part II explores social issues ranging from demographics and psychology to legal and economic matters. Part III discusses the Free Software Foundation, open source in the public sector (government and education), and future prospects.

Describes the legal implications of open source and free software licensing and provides an explanation of what an open source software license actually is, and how to draft one for personal use.

6th International IFIP WG 2.13 Conference on Open Source Systems, OSS 2010, Notre Dame, IN, USA, May 30 - June 2, 2010, Proceedings

How to Build Your Own Hardware and Reduce Research Costs

Open Source Software: New Horizons

Imagining Justice for Syria

Grassroots Technology in the Digital Era

Concepts, Methodologies, Tools, and Applications

Understanding Open Source and Free Software Licensing

This provocative book argues that it is high time the practice of architecture moved away from the ego-fuelled grand visions of starchitects to a networked, collaborative, inclusive model inspired by 21st-century trends such as crowd-sourcing, open access and mass customization. But how can collaborative design avoid becoming design-by-committee? Carlo Ratti and Matthew Claudel deftly navigate this and other vital questions, considering along the way the applications of open-source architecture not only conceptually, but also in practice. Open Source Architecture is a rallying cry to students and open-minded professionals seeking new perspectives on a profession that the authors passionately believe to be moribund.

The second edition of this best-selling Python book (over 500,000 copies sold!) uses Python 3 to teach even the technically uninclined how to write programs that do in minutes what would take hours to do by hand. There is no prior programming experience required and the book is loved by liberal arts majors and geeks alike. If you've ever spent hours renaming files or updating hundreds of spreadsheet cells, you know how tedious tasks like these can be. But what if you could have your computer do them for you? In this fully revised second edition of the best-selling classic Automate the Boring Stuff with Python, you'll learn how to use Python to write programs that do in minutes what would take you hours to do by hand--no prior programming experience required. You'll learn the basics of Python and explore Python's rich library of modules for performing specific tasks, like scraping data off websites, reading PDF and Word documents, and automating clicking and typing tasks. The second edition of this international fan favorite includes a brand-new chapter on input validation, as well as tutorials on automating Gmail and Google Sheets, plus tips on automatically updating CSV files. You'll learn how to create programs that effortlessly perform useful feats of automation to: • Search for text in a file or across multiple files • Create, update, move, and rename files and folders • Search the Web and download online content • Update and format data in Excel spreadsheets of any size • Split, merge, watermark, and encrypt PDFs • Send email responses and text notifications • Fill out online forms Step-by-step instructions walk you through each program, and updated practice projects at the end of each chapter challenge you to improve those programs and use your newfound skills to automate similar tasks. Don't spend your time doing work a well-trained monkey could do. Even if you've never written a line of code, you can make your computer do the grunt work. Learn how in Automate the Boring Stuff with Python, 2nd Edition.

Open-source development has been around for decades, with software developers co-creating tools and information systems for widespread use. With the development of open-source software such as learning objects, interactive articles, and educational games, the open-source values and practices have slowly been adopted by those in education sectors. Open-Source Technologies for Maximizing the Creation, Deployment, and Use of Digital Resources and Information highlights the global importance of open-source technologies in higher and general education. Written for those working in education and professional training, this collection of research explores a variety of issues related to open-source in education, such as its practical underpinnings, requisite cultural competence in global open-source, strategies for employing open-source in online learning and research, the design of an open-source networking laboratory, and other endeavors. It aims to enhance workplace practices in harnessing open-source resources in a time of budgetary frugality.

By closing the gap between general programming books and those on laboratory automation, this timely book makes accessible to every laboratory technician or scientist what has traditionally been restricted to highly specialized professionals. Following the idea of "learning by doing", the book provides an introduction to scripting using AutoIt, with many workable examples based on real-world scenarios. A large portion of the book tackles the traditionally hard problem of instrument synchronization, including remote, web-based synchronization. Automated result processing, database operation, and creation of graphical user interfaces are also examined. Readers of this book can immediately profit from the new knowledge in terms of both increased efficiency and reduced costs in laboratory operation. Above all, laboratory technicians and scientists will learn that they are free to choose whatever equipment they desire when configuring an automated analytical setup, regardless of manufacturers suggested specifications.

