

## **Livelessons Working With Big Data**

More than 7.5 Hours of Video Instruction Overview Nearly every company in the world is evaluating its digital strategy and looking for ways to capitalize on the promise of digitization. Big data analytics and machine learning are central to this strategy. Understanding the fundamentals of data processing and artificial intelligence is becoming required knowledge for executives, digital architects, IT administrators, and operational telecom (OT) professionals in nearly every industry. In Data Analytics and Machine Learning Fundamentals LiveLessons , experienced CCIEs Robert Barton and Jerome Henry provide more than 7 1/2 hours of personal instruction exploring the principles of big data analytics, supervised learning, unsupervised learning, and neural networks. In addition to delving into the fundamental concepts, Barton and Henry address sample big data and machine learning use cases in different industries and present demos featuring the most common tools (such as Hadoop, TensorFlow, Matlab/Octave, R, and Python) in various fields used by data scientists and researchers. At the conclusion of this video course, you will be armed with knowledge and application skills required to become proficient in articulating big data analytics and machine learning principles and possibilities. Skill Level Beginner to intermediate data analytics/machine learning knowledge Learn How To \* Understand how static and real-time streaming data is collected, analyzed, and used \* Understand the key tools and methods that enable machines to learn and mimic human thinking \* Bring together unstructured data in preparation for analysis and visualization \* Compare and contrast the various big data architectures \* Apply supervised learning/linear regression, data fitting, and reinforcement learning to machines to yield the information results you're looking for \* Apply classification techniques to machine learning to better analyze your data \* Exploit the benefits of unsupervised learning to glean data you didn't even know you were looking for \* Understand how artificial neural networks (ANNs) perform deep learning with surprising (and useful) results \* Apply principal components analysis (PCA) to improve the management of data analysis \* Understand the key approaches to implementing machine learning on real systems and the considerations you must make when undertaking a machine learning project Who Should Take This Course \* Anyone who wants to learn about machine learni...

The Definitive, Up-to-Date Guide to Digital Forensics The rapid proliferation of cyber crime is increasing the demand for digital forensics experts in both law enforcement and in the private sector. In Digital Archaeology, expert practitioner Michael Graves has written the most thorough, realistic, and up-to-date guide to the principles and techniques of modern digital forensics. Graves begins by providing a solid understanding of the legal underpinnings of and critical laws affecting computer forensics, including key principles of evidence and case law. Next, he explains how to systematically and thoroughly investigate computer systems to unearth crimes or other misbehavior, and back it up with evidence that will stand up in court. Drawing on the analogy of archaeological research, Graves explains each key tool and method investigators use to reliably uncover hidden information in digital systems. His detailed demonstrations often include the actual syntax of command-line utilities. Along the way, he presents exclusive coverage of facilities management, a full chapter on the crucial topic of first response to a digital crime scene, and up-to-the-minute coverage of investigating evidence in the cloud. Graves concludes by presenting coverage of important professional and business issues associated with building a career in digital forensics, including current licensing and certification requirements. Topics Covered Include Acquiring and analyzing data in ways consistent with forensic procedure Recovering and examining e-mail, Web, and networking activity Investigating users' behavior on mobile devices Overcoming anti-forensics measures that seek to prevent data capture and analysis Performing comprehensive electronic discovery in connection with lawsuits Effectively managing cases and documenting the evidence you find Planning and building your career in digital forensics Digital Archaeology is a key resource for anyone preparing for a career as a professional investigator; for IT professionals who are sometimes called upon to assist in investigations; and for those seeking an explanation of the processes involved in preparing an effective defense, including how to avoid the legally indefensible destruction of digital evidence. Working with Big Data Infrastructure, Algorithms and Visualizations : Livelessons

The Complete Guide to Data Science with Hadoop—For Technical Professionals, Businesspeople, and Students Demand is soaring for professionals who can solve real data science problems with Hadoop and Spark. Practical Data Science with Hadoop® and Spark is your complete guide to doing just that. Drawing on immense experience with Hadoop and big data, three leading experts bring together everything you need: high-level concepts, deep-dive techniques, real-world use cases, practical applications, and hands-on tutorials. The authors introduce the essentials of data science and the modern Hadoop ecosystem, explaining how Hadoop and Spark have evolved into an effective platform for solving data science problems at scale. In addition to comprehensive application coverage, the authors also provide useful guidance on the important steps of data ingestion, data munging, and visualization. Once the groundwork is in place, the authors focus on specific applications, including machine learning, predictive modeling for sentiment analysis, clustering for document analysis, anomaly detection, and natural language processing (NLP). This guide provides a strong technical foundation for those who want to do practical data science, and also presents business-driven guidance on how to apply Hadoop and Spark to optimize ROI of data science initiatives. Learn What data science is, how it has evolved, and how to plan a data science career How data volume, variety, and velocity shape data science use cases Hadoop and its ecosystem, including HDFS, MapReduce, YARN, and Spark Data importation with Hive and Spark Data quality, preprocessing, preparation, and modeling Visualization: surfacing insights from huge data sets Machine learning: classification, regression, clustering, and anomaly detection Algorithms and Hadoop tools for predictive modeling Cluster analysis and similarity functions Large-scale anomaly detection NLP: applying data science to human language

SPIoT-2021 Volume 2

R Programming LiveLessons

Practical Cassandra

Programming in Objective-C

PowerShell for Business Intelligence and Big Data Analytics

The 2021 International Conference on Machine Learning and Big Data Analytics for IoT Security and Privacy

Data Just Right

This book provides an overview of the innovative concepts, methodologies and frameworks that will increase the feasibility of the existing telemedicine system. With the arrival of advanced technologies, telehealth has become a new subject, requiring a different understanding of IT devices and of their use, to fulfill health needs. Different topics are discussed - from the basics of TeleMedicine, to help readers understand the technology from ground up, to details about the infrastructure and communication technologies to offer deeper insights into the technology. The use of IoT and cloud services along with the use of blockchain technology in TeleMedicine are also discussed. Detailed information about the use of machine learning and computer vision techniques for the proper transmission of medical data - keeping in mind the bandwidth of the network - are provided. The book will be a readily accessible source of information for professionals working in the area of information technology as well as for the all those involved in the healthcare environment.

