White Papers    Webcasts    Newsletters    Research Centers    Events    Magazine

| Topics | News | In Depth | Reviews | Blogs | Opinion | Shark Tank | IT Jobs | More |

**Applications**     App Development | Big Data | Business Intelligence/Analytics | Content/Document Management | CRM | Databases | Desktop Apps | Emerging Technologies | Enterprise Architecture | ERP | Open Source | Regulatory Compliance | Social Business | Unified Communications

Home > Applications > Business Intelligence/Analytics

# 60+ R resources to improve your data skills

By Sharon Machlis
January 15, 2014 05:02 PM ET          4 Comments

Share          g+1          Like    0

Prev page    1    2    3    Next page

### Videos

**Twotorials.** You'll either enjoy these snappy 2-minute "twotorial" videos or find them, oh, corny or over the top. I think they're both informative and fun, a welcome antidote to the typically dry how-to's you often find in statistical programming. Analyst Anthony Damico takes on R in 2-minute chunks, from "how to create a variable with R" to "how to plot residuals from a regression in R;" he also tackles an occasional problem such as "how to calculate your ten, fifteen, or twenty thousandth day on earth with R." I'd strongly recommend giving this a look if textbook-style instruction leaves you cold.

Sample "Twotorial" video.

**Google Developers' Intro to R.** This series of 21 short YouTube videos includes some basic R concepts, a few lessons on reshaping data and some info on loops. In addition, six videos focus on a topic that's often missing in R intros: working with and writing your own functions. This YouTube playlist offers a good programmer's introduction to the language -- just note that if you're looking to learn more about visualizations with R, that's not one of the topics covered.

This video in the Google Developers' R series introduces functions in R.

[Up and Running with R](#). This lynda.com video class covers the basics of topics such as using the R environment, reading in data, creating charts and calculating statistics. The curriculum is limited, but presenter Barton Poulson tries to explain what he's doing and why, not simply run commands. He also has a more in-depth 6-hour class, [R Statistics Essential Training](#). Lynda.com is a subscription service that starts at $25/month, but several of the videos are available free for you to view and see if you like the instruction style, and there's a 7-day free trial available.

[Coursera: Computing for Data Analysis](#). Coursera's free online classes are time-sensitive: You've got to enroll while they're taking place or you're out of luck. However, if there's no session starting soon, instructor Roger Peng, associate professor of biostatistics at Johns Hopkins University, [posted his lectures on YouTube](#); Revolution Analytics then collected them on a [handy single page](#). While I found some of these a bit difficult to follow at times, they are packed with information, and you may find them useful.

Intro video for the Coursera Computing for Data Analysis course

Coursera: Data Analysis. This was more of an applied statistics class that uses R as opposed to one that teaches R; but if you've got the R basics down and want to see it in action, this might be a good choice. There are no upcoming scheduled sessions for this at Coursera, but instructor Jeff Leek -- an assistant professor of biostatistics at Johns Hopkins, [posted his lecture videos on YouTube](#), and [Revolution Analytics collected links to them all](#) by week.

Intro video for Coursera Data Analysis online class

Coursera: Statistics One If you don't mind going through a full, 12-week stats course along with learning R, Princeton University senior lecturer Andrew Conway's class includes an introduction to R. "All the examples and assignments will involve writing code in R and interpreting R output," says the course description. You can check the Coursera link to see if and when future sessions are scheduled.

### Other online introductions and tutorials

Try R This beginner-level interactive online course will probably seem somewhat basic for anyone who has experience in another programming language. However, even if the focus on pirates and plunder doesn't appeal to you, it may be a good way to get some practice and get more comfortable using R syntax.

An Introduction to R. Let's not forget the R Project site itself, which has numerous resources on the language including this intro. The style here is somewhat dry, but you'll know you're getting accurate, up-to-date information from the R Core Team.

**How to Visualize and Compare Distributions**. This short and highly readable Flowing Data tutorial goes over traditional visualizations such as histograms and box plots. With downloadable code.

Learning statistics with R: A tutorial for psychology students and other beginners by Daniel Navarro at the University of Adelaide (PDF). 500+ pages that go from "Why do we learn statistics" and "Statistics in every day life" to linear regression and ANOVA (ANalysis Of VAriance). If you don't need/want a primer in statistics, there are still many sections that focus specifically on R.

R Tutorial. A reasonably robust beginning guide that includes sections on data types, probability and plots as well as sections focused on statistical topics such as linear regression, confidence intervals and p-values. By Kelly Black, associate professor at Clarkson University.

r4stats.com. This site is probably best known in the R community for author Bob Muenchen's tracking of R's popularity vs. other statistical software. However, in the Examples section, he's got some R tutorials such as basic graphics and graphics with ggplots. He's also posted code for tasks such as data import and extracting portions of your data comparing R with alternatives such as SAS and SPSS.

Aggregating and restructuring data. This excerpt from R in Action goes over one of the most important subjects in using R: reshaping your data so it's in the format needed for analysis and then grouping and summarizing that data by factors. In addition to touching on base-R functions like the useful-but-not-always-well-known aggregate(), it also covers melt() and cast() with the

reshape package. By Robert I. Kabacoff.