The Future of a Radical Price

Transforming People Teams to Drive Business Performance

R for Data Science

Automate the Boring Stuff with Python, 2nd Edition

Import, Tidy, Transform, Visualize, and Model Data

Joris Laarman Lab

Open Source Agriculture

This book covers the developing field of open source research and discusses how to use social media, satellite imagery, big data analytics, and user-generated content to strengthen human rights research and investigations. The topics are presented in an accessible format through extensive use of images and data visualization (éditeur).

A complete guide to investing in and managing a portfolio of mortgage- and asset-backed securities Mortgage- and asset-backed securities are not as complex as they might seem. In fact, all of the information, financial models, and software needed to successfully invest in and manage a portfolio of these securities are available to the investment professional through open source software. Investing in Mortgage and Asset-Backed Securities + Website shows you how to achieve this goal. The book draws entirely on publicly available data and open source software to construct a complete analytic framework for investing in these securities. The analytic models used throughout the book either exist in the quantlib library, as an R package, or are programmed in R and incorporated into the analytic framework used. Examines the valuation of fixed-income securities—metrics, valuation framework, and return analysis Covers residential mortgage-backed securities—security cash flow, mortgage dollar roll, adjustable rate mortgages, and private label MBS Discusses prepayment modeling and the valuation of mortgage credit Presents mortgage-backed securities valuation techniques—pass-through valuation and interest rate models Engaging and informative, this book skillfully shows you how to build, rather than buy, models and proprietary analytical platforms that will allow you to invest in mortgage- and asset-backed securities.

This book constitutes the refereed proceedings of the 6th International IFIP WG 2.13 Conference on Open Source Systems, OSS 2010, held in Notre Dame, IN, USA, in May/June 2010. The 23 revised full papers presented together with 17 short papers, 5 workshop abstracts and 4 panel descriptions were carefully reviewed and selected from 51 submissions. The papers reflect the international communities of active OSS researchers and present a broad range of perspectives on open source systems ranging from software engineering through organizational issues to law.

An exploration of why we play video games despite the fact that we are almost certain to feel unhappy when we fail at them. We may think of video games as being "fun," but in The Art of Failure, Jesper Juul claims that this is almost entirely mistaken. When we play video games, our facial expressions are rarely those of happiness or bliss. Instead, we frown, grimace, and shout in frustration as we lose, or die, or fail to advance to the next level. Humans may have a fundamental desire to succeed and feel competent, but game players choose to engage in an activity in which they are nearly certain to fail and feel incompetent. So why do we play video games even though they make us unhappy? Juul examines this paradox. In video games, as in tragic works of art, literature, theater, and cinema, it seems that we want to experience unpleasantness even if we also dislike it. Reader or audience reaction to tragedy is often explained as catharsis, as a purging of negative emotions. But, Juul points out, this doesn't seem to be the case for video game players. Games do not purge us of unpleasant emotions; they produce them in the first place. What, then, does failure in video game playing do? Juul argues that failure in a game is unique in that when you fail in a game, you (not a character) are in some way inadequate. Yet games also motivate us to play more, in order to escape that inadequacy, and the feeling of escaping failure (often by improving skills) is a central enjoyment of games. Games, writes Juul, are the art of failure: the singular art form that sets us up for failure and allows us to experience it and experiment with it. The Art of Failure is essential reading for anyone interested in video games, whether as entertainment, art, or education.

Getting Started with 3D Printing, Arduino, and Wearable Tech

Open-Source Technologies for Maximizing the Creation, Deployment, and Use of Digital Resources and Information

Laboratory Manual for Introductory Geology

Fundamentals of Data Visualization

Create, Share, and Save Money Using Open-Source Projects

with Applications in R

The Art of Failure

In 2004/5, over half of IT professionals will be looking at open source, most for the first time. This book provides key tools for System administrators, Network Administrators, IT project managers, and consultants who must evaluate and deploy open source software. This book details open source successes so far, explains which scenarios are the most realistic opportunities now, then gives the details needed to select these solutions, adopt the best tools and practices, introduce them to an organization, implement and manage them. The IT professional can use this book to review opportunities in their organization, evaluate components such as Apache, Linux, and OpenOffice against systems they know, and follow up in detail on their specific interests here and through referred resources. *Deployment scenarios categorized by function and industry *Rules of thumb on where and when open source software is or is not the right choice *Roadmaps for deployment in terms of the components of open source

The online economy offers challenges to traditional businesses as well as incredible opportunities. Chris Anderson makes the compelling case that in many instances businesses can succeed best by giving away more than they charge for. Known as "Freemium," this combination of free and paid is emerging as one of the most powerful digital business models. In Free, Chris Anderson explores this radical idea for the new global economy and demonstrates how it can be harnessed for the benefit of consumers and businesses alike. In the twenty-first century, Free is more than just a promotional gimmick: It's a business strategy that is essential to a company's successful future. Download the audiobook of Free for free! Details inside the book.