"Hadoop and Spark Fundamentals LiveLessons provides 9+ hours of video introduction to the Apache Hadoop Big Data ecosystem. The tutorial includes background information and explains the core components of Hadoop, including Hadoop Distributed File Systems (HDFS), MapReduce, the YARN resource manager, and YARN Frameworks. In addition, it demonstrates how to use Hadoop at several levels, including the native Java interface, C++ pipes, and the universal streaming program interface. Examples include how to use benchmarks and high-level tools, including the Apache Pig scripting language, Apache Hive "SQL-like" interface, Apache Flume for streaming input, Apache Sqoop for import and export of relational data, and Apache Oozie for Hadoop workflow management. In addition, there is comprehensive coverage of Spark, PySpark, and the Zeppelin web-GUI. The steps for easily installing a working Hadoop/Spark system on a desktop/laptop and on a local stand-alone cluster using the powerful Ambari GUI are also included. All software used in these LiveLessons is open source and freely available for your use and experimentation. A bonus lesson includes a quick primer on the Linux command line as used with Hadoop and Spark."--Resource description page.

"Eric and Russell were early adopters of Cassandra at SimpleReach. In Practical Cassandra, you benefit from their experience in the trenches administering Cassandra, developing against it, and building one of the first CQL drivers. If you are deploying Cassandra soon, or you inherited a Cassandra cluster to tend, spend some time with the deployment, performance tuning, and maintenance chapters... If you are new to Cassandra, I highly recommend the chapters on data modeling and CQL." --From the Foreword by Jonathon Ellis, Apache Cassandra Chair Build and Deploy Massively Scalable, Super-fast Data Management Applications with Apache Cassandra Practical Cassandra is the first hands-on developer's guide to building Cassandra systems and applications that deliver breakthrough speed, scalability, reliability, and performance. Fully up to date, it reflects the latest versions of Cassandra—including Cassandra Query Language (CQL), which dramatically lowers the learning curve for Cassandra developers. Pioneering Cassandra developers and Datastax MVPs Russell Bradberry and Eric Lubow walk you through every step of building a real production application that can store enormous amounts of structured, semi-structured, and unstructured data. Drawing on their exceptional expertise, Bradberry and Lubow share practical insights into issues ranging from querying to deployment, management, maintenance, monitoring, and troubleshooting. The authors cover key issues, from architecture to migration, and guide you through crucial decisions about configuration and data modeling. They provide tested sample code, detailed explanations of how Cassandra works "under the covers," and new case studies from three cutting-edge users: Ooyala, Hailo, and eBay. Coverage includes Understanding Cassandra's approach, architecture, key concepts, and primary use cases— and why it's so blazingly fast Getting Cassandra up and running on single nodes and large clusters Applying the new design patterns, philosophies, and features that make Cassandra such a powerful data store Leveraging CQL to simplify your transition from SQL-based RDBMSes Deploying and provisioning through the cloud or on bare-metal hardware Choosing the right configuration options for each type of workload Tweaking Cassandra to get maximum performance from your hardware, OS, and JVM Mastering Cassandra's essential tools for maintenance and monitoring Efficiently solving the most common problems with Cassandra deployment, operation, and application development

"Spring Developer Advocate Josh Long will provide a walking tour of all of the Spring projects, including: Spring, Spring MVC, Spring Data, Spring Batch, Spring Integration, Spring Security, Spring Social, and more. Josh introduces how to get started building modern day Spring applications while introducing the concepts behind them. In the lessons, Josh guides viewers through a look at the Spring stack and the features designed to support relational data access, NoSQL and big-data access, batch processing, integration and messaging, REST services, mobile clients, OAuth-secured, connected web applications, service provider APIs, and more!"--Resource description page.

Machine Learning with Python for Everyone

A Developer's Approach

Python Data Analysis

Big Ideas and Little Code in Python

The Art and Science of Digital Forensics

Introduction to Large-scale Data & Analytics

LiveLessons

***The Hands-On, Example-Rich Introduction to Pandas Data Analysis in Python Today, analysts must manage data characterized by extraordinary variety, velocity, and volume. Using the open source Pandas library, you can use Python to rapidly automate and perform virtually any data analysis task, no matter how large or complex. Pandas can help you ensure the veracity of your data, visualize it for effective decision-making, and reliably reproduce analyses across multiple datasets. Pandas for Everyone brings together practical knowledge and insight for solving real problems with Pandas, even if you're new to Python data analysis. Daniel Y. Chen introduces key concepts through simple but practical examples, incrementally building on them to solve more difficult, real-world problems. Chen gives you a jumpstart on using Pandas with a realistic dataset and covers combining datasets, handling missing data, and structuring datasets for easier analysis and visualization. He demonstrates powerful data cleaning techniques, from basic string manipulation to applying functions simultaneously across dataframes. Once your data is ready, Chen guides you through fitting models for prediction, clustering, inference, and exploration. He provides tips on performance and scalability, and introduces you to the wider Python data analysis ecosystem. Work with DataFrames and Series, and import or export data Create plots with matplotlib, seaborn, and pandas Combine datasets and handle missing data Reshape, tidy, and clean datasets so they're easier to work with Convert data types and manipulate text strings Apply functions to scale data manipulations Aggregate, transform, and filter large datasets with groupby Leverage Pandas' advanced date and time capabilities Fit linear models using statsmodels and scikit-learn libraries Use generalized linear modeling to fit models with different response variables Compare multiple models to select the "best" Regularize to overcome overfitting and improve performance Use clustering in unsupervised***

### machine learning

*Master Powerful Off-the-Shelf Business Solutions for AI and Machine Learning* Pragmatic AI will help you solve real-world problems with contemporary machine learning, artificial intelligence, and cloud computing tools. Noah Gift demystifies all the concepts and tools you need to get results—even if you don't have a strong background in math or data science. Gift illuminates powerful off-the-shelf cloud offerings from Amazon, Google, and Microsoft, and demonstrates proven techniques using the Python data science ecosystem. His workflows and examples help you streamline and simplify every step, from deployment to production, and build exceptionally scalable solutions. As you learn how machine language (ML) solutions work, you'll gain a more intuitive understanding of what you can achieve with them and how to maximize their value. Building on these fundamentals, you'll walk step-by-step through building cloud-based AI/ML applications to address realistic issues in sports marketing, project management, product pricing, real estate, and beyond. Whether you're a business professional, decision-maker, student, or programmer, Gift's expert guidance and wide-ranging case studies will prepare you to solve data science problems in virtually any environment. Get and configure all the tools you'll need Quickly review all the Python you need to start building machine learning applications Master the AI and ML toolchain and project lifecycle Work with Python data science tools such as IPython, Pandas, Numpy, Jupyter Notebook, and Sklearn Incorporate a pragmatic feedback loop that continually improves the efficiency of your workflows and systems Develop cloud AI solutions with Google Cloud Platform, including TPU, Colaboratory, and Datalab services Define Amazon Web Services cloud AI workflows, including spot instances, code pipelines, boto, and more Work with Microsoft Azure AI APIs Walk through building six real-world AI applications, from start to finish Register your book for convenient access to downloads, updates, and/or corrections as they become available. See inside book for details.

