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May 31 · 12 min read

# The best Data Science courses on the internet, ranked by your reviews

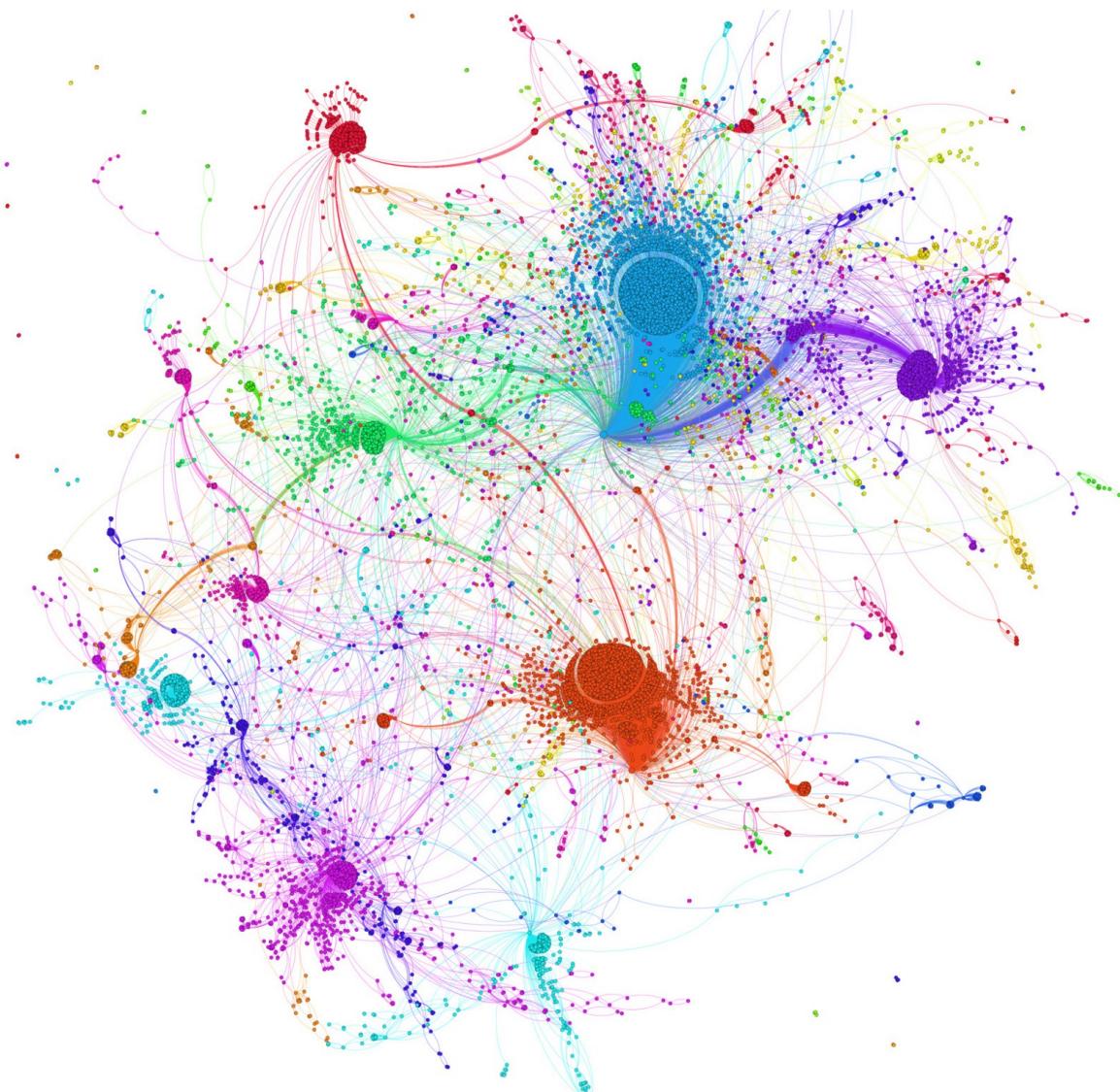


Photo by Quinlan Pfiffer

A year and a half ago, I dropped out of one of the best computer science programs in Canada. I started creating my own data science master's program using online resources. I realized that I could learn

everything I needed through edX, Coursera, and Udacity instead. And I could learn it faster, more efficiently, and for a fraction of the cost.