Freely available source code, with contributions from thousands of programmers around the world: this is the spirit of the software revolution known as Open Source. Open Source has grabbed the computer industry's attention. Netscape has opened the source code to Mozilla; IBM supports Apache; major database vendors haved ported their products to Linux. As enterprises realize the power of the open-source development model, Open Source is becoming a viable mainstream alternative to commercial software.Now in Open Sources, leaders of Open Source come together for the first time to discuss the new vision of the software industry they have created. The essays in this volume offer insight into how the Open Source movement works, why it succeeds, and where it is going.For programmers who have labored on open-source projects, Open Sources is the new gospel: a powerful vision from the movement's spiritual leaders. For businesses integrating open-source software into their enterprise, Open Sources reveals the mysteries of how open development builds better software, and how businesses can leverage freely available software for a competitive business advantage.The contributors here have been the leaders in the open-source arena: Brian Behlendorf (Apache) Kirk McKusick (Berkeley Unix) Tim O'Reilly (Publisher, O'Reilly & Associates) Bruce Perens (Debian Project, Open Source Initiative) Tom Paquin and Jim Hamerly (mozilla.org, Netscape) Eric Raymond (Open Source Initiative) Richard Stallman (GNU, Free Software Foundation, Emacs) Michael Tiemann (Cygnus Solutions) Linus Torvalds (Linux) Paul Vixie (Bind) Larry Wall (Perl) This book explains why the majority of the Internet's servers use open- source technologies for everything from the operating system to Web serving and email. Key technology products developed with open-source software have overtaken and surpassed the commercial efforts of billion dollar companies like Microsoft and IBM to dominate software markets. Learn the inside story of what led Netscape to decide to release its source code using the open-source mode. Learn how Cygnus Solutions builds the world's best compilers by sharing the source code. Learn why venture capitalists are eagerly watching Red Hat Software, a company that gives its key product -- Linux -- away.For the first time in print, this book presents the story of the open- source phenomenon told by the people who created this movement.Open Sources will bring you into the world of free software and show you the revolution.

The pervasiveness of and universal access to modern Information and Communication Technologies has enabled a popular new paradigm in the dissemination of information, art, and ideas. Now, instead of relying on a finite number of content providers to control the flow of information, users can generate and disseminate their own content for a wider audience. Open Source Technology: Concepts, Methodologies, Tools, and Applications investigates examples and methodologies in user-generated and freely-accessible content available through electronic and online media. With applications in education, government, entertainment, and more, the technologies explored in these volumes will provide a comprehensive reference for web designers, software developers, and practitioners in a wide variety of fields and disciplines.

Free

Technology and Policy

A Primer on Making Informative and Compelling Figures

Additive Manufacturing Technologies and Applications

OpenIntro Statistics

An Introduction to Statistical Learning

An Essay on the Pain of Playing Video Games

The popular first edition was one of the first books available on development and implementation of open source software using CVS. The second edition explains how CVS affects the architecture and design of applications, and has been enhanced with more value-added material covering strategies, third-party tools, scalability, client access limits, and overall server administration for CVS.

Learn how to use R to turn raw data into insight, knowledge, and understanding. This book introduces you to R, RStudio, and the tidyverse, a collection of R packages designed to work together to make data science fast, fluent, and fun. Suitable for readers with no previous programming experience, R for Data Science is designed to get you doing data science as quickly as possible. Authors Hadley Wickham and Garrett Grolemund guide you through the steps of importing, wrangling, exploring, and modeling your data and communicating the results. You'll get a complete, big-picture understanding of the data science cycle, along with basic tools you need to manage the details. Each section of the book is paired with exercises to help you practice what you've learned along the way. You'll learn how to: Wrangle—transform your datasets into a form convenient for analysis Program—learn powerful R tools for solving data problems with greater clarity and ease Explore—examine your data, generate hypotheses, and quickly test them Model—provide a low-dimensional summary that captures true "signals" in your dataset Communicate—learn R Markdown for integrating prose, code, and results