*Statistical Computation for Programmers, Scientists, Quants, Excel Users, and Other Professionals* Using the open source R language, you can build powerful statistical models to answer many of your most challenging questions. R has traditionally been difficult for non-statisticians to learn, and most R books assume far too much knowledge to be of help. R for Everyone is the solution. Drawing on his unsurpassed experience teaching new users, professional data scientist Jared P. Lander has written the perfect tutorial for anyone new to statistical programming and modeling. Organized to make learning easy and intuitive, this guide focuses on the 20 percent of R functionality you'll need to accomplish 80 percent of modern data tasks. Lander's self-contained chapters start with the absolute basics, offering extensive hands-on practice and sample code. You'll download and install R; navigate and use the R environment; master basic program control, data import, and manipulation; and walk through several essential tests. Then, building on this foundation, you'll construct several complete models, both linear and nonlinear, and use some data mining techniques. By the time you're done, you won't just know how to write R programs, you'll be ready to tackle the statistical problems you care about most. **COVERAGE INCLUDES** • Exploring R, RStudio, and R packages • Using R for math: variable types, vectors, calling functions, and more • Exploiting data structures, including data.frames, matrices, and lists • Creating attractive, intuitive statistical graphics • Writing user-defined functions • Controlling program flow with if, ifelse, and complex checks • Improving program efficiency with group manipulations • Combining and reshaping multiple datasets • Manipulating strings using R's facilities and regular expressions • Creating normal, binomial, and Poisson probability distributions • Programming basic statistics: mean, standard deviation, and t-tests • Building linear, generalized linear, and nonlinear models • Assessing the quality of models and variable selection • Preventing overfitting, using the Elastic Net and Bayesian methods • Analyzing univariate and multivariate time series data • Grouping data via K-means and hierarchical clustering • Preparing reports, slideshows, and web pages with knitr • Building reusable R packages with devtools and Rcpp • Getting involved with the R global community

*"R Programming Data Analyst Learning Path*, is a tour through the most important parts of R, the statistical programming language, from the very basics to complex modeling. It covers reading data, programming basics, visualization, data munging, regression, classification, clustering, modern machine learning, network analysis, web graphics, and techniques for dealing with large data, both in memory and in databases. This 15-hour video teaches you how to program in R even if you are unfamiliar with statistical techniques. It starts with the basics of using R and progresses into data manipulation and model building. Users learn through

*hands-on practice with the code and techniques. New material covers chaining commands, faster data manipulation, new ways to read rectangular data into R, testing code, and the hot package Shiny.*"--Resource description page.

*Apache Hadoop YARN*

*Moving Beyond MapReduce and Batch Processing with Apache Hadoop 2*

*Big Data Analytics for Information Security*

*Deep Learning Illustrated*

*Outside-In Marketing*

*Pragmatic AI*

Presents an introduction to Objective-C, covering such topics as classes and objects, data types, program looping, inheritance, polymorphism, variables, memory management, and archiving.

Almost 4 hours of video instruction to help you learn the key concepts and features behind Kafka and how it can be used to solve many problems related to the transfer of data. Overview Apache Kafka Fundamentals LiveLessons provides a complete overview of Kafka and Kafka- related topics. The course begins with a general overview of Kafka and then dives into use cases and the design of Kafka. Learners are introduced to the concept of clusters as well as how to create producers and consumers. Additional topics, such as security, connectors, and streams, are covered. The course finishes with a discussion of how Kafka can be used with Big Data software. With detailed, hands-on code examples, provided with the intent to translate to a coding language of your choosing, learners are walked through multiple scenarios involving projects from Twitter, Netflix, Yahoo!, and other real-world scenarios. Topics include \* Kafka concepts \* Use cases \* Kafka design \* API overview \* Installation and configuration \* Clusters \* Writing producers \* Writing consumers \* Kafka operations \* Connectors \* Streams What You Will Learn \* A complete overview of Kafka \* How to install and configure Kafka \* How Kafka fits into the big picture of Big Data Who Should Take This Course? \* IT professional who are responsible for implementing and maintaining their organizations' Big Data solution \* IT managers who have an interest in understanding how Kafka can solve part of their Big Data issues Course Requirements Requires a basic knowledge of Linux and a programming language such as Java, Perl, Python, C, or Ruby. Lesson Descriptions Lesson 1, "Kafka Concepts": You learn the essentials of what Kafka is, it's history, and some of the key concepts of the Kafka solution. We compare Kafka to other potential solutions and point out the major advantages of using it. Lesson 2, "Use Cases": In this lesson you see how Kafka is used in real-world scenarios using projects from Twitter, Netflix, and Yahoo! Lesson 3, "Kafka Design": In this lesson you learn the design principals of Kafka. You start by learning key features and concepts, including the Kafka APIs, topics, logs, producers, and consumers. You also learn different ways in which Kafka can be used, including as a message system, a storage system, and for stream processing. Lesson 4, "API Overview": This lesson explores some basics of the producer and consumer APIs. The goal of this lesson is to start exploring the Java l...

Presents an introduction to data analytics, describing the management of multi-tetrabyte datasets, such query tools as Hadoop, Hive, and Google BigQuery, the use of R to perform statistical analysis, and advanced data visualization tools.

6+ Hours of Video Instruction Learn the main concepts and techniques used in modern machine learning through numerous examples written in scikit-learn Overview Machine Learning with scikit-learn LiveLessons is your guide to the scikit-learn library, which provides a wide range of algorithms in machine learning that are unified under a common and intuitive Python API. Most of the dozens of classes provided for various kinds of models share the large majority of the same calling interface. Quite often you can easily substitute one algorithm for another with very little or no change in your underlying code. This enables you to explore the problem space quickly and often to arrive at an optimal or at least satisfying approach to your problem domain or datasets. The scikit-learn library is built on the foundations of the numeric Python stack. It uses NumPy for its fundamental data structures and optimized performance, and it plays well with pandas and matplotlib. It is free software under a BSD license. The great bulk of machine learning programming in Python is done with scikit-learn at least outside the specialized domain of deep neural networks. About the Instructor David Mertz has been involved with the Python community for 20 years, with data science, (under various previous names) and with machine learning since way back when it was more likely to be called 'Artificial intelligence.' He was a director of the Python Software Foundation for six years and continues to serve on, or chair, a variety of PSF working groups. He has also written quite a bit about Python: the column Charming Python for IBM developerWorks, for many years; Text Processing in Python (Addison-Wesley, 2003); and two short books for O'Reilly. He created the data science training program for Anaconda, Inc., and was a senior trainer for them. Skill Level Intermediate Learn How To Use various machine learning techniques Explore a dataset Perform various types of classification Use regression, clustering, and hyperparameters Use feature engineering and feature selection Implement data pipelines Develop robust train/test splits Who Should Take This Course Programmers and statisticians interested in using Python and the scikit-learn library to implement machine learning Course Requirements Programming experience Table of Contents Introduction Lesson 1: What Is Machine Learning? Lesson 2: Exploring a Dataset Lesson 3: Classification Lesson 4: Regression Less...