I'm almost finished now. I've taken many data science-related courses and audited portions of many more. I know the options out there, and what skills are needed for learners preparing for a data analyst or data scientist role. So I started creating a review-driven guide that recommends the best courses for each subject within data science.

For the first guide in the series, I recommended a few coding classes for the beginner data scientist. Then it was statistics and probability classes. Then introductions to data science. Then data visualization. Machine learning was the fifth and latest guide. And now I'm back to conclude this series with even more resources.

## **Here's a summary of all my previous guides, plus recommendations for 13 other data science topics.**

For each of the five major guides in this series, I spent several hours trying to identify every online course for the subject in question, extracting key bits of information from their syllabi and reviews, and compiling their ratings. My goal was to identify the three best courses available for each subject and present them to you.

The 13 supplemental topics—like databases, big data, and general software engineering—didn't have enough courses to justify full guides. But over the past eight months, I kept track of them as I came across them. I also scoured the internet for courses I may have missed.

For these tasks, I turned to none other than the open source Class Central community, and its database of thousands of course ratings and reviews.

The screenshot shows the homepage of Class Central. At the top, there is a dark banner with the text "FIND THE BEST ONLINE COURSES FROM TOP UNIVERSITIES" in large, bold, white letters. Below the banner are two buttons: "MEET YOUR NEXT COURSE" (blue) and "BROWSE SUBJECTS" (white). A small note below the buttons says "no sign up required". The main content area features several course cards under a "SPOTLIGHT" heading. The first card is for "The Nature of Code", which discusses programming strategies for natural systems. The second card is for "Modern & Contemporary American Poetry ('ModPo')", featuring three portraits of poets. The third card is for "Learning How to Learn: Powerful mental tools to help you master tough subjects", which offers tips for effective learning. The fourth card is for "Medical Neuroscience", showing a 3D model of a brain. The fifth card is for "He Named Me Malala: Girls in STEM", featuring a photo of a young girl in a classroom. Below these cards are five smaller, partially visible images.

Class Central's homepage.

Since 2011, Class Central founder [Dhawal Shah](#) has kept a closer eye on online courses than arguably anyone else in the world. Dhawal personally helped me assemble this list of resources.

## How we picked courses to consider

Each course within each guide must fit certain criteria. There were subject-specific criteria, then two common ones that each guide shared:

1. **It must be on-demand or offered every few months.**
2. **It must be an interactive online course, so no books or read-only tutorials.** Though these are viable ways to learn, this guide focuses on courses. Courses that are strictly videos (i.e. with no quizzes, assignments, etc.) are also excluded.

We believe we covered every notable course that fit the criteria in each guide. There is always a chance that we missed something, though. Please let us know in each guide's comments section if we left a good course out.

## How we evaluated courses

We compiled average ratings and number of reviews from Class Central and other review sites to calculate a weighted average rating for each course. We read text reviews and used this feedback to supplement the numerical ratings.

We made subjective syllabus judgment calls based on a variety of factors specific to each subject. The criteria in our intro to programming guide, for example:

1. **Coverage of the fundamentals of programming.**
2. **Coverage of more advanced, but useful, topics in programming.**
3. **How much of the syllabus is relevant to data science?**

**Here are the best courses overall for each of these topics. Together these form a comprehensive data science curriculum.**

### Subject #1: Intro to Programming

[Learn to Program: The Fundamentals \(LPT1\)](#) and [Crafting Quality Code \(LPT2\)](#) by the University of Toronto via Coursera

The University of Toronto's Learn to Program series has an excellent mix of content difficulty and scope for the beginner data scientist. Taught in Python, the series has a 4.71-star weighted average rating over 284 reviews.



# UNIVERSITY OF TORONTO

The University of Toronto offers Learn to Program: The Fundamentals (LPT1) and Crafting Quality Code (LPT2), taught by Jennifer Campbell and Paul Gries, via Coursera.

An Introduction to Interactive Programming in Python (Part 1) and (Part 2) by Rice University via Coursera

Rice University's Interactive Programming in Python series contains two of the best online courses ever. They skew towards games and interactive applications, which are less applicable topics in data science. The series has a 4.93-star weighted average rating over 6,069 reviews.