Penetration Tester's Open Source Toolkit, Third Edition, discusses the open source tools available to penetration testers, the ways to use them, and the situations in which they apply. Great commercial penetration testing tools can be very expensive and sometimes hard to use or of questionable accuracy. This book helps solve both of these problems. The open source, no-cost penetration testing tools presented do a great job and can be modified by the student for each situation. This edition offers instruction on how and in which situations the penetration tester can best use them. Real-life scenarios support and expand upon explanations throughout. It also presents core technologies for each type of testing and the best tools for the job. The book consists of 10 chapters that covers a wide range of topics such as reconnaissance; scanning and enumeration; client-side attacks and human weaknesses; hacking database services; Web server and Web application testing; enterprise application testing; wireless penetrating testing; and building penetration test labs. The chapters also include case studies where the tools that are discussed are applied. New to this edition: enterprise application testing, client-side attacks and updates on Metasploit and Backtrack. This book is for people who are interested in penetration testing or professionals engaged in penetration testing. Those working in the areas of database, network, system, or application administration, as well as architects, can gain insights into how penetration testers perform testing in their specific areas of expertise and learn what to expect from a penetration test. This book can also serve as a reference for security or audit professionals. Details current open source penetration testing tools Presents core technologies for each type of testing and the best tools for the job New to this edition: Enterprise application testing, client-side attacks and updates on Metasploit and Backtrack

Developed by three experts to coincide with geology lab kits, this laboratory manual provides a clear and cohesive introduction to the field of geology. Introductory Geology is designed to ease new students into the often complex topics of physical geology and the study of our planet and its makeup. This text introduces readers to the various uses of the scientific method in geological terms. Readers will encounter a comprehensive yet straightforward style and flow as they journey through this text. They will understand the various spheres of geology and begin to master geological outcomes which derive from a growing knowledge of the tools and subjects which this text covers in great detail.

The New Shop Class

Python for the Lab

Open Source Technology: Concepts, Methodologies, Tools, and Applications

Proceedings of the 14th International Conference on Remote Engineering and Virtual Instrumentation REV 2017, held 15-17 March 2017, Columbia University, New York, USA

Clinical Engineering Handbook

CIO Magazine

Open Source

"The situation in Syria poses an acute-some might say existential-challenge to the international community's commitment to justice and accountability. It also marks the abject failure of the international system of peace and security erected in the post-World War II period. The Security Council has been almost entirely incapacitated by the propensity of Russia to wield its veto against nearly every coercive measure of any consequence, including legal accountability, that might be imposed on the regime of Syrian President Bashar Al-Assad. As a result, other actors, within and outside of the United Nations, have endeavored to find inventive ways around this geopolitical impasse. This forced creativity has generated a number of innovative institutions, legal arguments, and investigative techniques aimed at advancing justice and accountability for Syria, wherever possible. This book catalogues the many obstacles to this pursuit of justice for Syria and analyzes ways today's justice entrepreneurs have worked to find paths around them. The book's subtitle-Water Always Finds Its Way-reflects this idea that the quest for justice is inexorable. Just as water eventually finds its way through cracks and around obstacles, even if at a trickle, so too will justice. Virtually every international crime that forms part of the international penal code-a mélange of customary international law and treaty provisions-has been committed in and around Syria. The Syrian people have witnessed and been subjected to deliberate, indiscriminate, and disproportionate attacks; the misuse of conventional, unconventional, and improvised weapon systems; industrial-grade custodial abuses in a vast network of formal and informal prisons; unrelenting siege warfare; the denial of humanitarian aid and what appears to be the deliberate use of starvation as a weapon of war; sexual violence, including the sexual enslavement of Yezidi women and girls trafficked from Iraq and the sexual torture of detained men and boys; and the intentional destruction of irreplaceable cultural property. Thousands of Syrians are missing, many of them victims of enforced disappearances. Even children are not spared. The long-standing taboo against the use of chemical weapons has been repeatedly flouted in ways that constitute a double violation of IHL: the use of a prohibited weapon to target civilians. And, the sectarian nature of the violence has raised the specter of genocide against ethno-religious minorities. Indeed, then-Secretary of State John Kerry announced in 2016 that ISIL was committing genocide against a number of minority groups in Syria and Iraq. Violence in the region has contributed to the biggest exodus of refugees since World War II"-- Furniture generated by smart algorithms, the first fully functional 3-D printed steel bridge, and a 3-D printable chair that can be downloaded from the Internetthese are but a few examples of the ingenious oeuvre of Dutch designer and inventor Joris Laarman (b. 1979), who works at the intersection of