Hadoop Fundamentals LiveLessons (Video Training), 2/e

Apache Hadoop YARN LiveLessons

Python for Programmers

Learn the Essentials of Big Data Computing in the Apache Hadoop 2 Ecosystem

Data Just Right LiveLessons

Hadoop Fundamentals LiveLessons (Video Training)

An Introduction to Cloud-Based Machine Learning

**"Apache Hadoop is a freely available open source tool-set that enables big data analysis. This Hadoop fundamentals LiveLessons tutorial demonstrates the core components of Hadoop including Hadoop Distriuted File Systems (HDFS) and MapReduce. In addition, the tutorial demonstrates how to use Hadoop at several levels including the native Java interface, C++ pipes, and the universal streaming program interface. Examples of how to use high level tools include the Pig scripting language and the Hive 'SQL like' interface. Finally, the steps for installing Hadoop on a desktop virtual machine, in a Cloud environment, and on a local stand-alone cluster are presented. Topics covered in this tutorial apply to Hadoop version 2 (i.e., MR2 or Yarn)."**--Resource description page.

**"Modern Python LiveLessons: Big Ideas and Little Code in Python provides developers with an approach to programming in Python that expresses big ideas succinctly, with the minimum of code, allowing the business logic to shine through. It does so using a number of relevant examples from current problems, including data analytics and social media. In this video training, Raymond Hettinger starts by introducing modern Python foundational skills, tools, and techniques in the first half of the lessons. In the second part he shows you how to apply the tools and techniques to a real application."--Resource description page.**

**"Working with Big Data: Infrastructure, Algorithms, and Visualizations LiveLessons presents a high level overview of big data and how to use key tools to solve your data challenges. This introduction to the three areas of big data includes: Infrastructure - how to store and process big data ; Algorithms - how to integrate algorithms into your big data stack and an introduction to classification ; Visualizations - an introduction to creating visualizations in JavaScript using D3.js."--Resource description page.**

**The professional programmer's Deitel® guide to Python® with introductory artificial intelligence case studies Written for programmers with a background in another high-level language, Python for Programmers uses hands-on instruction to teach today's most compelling, leading-edge computing technologies and programming in Python-one of the world's most popular and fastest-growing languages. Please read the Table of Contents diagram inside the front cover and the Preface for more details. In the context of 500+, real-world examples ranging from individual snippets to 40 large scripts and full implementation case studies, you'll use the interactive IPython interpreter with code in Jupyter Notebooks to quickly master the latest Python coding idioms. After covering Python Chapters 1-5 and a few key parts of Chapters 6-7, you'll be able to handle significant portions of the hands-on introductory AI case studies in Chapters 11-16, which are loaded with cool, powerful, contemporary examples. These include natural language processing, data mining Twitter® for sentiment analysis, cognitive computing with IBM® Watson™, supervised machine learning with classification and regression, unsupervised machine learning with clustering, computer vision through deep learning and convolutional neural networks, deep learning with recurrent neural networks, big data with Hadoop®, Spark™ and NoSQL databases, the Internet of Things and more. You'll also work directly or indirectly with cloud-based services, including Twitter, Google Translate™, IBM Watson, Microsoft® Azure®, OpenMapQuest, PubNub and more. Features 500+ hands-on, real-world, live-code examples from snippets to case studies IPython + code in Jupyter® Notebooks Library-focused: Uses Python Standard Library and data science libraries to accomplish significant tasks with minimal code Rich Python coverage: Control statements, functions, strings, files, JSON serialization, CSV, exceptions Procedural, functional-style and object-oriented programming Collections: Lists, tuples, dictionaries, sets, NumPy arrays, pandas Series & DataFrames Static, dynamic and interactive visualizations Data experiences with real-world datasets and data sources Intro to Data Science sections: AI, basic stats, simulation, animation, random variables, data wrangling, regression AI, big data and cloud data science case studies: NLP, data mining Twitter®, IBM® Watson™, machine learning, deep learning, computer vision, Hadoop®, Spark™, NoSQL, IoT Open-source libraries: NumPy, pandas, Matplotlib, Seaborn, Folium, SciPy, NLTK, TextBlob, spaCy, Textatistic, Tweepy, scikit-learn®, Keras and more Accompanying code examples are available here:**

**[http://ptgmedia.pearsoncmg.com/imprint\\_downloads/informit/bookreg/9780135224335/9780135224335\\_examples.zip](http://ptgmedia.pearsoncmg.com/imprint_downloads/informit/bookreg/9780135224335/9780135224335_examples.zip). Register your product for convenient access to downloads, updates, and/or corrections as they become available. See inside book for more information.**

**Working with Big Data LiveLessons (Video Training)**

**Machine Learning with Scikit-learn LiveLessons**

**Modern Python LiveLessons**

**A Visual, Interactive Guide to Artificial Intelligence**

**Working with Big Data**

**Intrastructure, Algorithms and Visualizations : Livelessons**

**Apache Kafka Fundamentals LiveLessons**

Get Started Fast with Apache Hadoop® 2, YARN, and Today's Hadoop Ecosystem With Hadoop 2.x and YARN, Hadoop moves beyond MapReduce to become practical for virtually any type of data p and the Data Lake concept represent a radical shift away from conventional approaches to data usage and storage. Hadoop 2.x installations offer unmatched scalability and breakthrough extensil existing Big Data analytics processing methods and models. Hadoop® 2 Quick-Start Guide is the first easy, accessible guide to Apache Hadoop 2.x, YARN, and the modern Hadoop ecosystem. Build experience teaching Hadoop and Big Data, author Douglas Eadline covers all the basics you need to know to install and use Hadoop 2 on personal computers or servers, and to navigate the power