Getting started with charts in R. From the popular FlowingData visualization website run by Nathan Yau, this tutorial offers examples of basic plotting in R. Includes downloadable source code. (While many FlowingData tutorials now require a paid membership to the site, as of May 2013 this one did not.)

Using R for your basic statistical Needs LISA Short Course. Aimed at those who already know stats but want to learn R, this is a *file of R code with comments*, making it easy to run (and alter) the code yourself. The programming is easy to follow, but if you haven't brushed up on your stats lately, be advised that comments such as

> Suppose we'd like to produce a reduced set of independent variables. We could use the function # step() to perform stepwise model selection based on AIC which is -2log(Likelihood) + kp? Where k=2 # and p = number of model parameters (beta coefficients).

may be tough to follow. By Nels Johnson at Virginia Tech's Laboratory for Interdisciplinary Statistical Analysis.

Producing Simple Graphs with R. Although 6+ years old now, this gives a few more details and examples for several of the visualization concepts touched on in our beginner's guide. By Frank McCown at Harding University.

Short courses. Materials from various courses taught by Hadley Wickham, chief scientist at RStudio and author of several popular R packages including ggplot2. Features slides and code for topics beyond beginning R, such as R development master class.

Quick introduction to ggplot2. Very nice, readable and -- as promised -- quick introduction to the ggplot2 add-on graphic package in R, incuding lots of sample plots and code. By Google engineer Edwin Chen.

ggplot2 workshop presentation. This robust, single-but-very-long-page tutorial offers a detailed yet readable introduction to the ggplot2 graphing package. What sets this apart is its attention to its theoretical underpinnings while also offering useful, concrete examples. From a presentation at the Advances in Visual Methods for Linguistics conference. By Josef Fruehwald, then a PhD candidate at the University of Pennsylvania.

ggplot2_tutorial.R. This online page at RPubs.com, prepared for the Santa Barbara R User Group, includes a lot of commented R code and graph examples for creating data visualizations with ggplot2.

More and Fancier Graphics. This one-page primer features loads of examples, including explainers of a couple of functions that let you interact with R plots, locator() and identify() as well as a lot of core-R plotting customization. By William B. King, Coastal Carolina University.

ggplot2 Guide. This ggplot2 explainer skips the simpler qplot option and goes straight to the more powerful but complicated ggplot command, starting with basics of a simple plot and going through geoms (type of plot), faceting (plotting by subsets), statistics and more. By data analyst George Bull at Sharp Statistics.

Using R. In addition to covering basics, there are useful sections on data manipulation -- an important topic not easily covered for beginners -- as well as getting statistical summaries and generating basic graphics with base R, the Lattice package and ggplot2. Short explainers are interspersed with demo code, making this useful as both a tutorial and reference site. By analytics consultant Alastair Sanderson, formerly research fellow in the Astrophysics & Space Research (ASR) Group at the University of Birmingham in the U.K.

The Undergraduate Guide to R. This is a highly readable, painless introduction

to R that starts with installation and the command environment and goes through data types, input and output, writing your own functions and programming tips. Viewable as a Google Doc or downloadable as a PDF, plus accompanying files. By Trevor Martin, then at Princeton University, funded in part by an NIH grant.

How to turn CSV data into interactive visualizations with R and rCharts. 9-page slideshow gives step-by-step instructions on various options for generating interactive graphics. The charts and graphs use jQuery libraries as the underlying technology but only a couple of line of R code are needed. By Sharon Machlis, Computerworld.

Higher Order Functions in R. If you're at the point where you want to apply functions on multiple vectors and data frames, you may start bumping up against the limits of R's apply family. This post goes over 6 extremely useful base R functions with readable explanations and helpful examples. By John Mules White, "soon-to-be scientist at Facebook."

Introductory Econometrics Using Quandl and R While this does indeed promote Quandl as your data source, that data *is* free, and for those interested in using R for regressions, you'll find several detailed walk-throughs from data import through statistical analysis.

***Next: More free downloads from academia, communities, search, software and more***.

Prev page    1    2    3    Next page

**FREE Download:** IT Certification Study Tips on the Cheap! ▶

Comments (4 Comments)        Print

Share        g+1        Like  ◁ 0

## Today's Top Stories

- Microsoft grows revenue, improves profits in Q2
- Lumia sales slump sabotages Microsoft's strategy
- Microsoft loses money on each Surface sold
- The Internet of Things for sports is quickly taking shape
- Obama in awkward spot after privacy board calls NSA snooping illegal
- Read this before you buy another hard drive
- Target breach shows payment system security needs less talk, more action

## From CIO.com | CSOonline

- Top Android Widgets for Your Smartphone and Tablet
- 12 Big BYOD Predictions for 2014
- Does Google Authorship Matter for SEO?
- What to Look for When Hiring Social Media Tech Talent in 2014
- Slideshow: 5 ways to lock down your mobile device
- Slideshow: 10 mistakes companies make after a data breach
- How to rob a bank: A social engineering walk through
- Which smartphone is the most secure?