design, art and engineering. Part of the recent high-profile Dutch design movement, Laarman quickly set himself apart from his peers with the Heat Wave Radiator, which erases the lines between the functional and the decorative. Quickly embracing digital technologies and applying them to the traditional field of design, Laarman has produced instant icons such as the Bone Chair designs, which harnesses a computer algorithm to mimic bone growth for the form of the designs. He has also bridged the distance between digital technology and craftsmanship with his Makerchair, downloadable as an open-source design. Abolishing the distinctions between natural and manmade, Laarmans work opens a new avenue for the future of design. In parallel with the touring exhibition, this handsome hardcover catalog with over 300 color illustrations goes far beyond the exhibition, revealing Laarmans process, his studio and numerous designs in office, home and workshop settings. Flowing throughout the book are informative project descriptions, a statement from the LAB and assorted essays. The American museum tour includes the Cooper Hewitt, NY (2017), the High Museum, Atlanta, and MFA, Houston (201718).

The OpenIntro project was founded in 2009 to improve the quality and availability of education by producing exceptional books and teaching tools that are free to use and easy to modify. We feature real data whenever possible, and files for the entire textbook are freely available at openintro.org. Visit our website, openintro.org. We provide free videos, statistical software labs, lecture slides, course management tools, and many other helpful resources.

Doing Meta-Analysis with R: A Hands-On Guide serves as an accessible introduction on how meta-analyses can be conducted in R. Essential steps for meta-analysis are covered, including calculation and pooling of outcome measures, forest plots, heterogeneity diagnostics, subgroup analyses, meta-regression, methods to control for publication bias, risk of bias assessments and plotting tools. Advanced but highly relevant topics such as network meta-analysis, multi-three-level meta-analyses, Bayesian meta-analysis approaches and SEM meta-analysis are also covered. A companion R package, dmetar, is introduced at the beginning of the guide. It contains data sets and several helper functions for the meta and metafor package used in the guide. The programming and statistical background covered in the book are kept at a non-expert level, making the book widely accessible. Features ▯ Contains two introductory chapters on how to set up an R environment and do basic imports/manipulations of meta-analysis data, including exercises ▯ Describes statistical concepts clearly and concisely before applying them in R ▯ Includes step-by-step guidance through the coding required to perform meta-analyses, and a companion R package for the book

Digital Witness

College Physics

Financial Modeling with R and Open Source Analytics

Investing in Mortgage-Backed and Asset-Backed Securities, + Website

Voices from the Open Source Revolution

Redefining HR

Practical Laboratory Automation

In these times of change and disruption, HR must adapt, fast. But how can HR professionals critically assess their current processes and activities to identify what areas they need to think differently about in order to drive business results? This book provides the answers to enable all aspects of the people function to perform to their full potential. Redefining HR is a refreshing take on the evolution of the field of Human Resources and People Operations. It's an in-depth guide to the fundamental components of modern HR, and provides a tangible framework of progressive ideas and practices for HR practitioners, people leaders, and business executives. This is not a theoretical examination of HR. This is a book for practitioners, with insights from people professionals at the leading edge of HR's transformation from companies including Hubspot, Reddit, Stripe, Mastercard, Eventbrite, VaynerMedia, Asana. Written by a leading innovator in the HR industry, this book illuminates new perspectives and approaches for rethinking recruitment, talent management, performance and reward to save time, reduce costs and achieve greater business success. It covers key HR practices including diversity and inclusion, people analytics, learning and development (L&D) and employee experience and is supported by global case studies from organizations including Siemens, Upwork, CVS, Schneider Electric, Delivery Hero, and more. Redefining HR is an essential resource for all HR professionals business leaders wanting to create an exceptional people management function.