complement it. Eadline concisely introduces and explains every key Hadoop 2 concept, tool, and service, illustrating each with a simple “beginning-to-end” example and identifying trustworthy, up-learning more. This guide is ideal if you want to learn about Hadoop 2 without getting mired in technical details. Douglas Eadline will bring you up to speed quickly, whether you’re a user, admin, programmer, architect, analyst, or data scientist. Coverage Includes Understanding what Hadoop 2 and YARN do, and how they improve on Hadoop 1 with MapReduce Understanding Hadoop-based RDBMS Data Warehouses Installing Hadoop 2 and core services on Linux machines, virtualized sandboxes, or clusters Exploring the Hadoop Distributed File System (HDFS) Understanding the essence and YARN application programming Simplifying programming and data movement with Apache Pig, Hive, Sqoop, Flume, Oozie, and HBase Observing application progress, controlling jobs, and managing Managing Hadoop efficiently with Apache Ambari—including recipes for HDFS to NFSv3 gateway, HDFS snapshots, and YARN configuration Learning basic Hadoop 2 troubleshooting, and installing Apache Spark

Grasp advanced PowerShell Core 6.0 functionalities to automate your environment Key FeaturesKeep up with changes introduced in PowerShell Core 6.0Easily maintain appropriate compatibility with versionsAutomate complex tasks, manipulate data, and secure your environment with PowerShell Core 6.0Book Description PowerShell scripts offer a handy way to automate various chores, how with these scripts can be a difficult task. This comprehensive guide starts with the fundamentals before moving on to advanced-level topics to help you become a PowerShell Core 6.0 expert. The PowerShell Core 6.0 Fundamentals, begins with the new features of PowerShell Core 6.0, installing it on Linux, and working with parameters, objects and .NET classes from within PowerShell Core 6.0. As you read the chapters, you'll see how to efficiently manage large amounts of data and interact with other services using PowerShell Core 6.0. You'll be able to make the most of PowerShell Core 6.0's powerful where you will have different methods available to parse data and manipulate regular expressions and Windows Management Instrumentation (WMI). After having explored automation, you will explore PowerShell Core 6.0 module, covering asynchronous processing and desired state configuration. In the last module, you will learn to extend PowerShell Core 6.0 using advanced scripts and filters along with working on error handling techniques. By the end of this book, you will be an expert in scripting with PowerShell Core 6.0. What you will learnOptimize code through the use of function structuresWork with objects and operators to test and manipulate dataParse and manipulate different data typesCreate scripts and functions using PowerShellUse jobs, events, and popular public implementing multithreadingWrite .NET classes with ease within the PowerShellCreate and implement regular expressions in PowerShell scriptsMake use of advanced techniques to define and resolve parametersWho this book is for If you are a system administrator who wants to become an expert in controlling and automating your Windows environment, then Mastering Windows PowerShell is also ideal for those new to the PowerShell language.

Apache Hadoop is a freely available open source tool-set that enables big data analysis. This Hadoop Fundamentals LiveLessons tutorial demonstrates the core components of Hadoop including Hadoop Distributed File Systems (HDFS) and MapReduce. In addition, the tutorial demonstrates how to use Hadoop at several levels including the native Java interface, C++ pipes, and the universal streaming program interface. To use high level tools include the Pig scripting language and the Hive 'SQL like' interface. Finally, the steps for installing Hadoop on a desktop virtual machine, in a Cloud environment, and on a local server are presented. Topics covered in this tutorial apply to Hadoop version 2 (i.e., MR2 or Yarn). The source code repository for this LiveLesson can be found at [www.clustermonkey.net/download/LiveLessons/Hadoop\\_Fundamentals/](http://www.clustermonkey.net/download/LiveLessons/Hadoop_Fundamentals/). About the Author: Douglas Eadline, PhD, began his career as a practitioner and a chronicler of the Linux Cluster HPC revolution. He documents big data analytics. Starting with the first Beowulf How To document, Dr. Eadline has written hundreds of articles, white papers, and instructional documents covering virtually all aspects of the HPC industry. Prior to starting and editing the popular ClusterMonkey.net web site in 2005, he served as Editor in Chief for ClusterWorld Magazine, and was Senior HPC Editor for Linux Magazine. Currently, he is a Senior HPC Editor for Linux Magazine and writes a monthly column in HPC Admin Magazine. Both clients and readers have recognized Dr. Eadline's ability to present a "technological value proposition" in a clear and accurate manner. Dr. Eadline has practical hands on experience in many aspects of HPC including, hardware and software design, benchmarking, storage, GPU, cloud, and parallel computing.

Master D3, Today's Most Powerful Tool for Visualizing Data on the Web Data-driven graphics are everywhere these days, from websites and mobile apps to interactive journalism and high-end presentations. With D3.js, you can create graphics that are visually stunning and powerfully effective. Visual Storytelling with D3 is a hands-on, full-color tutorial that teaches you to design charts and data visualizations to tell your story intuitively, and that shows you how to wield the powerful D3 JavaScript library. Drawing on his extensive experience as a professional graphic artist, writer, and programmer, Ritchie S. King walks you through a sample project—from conception through data selection and design. Step by step, you'll build your skills, mastering increasingly sophisticated graphical forms and techniques. If you know a little HTML and JavaScript, you have all the technical background you'll need to master D3. This tutorial is for web designers creating graphics-driven sites, services, tools, or dashboards; online journalists who want to visualize their data; analysts seeking to communicate their results more intuitively; marketers aiming to deepen their connections with customers; and for any data visualization enthusiast. Coverage includes Identifying a data visualization that is visually appealing and creating it Creating and manipulating beautiful graphical elements with SVG Shaping web pages with D3 Structuring data so D3 can easily visualize it Using D3's data joins to connect your data to the DOM Adding a web page Sizing and scaling charts, and adding axes to them Loading and filtering data from external standalone datasets Animating your charts with D3's transitions Adding interactivity to visualizations Adding a play button that cycles through different views of your data Finding D3 resources and getting involved in the thriving online D3 community About the Website All of this book's examples are available at [ritchiesking.com/book](http://ritchiesking.com/book), along with video tutorials, updates, supporting material, and even more examples, as they become available.