## Additional Resources

WHITE PAPER
**How Cloud Communications Reduce Costs and Increase Productivity**
Small and midsize businesses are moving to the cloud to host their communications capabilities. Learn how enterprise-quality phone benefits, online management, conferencing, auto attendant, and ease of use are built into a system that is half the cost of a PBX.

Read now.

Our Commenting Policies

## 4 comments                                    ⭐ ‹ 0

|   | Join the discussion… |
|---|---|

Newest ⌄          Community                                    Share ⬈       Login ⌄

**Jan Galkowski** • 8 days ago
There's a similar and sometimes overlapping list for Bayesian
computation at the ISBA, specifically http://bayescomp.wikidot.com/s...
⌃ | ⌄ • Reply • Share ›

**lpf1836** • 6 months ago
The next session of Jeff Leek's Coursera course is scheduled to begin on
Oct. 28
3 ⌃ | ⌄ • Reply • Share ›

**cmatere** • 6 months ago
This is an excellent list of R resources.Thank you very much Sharon for
this wonderful piece of work.

Crispin Matere
National AIDS Control Council,
Kenya
2 ⌃ | ⌄ • Reply • Share ›

**hrlngrv** • 6 months ago
R is the offspring of S/S-Plus, which was developed by John M.
Chambers. Chambers's book *Programming with Data: A Guide to the S
Language* is just as relevant for R. It's a very good text, written in the Bell
Labs style. Maybe as much about stats as it is about S (so also R), which
to me isn't a bad thing.
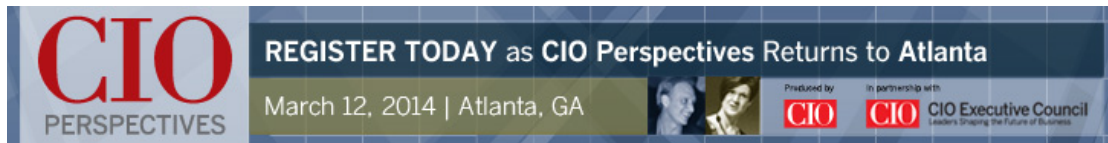5 ⌃ | ⌄ • Reply • Share ›

✉ Subscribe         Ⓓ Add Disqus to your site

## Business Intelligence/Analytics White Papers | **All Business Intelligence/Analytics White Papers**

| | |
|---|---|
| The top five ways to get started with big data | Operational Analytics from A to Z |
| IBM PureData System: A Giant Leap Forward in Delivering Data Services | Extreme Warehouse Speed for Fast Business Decisions |
| Must-have capabilities for today's warehouse environment | Understanding big data so you can act with confidence |
| Build your Sender Reputation in Four Steps | IT Security by the Numbers: Calculating the Total Cost of Protection |
| The Threat Landscape | Who's Spying on You? |
| CRM's Dirty Little Secret: How to Avoid CRM Sticker Shock | Cisco Mobile Security Survey: Research Highlights |
| Infographic--Cisco Mobile Security Study | Mobilize Magazine--Innovating for a Mobile World |
| Deploy Your BYOD Solution--Cisco Design Guide | Forrester Research: Secure Mobile Collaboration |
| The Value of BYOD--A Cisco ISBG Economic Analysis | Analytics: The Real-World Use of Big Data |
| Geeknet: Business Analytics for Midsize Businesses: Challenges and Benefits | Frost & Sullivan Answers on Demand: Bringing the Power of Advanced Analytics to Midsize Businesses |

## Sponsored Links

Stay secure with Panasonic Toughbook○ mobile solutions.

Online Master of Science in Information Systems at Northwestern University

ITwhitepapers.com - Access thousands of white papers on 300+ technical topics.

Leverage Your Cisco infrastructure for Superior Application Performance

Learn about the AMD Virtual Experience

"The Definitive Guide to Security Management" Chapter 1: Introduction to Security Management

Introducing: Project Icebreaker

MIT Sloan Exec Ed-short courses, cutting-edge insights. Enroll today

Download Microsoft's latest Data Protection Management tool

Not All QSAs Are Created Equal: What You Should Know Before You Buy

The arrival of Serial Attached SCSI (SAS) marks a new era in storage scalability

The AMD Virtual Experience Virtual Trade Show

"The Definitive Guide to Security Management" Chapter 1: Introduction to Security Management

**Skip to top**

**About Us        Advertise        Contacts        Editorial Calendar        Subscribe to Computerworld Magazine        Help Desk
Newsletters        Careers at IDG        Privacy Policy        Reprints        Site Map        Ad Choices**

**The IDG Network:**   CFOworld │ CIO │ CITEworld │ Computerworld │ CSO │ DEMO │ IDC │ IDG │ IDG Connect │ IDG Knowledge Hub │ IDG TechNetwork │ IDG Ventures │ InfoWorld │ ITwhitepapers │ ITworld │ JavaWorld │ LinuxWorld │ Macworld │ Network World │ PC World │ TechHive │ Technology Briefcase