Clinical Engineering Handbook, Second Edition, covers modern clinical engineering topics, giving experienced professionals the necessary skills and knowledge for this fast-evolving field. Featuring insights from leading international experts, this book presents traditional practices, such as healthcare technology management, medical device service, and technology application. In addition, readers will find valuable information on the newest research and groundbreaking developments in clinical engineering, such as health technology assessment, disaster preparedness, decision support systems, mobile medicine, and prospects and guidelines on the future of clinical engineering. As the biomedical engineering field expands throughout the world, clinical engineers play an increasingly important role as translators between the medical, engineering and business professions. In addition, they influence procedures and policies at research facilities, universities, and in private and government agencies. This book explores their current and continuing reach and its importance. Presents a definitive, comprehensive, and up-to-date resource on clinical engineering Written by worldwide experts with ties to IFMBE, IUPESM, Global CE Advisory Board, IEEE, ACCE, and more Includes coverage of new topics, such as Health Technology Assessment (HTA), Decision Support Systems (DSS), Mobile Apps, Success Stories in Clinical Engineering, and Human Factors Engineering

Digital Forensics with Open Source Tools is the definitive book on investigating and analyzing computer systems and media using open source tools. The book is a technical procedural guide, and explains the use of open source tools on Mac, Linux and Windows systems as a platform for performing computer forensics. Both well-known and novel forensic methods are demonstrated using command-line and graphical open source computer forensic tools for examining a wide range of target systems and artifacts. Written by world-renowned forensic practitioners, this book uses the most current examination and analysis techniques in the field. It consists of 9 chapters that cover a range of topics such as the open source examination platform; disk and file system analysis; Windows systems and artifacts; Linux systems and artifacts; Mac OS X systems and artifacts; Internet artifacts; and automating analysis and extending capabilities. The book lends itself to use by students and those entering the field who do not have means to purchase new tools for different investigations. This book will appeal to forensic practitioners from areas including incident response teams and computer forensic investigators; forensic technicians from legal, audit, and consulting firms; and law enforcement agencies. Written by world-renowned forensic practitioners Details core concepts and techniques of forensic file system analysis Covers analysis of artifacts from the Windows, Mac, and Linux operating systems

Effective visualization is the best way to communicate information from the increasingly large and complex datasets in the natural and social sciences. But with the increasing power of visualization software today, scientists, engineers, and business analysts often have to navigate a bewildering array of visualization choices and options. This practical book takes you through many commonly encountered visualization problems, and it provides guidelines on how to turn large datasets into clear and compelling figures. What visualization type is best for the story you want to tell? How do you make informative figures that are visually pleasing? Author Claus O. Wilke teaches you the elements most critical to successful data visualization. Explore the basic concepts of color as a tool to highlight, distinguish, or represent a value Understand the importance of redundant coding to ensure you provide key information in multiple ways Use the book's visualizations directory, a graphical guide to commonly used types of data visualizations Get extensive examples of good and bad figures Learn how to use figures in a document or report and how employ them effectively to tell a compelling story

The Business and Economics of Linux and Open Source

Practical Programming for Total Beginners

Open Source Development with CVS

A Hands-On Guide

Online Engineering & Internet of Things

Open-Source Lab

Building Open Source Hardware

`This book is a printed edition of the Special Issue "Additive Manufacturing Technologies and Applications" that was published in Technologies`

`An Introduction to Statistical Learning provides an accessible overview of the field of statistical learning, an essential toolset for making sense of the vast and complex data sets that have emerged in fields ranging from biology to finance to marketing to astrophysics in the past twenty years. This book presents some of the most important modeling and prediction techniques, along with relevant applications. Topics include linear regression, classification, resampling methods, shrinkage approaches, tree-based methods, support vector machines, clustering, and more. Color graphics and real-world examples are used to illustrate the methods presented. Since the goal of this textbook is to facilitate the use of these statistical learning techniques by practitioners in science, industry, and other fields, each chapter contains a tutorial on implementing the analyses and methods presented in R, an extremely popular open source statistical software platform. Two of the authors co-wrote The Elements of Statistical Learning (Hastie, Tibshirani and Friedman, 2nd edition 2009), a popular reference book for statistics and machine learning researchers. An Introduction to Statistical Learning covers many of the same topics, but at a level accessible to a much broader audience. This book is targeted at statisticians and non-statisticians alike who wish to use cutting-edge statistical learning techniques to analyze their data. The text assumes only a previous course in linear regression and no knowledge of matrix algebra.`

`A guide to designing and manufacturing open source hardware covers such topics as creating derivatives of existing projects, using source files, moving from prototype to commercial production, and writing documentation for other hardware hackers.`

`This Palgrave Pivot employs the concept of open source agriculture as a new social movement, which not only advocates a specific agenda but also creates technological products under a unique technology development model. The book brings together social movement and technology theory to examine it through two in-depth case studies of open source agricultural communities. This allows for the tracing of values and interests coded within the technological artefacts the communities produce, as well as their development processes. Critical theory of technology is further applied to examine the broader political economy of the development model.`