Digital Archaeology

An Introduction to Data Visualization in JavaScript

Mastering Windows PowerShell Scripting

Hadoop and Spark Fundamentals

R for Everyone

The Rails Way

Designing and Building Effective Analytics at Scale

**More than 6 hours of video training covering everything you need to know to deploy, configure, and troubleshoot NetFlow in many different Cisco platforms and learn big data analytics technologies for cyber security. Description Cisco NetFlow for Cyber Security Big Data Analytics walks you through the steps for deploying, configuring, and troubleshooting NetFlow and learning big data analytics technologies for cyber security. Cisco NetFlow creates an environment where network administrators and security professionals have the tools to understand who, what, when, where, and how network traffic is flowing. Cisco NetFlow LiveLessons is a key resource for understanding the power behind the Cisco NetFlow solution. Omar Santos, a Cisco Product Security Incident Response**

**Team (PSIRT) technical leader and author of Network Security with NetFlow and IPFIX, the CCNA Security 210-260 Official Cert Guide, and other key security video and book titles by Cisco Press demonstrates how NetFlow can be used by large enterprises and small-to-medium-sized businesses to meet critical network challenges. This video course explores everything you need to understand and implement the Cisco Cyber Threat Defense Solution, while also providing configuration and troubleshooting walk-throughs. Skill Level Intermediate What You Will Learn NetFlow and IPFIX basics NetFlow Deployment Scenarios Cisco Flexible NetFlow NetFlow Commercial and Open Source Monitoring and Analysis Software Packages Big Data Analytics Tools The Cisco Cyber Threat Defense Solution Troubleshooting NetFlow NetFlow for Anomaly Detection and Identifying DoS Attacks NetFlow for Incident Response and Forensics Who Should Take This Course Network and security professionals interested in learning about the Cisco NetFlow solution; anyone wishing to build Cisco security About LiveLessons Video Training LiveLessons Video Training series publishes hundreds of hands-on, expert-led video tutorials covering a wide selection of technology topics designed to teach you the skills you need to succeed. This professional and personal technology video series features world-leading author instructors published by your trusted technology brands: Addison-Wesley, Cisco Press, IBM Press, Pearson IT Certification, Prentice Hall, Sams, and Que. Topics include: IT Certification, Programming, Web Development, Mobile Development, Home and Office Technologies, Business and Management, and more. View all LiveLessons on InformIT at <http://...>**

**Apache Hadoop is a freely available open source tool-set that enables big data analysis. This Hadoop Fundamentals LiveLessons tutorial demonstrates the core components of Hadoop including Hadoop Distributed File Systems (HDFS) and MapReduce. In addition, the tutorial demonstrates how to use Hadoop at several levels including the native Java interface, C++ pipes, and the universal streaming program interface. Examples of how to use high level tools include the Pig scripting language and the Hive 'SQL like' interface. Finally, the steps for installing Hadoop on a desktop virtual machine, in a Cloud environment, and on a local stand-alone cluster are presented. Topics covered in this tutorial apply to Hadoop version 2 (i.e., MR2 or Yarn). About the Author: Douglas Eadline, PhD, began his career as a practitioner and a chronicler of the Linux Cluster HPC revolution and now documents big data analytics. Starting with the first Beowulf How To document, Dr. Eadline has written hundreds of articles, white papers, and instructional documents covering virtually all aspects of HPC computing. Prior to starting and editing the popular ClusterMonkey.net web site in 2005, he served as Editor in chief for ClusterWorld Magazine, and was Senior HPC Editor for Linux Magazine. Currently, he is a consultant to the HPC industry and writes a monthly column in HPC Admin Magazine. Both clients and readers have recognized Dr. Eadline's ability to present a "technological value proposition" in a clear and accurate style. He has practical hands on experience in many aspects of HPC including, hardware and software design, benchmarking, storage, GPU, cloud, and parallel computing.**

**"Cisco NetFlow for Cyber Security Big Data Analytics walks you through the steps for deploying, configuring, and troubleshooting NetFlow and learning big data analytics technologies for cyber security. Cisco NetFlow creates an environment where network administrators and security professionals have the tools to understand who, what, when, where, and how network traffic is flowing. Cisco NetFlow LiveLessons is a key resource for understanding the power behind the Cisco NetFlow solution."--Resource description page.**

**"Apache Hadoop is helping drive the Big Data revolution. Now, its data processing has been completely overhauled: Apache Hadoop YARN provides resource management at data center scale and easier ways to create distributed applications that process petabytes of data. And now in Apache Hadoop™ YARN, two Hadoop technical leaders show you how to develop new applications and adapt existing code to fully leverage these revolutionary advances." -- From the Amazon**

**Big Ideas, Little Code : LiveLessons**

**Hadoop Fundamentals**

**Hadoop 2 Quick-Start Guide**

**Cisco NetFlow for Cyber Security Big Data Analytics**

**Cisco NetFlow**

**Pandas for Everyone**

**Spring Framework LiveLessons**

Working with Big Data: Infrastructure, Algorithms, and Visualizations LiveLessons presents a high level overview of big data and how to use key tools to solve your data challenges. The three areas of big data includes: Infrastructure - how to store and process big data Algorithms - how to integrate algorithms into your big data stack and an introduction to classification introduction to creating visualizations in JavaScript using D3.js The goal was not to be exhaustive, but rather, to provide a higher level view of how all the pieces of a big data architecture fit together. The Author: Paul Dix is the author of "Service Oriented Design with Ruby and Rails." He is a frequent speaker at conferences and user groups including Web 2.0, RubyConf, RailsConf, RailsConf, Conference, and Scotland on Rails. Paul is the founder and organizer of the NYC Machine Learning Meetup, which has over 2,900 members. In the past he has worked at startups and at Google, Microsoft, and McAfee. Currently, Paul is a co-founder at Errplane, a cloud based service for monitoring and alerting on application performance and metrics. He lives in New York City. Supercharge ROI by Rebuilding Content Marketing Around Your Customer! Marketing has always been about my brand, my product, my company. That's "inside-out" marketing. Today's customers ignore it. What does work? Customized messages they already care about. Marketing that respects their time and gives them immediate value in exchange for their attention. Marketing that works. Two renowned digital marketing thought leaders show how to integrate content marketing with Big Data to create high-ROI, outside-in marketing. James Mathewson and Mike Moran share techniques, guidelines, and metrics for engaging on your customers' terms, using their words, reflecting their motivations. Whether you're a content marketer, marketing executive, or entrepreneur, this book is for you. to: • Ease your customers' pain—solve what keeps them up at night—with compelling content experiences • Build content that's essential to clients and prospects in each step of the

search and social data into all facets of content development to continually improve its effectiveness • Build evergreen content that is continuously improved to better meet the ne  
• Apply advanced machine learning, text analytics, and sentiment analysis to craft more discoverable, shareable content • Shape your messages to intercept your clients' and prospec  
Google • Transform culture and systems to excel at outside-in marketing