`Using Open Source Information for Human Rights Investigation, Documentation, and Accountability`

`DIY Manufacturing for Hackers and Makers`

`Open Sources`

`Made Easy with AutoIt`

`Digital Forensics with Open Source Tools`

`Open Source Software: Implementation and Management`

`Penetration Tester's Open Source Toolkit`

The New Shop Class connects the worlds of the maker and hacker with that of the scientist and engineer. If you are a parent or educator or a budding maker yourself, and you feel overwhelmed with all of the possible technologies, this book will get you started with clear discussions of what open source technologies like 3D printers, Arduinos, robots and wearable tech can really do in the right hands. Written by real "rocket scientist" Joan Horvath, author of Mastering 3D Printing, and 3D printing expert Rich Cameron (AKA whosawhatsis), The New Shop Class is a friendly, down-to-earth chat about how hands-on making things can lead to a science career. Get practical suggestions about how to use technologies like 3D printing, Arduino, and simple electronics Learn how to stay a step ahead of the young makers in your life and how to encourage them in maker activities Discover how engineers and scientists got their start, and how their mindsets mirror that of the maker

Open-Source Lab: How to Build Your Own Hardware and Reduce Scientific Research Costs details the development of the free and open-source hardware revolution. The combination of open-source 3D printing and microcontrollers running on free software enables scientists, engineers, and lab personnel in every discipline to develop powerful research tools at unprecedented low costs. After reading Open-Source Lab, you will be able to: Lower equipment costs by making your own hardware Build open-source hardware for scientific research Actively participate in a community in which scientific results are more easily replicated and cited Numerous examples of technologies and the open-source user and developer communities that support them Instructions on how to take advantage of digital design sharing Explanations of Arduinos and RepRaps for scientific use A detailed guide to open-source hardware licenses and basic principles of intellectual property

The courageous acts of whistleblowing that inspired the world over the past few years have changed our perception of surveillance and control in today's information society. But what are the wider effects of whistleblowing as an act of dissent on politics, society, and the arts? How does it contribute to new courses of action, digital tools, and contents? This urgent intervention based on the work of Berlin's Disruption Network Lab examines this growing phenomenon, offering interdisciplinary pathways to empower the public by investigating whistleblowing as a developing political practice that has the ability to provoke change from within.

This book discusses online engineering and virtual instrumentation, typical working areas for today's engineers and inseparably connected with areas such as Internet of Things, cyber-physical systems, collaborative networks and grids, cyber cloud technologies, and service architectures, to name just a few. It presents the outcomes of the 14th International Conference on Remote Engineering and Virtual Instrumentation (REV2017), held at Columbia University in New York from 15 to 17 March 2017. The conference addressed fundamentals, applications and experiences in the field of online engineering and virtual instrumentation in the light of growing interest in and need for teleworking, remote services and collaborative working environments as a result of the globalization of education. The book also discusses guidelines for education in university-level courses for these topics.

Exposing Systems of Power and Injustice

Open Source Architecture

Whistleblowing for Change

Open-source Lab

Doing Meta-Analysis with R

`Python for the Lab is the first book covering how to develop instrumentation software. It is ideal for researchers willing to automatize their setups and bring their experiments to the next level. The book is the product of countless workshops at different universities, and a carefully design pedagogical strategy. With an easy to follow and task-oriented design, the book uncovers all the best practices in the field. It also shows how to design code for long-term maintainability, opening the doors of fruitful collaboration among researchers from different labs.`

`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. Live a more sustainable and economical life using open-source technology! Designed for beginning hobbyists and makers, this engaging guide is filled with ways to save money by making use of free and open-source technologies on a wide and impressive range of products. Written by a leader in the field of open-source technology, the book reveals the potential of at-home manufacturing and recycling projects?and even how to score free big-ticket items, including housing and electricity. All the projects have big money saving in mind, but also big fun! Create, Share, and Save Money Using Open-Source Projects lays out the many ways in which you can employ these resources on a small scale to live a more economical and sustainable lifestyle. You'll find tons of DIY projects that demonstrate how to use open-source software and hardware to save money on: Digital photographs and videos Music, software, and instruments Scientific equipment Paper and audio books Maps and GIS data Patterns for clothing Security systems Cars Electricity [Bob frowns on "and much more."`