The Complete Beginner's Guide to Understanding and Building Machine Learning Systems with Python Machine Learning with Python for Everyone will help you master the processes  
you need to build effective learning systems, even if you're an absolute beginner. If you can write some Python code, this book is for you, no matter how little college-level math you  
Mark E. Fenner relies on plain-English stories, pictures, and Python examples to communicate the ideas of machine learning. Mark begins by discussing machine learning and what it  
mathematical and computational topics in an approachable manner; and walking you through the first steps in building, training, and evaluating learning systems. Step by step, you'll  
a practical learning system, broaden your toolbox, and explore some of the field's most sophisticated and exciting techniques. Whether you're a student, analyst, scientist, or hobbyist,  
be applicable to every learning system you ever build or use. Understand machine learning algorithms, models, and core machine learning concepts Classify examples with classifiers,  
with regressors Realistically assess performance of machine learning systems Use feature engineering to smooth rough data into useful forms Chain multiple components into one s  
performance Apply machine learning techniques to images and text Connect the core concepts to neural networks and graphical models Leverage the Python scikit-learn library and  
Register your book for convenient access to downloads, updates, and/or corrections as they become available. See inside book for details.

Get started fast with Apache Hadoop 2, with the first easy, accessible guide to this revolutionary Big Data technology. Building on his unsurpassed experience teaching Hadoop and  
Eadline covers all the basics you need to know to install and use Hadoop 2 on both personal computers and servers, and navigate the entire Apache Hadoop ecosystem. Eadline dem  
the problems it solves, shows how it relates to Big Data, and demonstrates both administrators and users work with it. He explains the central role of MapReduce in Hadoop 1, and  
Hadoop 2 move beyond MapReduce. You'll find essential information on: Planning and performing Hadoop 2 installations -- including decisions about hardware, software, clustering, a  
Hadoop Distributed File System (HDFS) and working around its tradeoffs Running and benchmarking Hadoop 2 programs Working with MapReduce -- including basic programming exa  
level tools, including Pig and Hive Getting started with Apache Hadoop YARN frameworks Administering Hadoop 2 with Ambari, radmin, and automated scripts From its Getting Star  
its roadmap of additional resources, Hadoop 2 Quick-Start Guide is your perfect Hadoop 2 starting point -- and your fastest way to start mastering Big Data.

Using Big Data to Guide your Content Marketing

Practical Data Science with Hadoop and Spark

Visual Storytelling with D3

with Big Data and Artificial Intelligence Case Studies

Advanced Analytics and Graphics

(sneak Peek Video Training)

Infrastructure, Algorithms, and Visualizations

**"Apache Hadoop YARN Fundamentals LiveLessons is the first complete video training course on the basics of Apache Hadoop version 2 with YARN. The tutorial begins with MapReduce and Big Data fundamentals and moves to YARN design, installation (laptop, cluster, and cloud) , administration, running applications (MapReduce2, Pig and Hive), writing new applications, and useful frameworks. Additional coverage of Ambari, Ganglia, Nagios and the Hortonworks HDP is provided."--Resource description page.**

**Nearly 4 Hours of Video Instruction Everything you need to know in order to implement and work with SQL Server Replication! Replication is a common method of moving from one SQL Server to another. It enables moving data to a reporting server, creating a basic failover site, providing data to development environments, and addresses many other issues. Most DBAs have or will encounter Replication when working with SQL server. The Replication system is large enough that it is often difficult to master without some form of training. SQL Server Replication Fundamentals LiveLessons provides the information needed in order to work with replication. Description Every SQL Server Admin in the market needs to understand Replication in order to do their jobs. Individuals in the accidental DBA category who find Replication installed on their system, also need to understand how to use it. This LiveLesson covers all the basic building blocks of Replication. Expert Eric Johnson begins with a basic overview of the components and terms and progress into advanced configuration and troubleshooting. There is a lot to learn in order to use Replication correctly. The configuration is very visual and often more easily explained with this medium than any other delivery mechanism. This LiveLesson uses the most current version of SQL Server, but almost all the content can be applied to SQL Server versions as far back as 2005, and in some cases, even older versions of SQL Server. About the Instructor Eric Johnson (MCSE, MCDBA, MCSA, CCNP) is a co-founder of Consortio Services, and the primary Database Technologies Consultant. His background in information technology is diverse, ranging from operating systems and hardware to specialized applications and development. He has even done his fair share of work on networks. Since IT is really just a way to support business processes, he has also acquired his MBA. All in all, he has 10 years of experience with IT, a great amount of which has been working with Microsoft SQL**

**Server. Eric has managed and designed databases of all shapes and sizes. He has delivered numerous SQL Server training classes and webcasts as well as presentations at national technology conferences. Most recently, he presented at TechMentor on SQL Server 2005 Replication, Reporting Services, and Integration Services. He also does a good deal of writing, including the recent four-part series, Tour de SQL, published in Redmond magazine. In addition, he is activ...**

**"The authors' clear visual style provides a comprehensive look at what's currently possible with artificial neural networks as well as a glimpse of the magic that's to come." -Tim Urban, author of Wait But Why Fully Practical, Insightful Guide to Modern Deep Learning Deep learning is transforming software, facilitating powerful new artificial intelligence capabilities, and driving unprecedented algorithm performance. Deep Learning Illustrated is uniquely intuitive and offers a complete introduction to the discipline's techniques. Packed with full-color figures and easy-to-follow code, it sweeps away the complexity of building deep learning models, making the subject approachable and fun to learn. World-class instructor and practitioner Jon Krohn-with visionary content from Grant Beyleveld and beautiful illustrations by Aglaé Bassens-presents straightforward analogies to explain what deep learning is, why it has become so popular, and how it relates to other machine learning approaches. Krohn has created a practical reference and tutorial for developers, data scientists, researchers, analysts, and students who want to start applying it. He illuminates theory with hands-on Python code in accompanying Jupyter notebooks. To help you progress quickly, he focuses on the versatile deep learning library Keras to nimbly construct efficient TensorFlow models; PyTorch, the leading alternative library, is also covered. You'll gain a pragmatic understanding of all major deep learning approaches and their uses in applications ranging from machine vision and natural language processing to image generation and game-playing algorithms. Discover what makes deep learning systems unique, and the implications for practitioners Explore new tools that make deep learning models easier to build, use, and improve Master essential theory: artificial neurons, training, optimization, convolutional nets, recurrent nets, generative adversarial networks (GANs), deep reinforcement learning, and more Walk through building interactive deep learning applications, and move forward with your own artificial intelligence projects Register your book for convenient access to downloads, updates, and/or corrections as they become available. See inside book for details.**

**"Data Just Right LiveLessons provides a practical introduction to solving common data challenges, such as managing massive datasets, visualizing data, building data pipelines and dashboards, and choosing tools for statistical analysis. You will learn how to use many of today's leading data analysis tools, including Hadoop, Hive, Shark, R, Apache Pig, Mahout, and Google BigQuery. Data Just Right LiveLessons shows how to address each of today's key Big Data use cases in a cost-effective way by combining technologies in hybrid solutions. You'll find expert approaches to managing massive datasets, visualizing data, building data pipelines and dashboards, choosing tools for statistical analysis, and more. These videos demonstrate techniques using many of today's leading data analysis tools, including Hadoop, Hive, Shark, R, Apache Pig, Mahout, and Google BigQuery."--Resource description page.**

**Network Security with Netflow and IPFIX**

**(video Training)**

**Automate and manage your environment using PowerShell Core 6.0, 3rd Edition**

**Data Analytics and Machine Learning Fundamentals LiveLessons Video Training**

**SQL Server Replication Fundamentals LiveLessons (Video Training)**

**Modern Python**

**Telemedicine: The Computer Transformation of Healthcare**

The expert guide to building Ruby on Rails applications Ruby on Rails strips complexity from the development process, enabling professional developers to focus on what matters most: delivering business value. Now, for the first time, there's a comprehensive, authoritative guide to building production-quality software with Rails. Pioneering Rails developer Obie Fernandez and a team of experts illuminate the entire Rails API, along with the Ruby idioms, design approaches, libraries, and plug-ins that make Rails so valuable. Drawing on their unsurpassed experience, they address the real challenges development teams face, showing how to use Rails' tools and best practices to maximize productivity and build polished applications users will enjoy. Using detailed code examples, Obie systematically covers Rails' key capabilities and subsystems. He presents advanced programming techniques, introduces open source libraries that facilitate easy Rails adoption, and offers important insights into testing and production deployment. Dive deep into the Rails codebase together, discovering why Rails behaves as it does—and how to make it behave the way you want it to. This book will help you Increase your productivity

as a web developer Realize the overall joy of programming with Ruby on Rails Learn what's new in Rails 2.0 Drive design and protect long-term maintainability with TestUnit and RSpec Understand and manage complex program flow in Rails controllers Leverage Rails' support for designing REST-compliant APIs Master sophisticated Rails routing concepts and techniques Examine and troubleshoot Rails routing Make the most of ActiveRecord object-relational mapping Utilize Ajax within your Rails applications Incorporate logins and authentication into your application Extend Rails with the best third-party plug-ins and write your own Integrate email services into your applications with ActionMailer Choose the right Rails production configurations Streamline deployment with Capistrano

"Business intelligence is the science of mining data and using it to derive business value. It typically requires complex tools such as Microsoft's Power BI. The goal of this video series is to show how to perform custom business analytics and build business dashboards using nothing but PowerShell. This video series is entirely hands on. It explains key concepts while actually building PowerShell-based business intelligence dashboards and applications."--Resource description page.

A comprehensive guide for deploying, configuring, and troubleshooting NetFlow and learning big data analytics technologies for cyber security Today's world of network security is full of cyber security vulnerabilities, incidents, breaches, and many headaches. Visibility into the network is an indispensable tool for network and security professionals and Cisco NetFlow creates an environment where network administrators and security professionals have the tools to understand who, what, when, where, and how network traffic is flowing. Network Security with NetFlow and IPFIX is a key resource for introducing yourself to and understanding the power behind the Cisco NetFlow solution. Omar Santos, a Cisco Product Security Incident Response Team (PSIRT) technical leader and author of numerous books including the CCNA Security 210-260 Official Cert Guide, details the importance of NetFlow and demonstrates how it can be used by large enterprises and small-to-medium-sized businesses to meet critical network challenges. This book also examines NetFlow's potential as a powerful network security tool. Network Security with NetFlow and IPFIX explores everything you need to know to fully understand and implement the Cisco Cyber Threat Defense Solution. It also provides detailed configuration and troubleshooting guidance, sample configurations with depth analysis of design scenarios in every chapter, and detailed case studies with real-life scenarios. You can follow Omar on Twitter: @santosomar NetFlow and IPFIX basics Cisco NetFlow versions and features Cisco Flexible NetFlow NetFlow Commercial and Open Source Software Packages Big Data Analytics tools and technologies such as Hadoop, Flume, Kafka, Storm, Hive, HBase, Elasticsearch, Logstash, Kibana (ELK) Additional Telemetry Sources for Big Data Analytics for Cyber Security Understanding big data scalability Big data analytics in the Internet of everything Cisco Cyber Threat Defense and NetFlow Troubleshooting NetFlow Real-world case studies

Overview Modern Python LiveLessons: Big Ideas and Little Code in Python provides developers with an approach to programming in Python that expresses big ideas succinctly, with the minimum of code, allowing the business logic to shine through. It does so using a number of relevant examples from current problems, including data analytics and social media. Description In this video training, Raymond Hettinger starts by introducing modern Python foundational skills, tools, and techniques in the first half of the lessons. In the second part he shows you how to apply the tools and techniques to a real application. About the Instructor Raymond Hettinger has been a Python Core Developer since 2001 and received the Python Software Foundation Distinguished Service Award in 2014. Currently, he runs an international Python training and consulting business. He is the author of many parts of Python, including itertools, collections, sets, sorted, enumerate, and reversed. Skill Level Intermediate What You Will Learn Core skills of modern Python that enable you to elegantly code powerful solutions succinctly and efficiently: How to use continuous and discreet functions in the random module, collections.Counter(), lambda, list operations, chained comparisons, and f-strings How to use random.choice() and random.sample(); do resampling, bootstrapping, and significance testing; and run simulations How to run static analysis on code with type hints and use static type checking How to use defaultdict for grouping, key functions for data ordering, and zip\* to transpose data, and how to flatten 2D data with multiple loops and list comprehension How to use k-means to implement unsupervised learning More defaultdict skills with which to pivot and accumulate data and reverse a one-to-many mapping How to use sorted, bisect, and merge and how to conserve memory with string interning How to normalize text and use the hashing tools in hashlib How to use Bottle to build REST APIs and web applications How to test using pytest, itertools, Hypothesis, pyflakes, mypy, and data validators Who Should Take This Course Developers looking to improve their modern Python's skills Course Requirements Basic understanding of programming and development Familiarity with the Python language About LiveLessons Video Training The LiveLessons Video Training series publishes hundreds of hands-on, expert-led video tutorials covering a wide selection of technology topics designed to t...