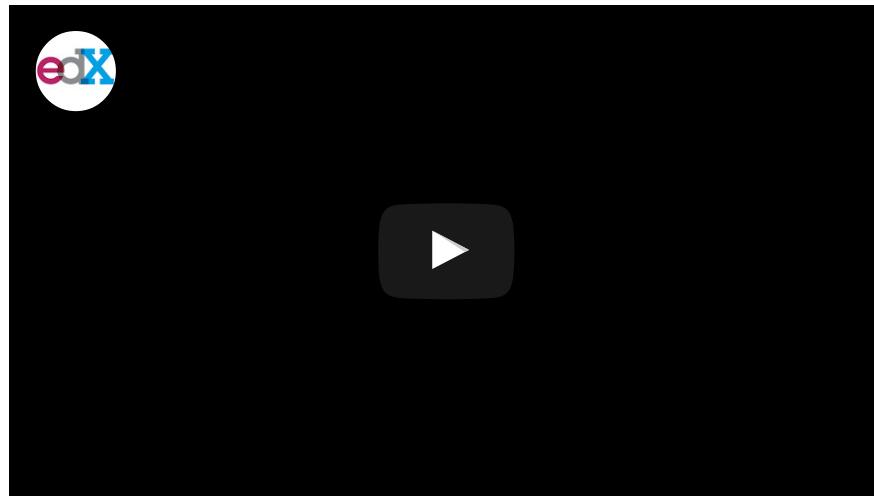
R Programming Track by DataCamp

If you are set on learning R, DataCamp's R Programming Track effectively combines programming fundamentals and R syntax instruction. It has a 4.29-star weighted average rating over 14 reviews.

## Subject #2: Statistics & Probability

Foundations of Data Analysis—Part 1: Statistics Using R and Part 2: Inferential Statistics by the University of Texas at Austin via edX

The courses in the UT Austin's Foundations of Data Analysis series are two of the few with great reviews that also teach statistics and probability with a focus on coding up examples. The series has a 4.61-star weighted average rating over 28 reviews.



The promo video for UT Austin's Foundations of Data Analysis, taught by Michael J. Mahometa.

### Statistics with R Specialization by Duke University via Coursera

Duke's Statistics with R Specialization, which is split into five courses, has a comprehensive syllabus with full sections dedicated to probability. It has a 3.6-star weighted average rating over 5 reviews, but the course it was based upon has a 4.77-star weighted average rating over 60 reviews.

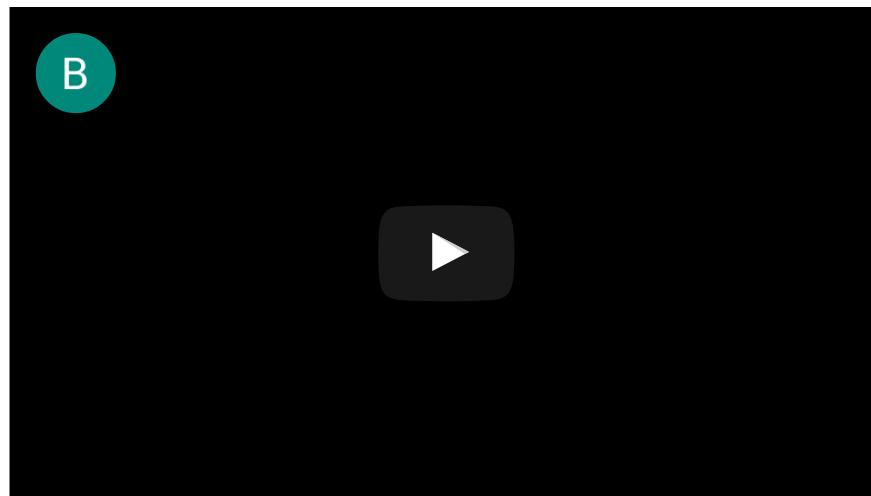
### Introduction to Probability—The Science of Uncertainty by the Massachusetts Institute of Technology (MIT) via edX

MIT's Intro to Probability course by far has the highest ratings of the courses considered in the statistics and probability guide. It exclusively covers probability in great detail, plus it is longer (15 weeks) and more challenging than most MOOCs. It has a 4.82-star weighted average rating over 38 reviews.

### **Subject #3: Intro to Data Science**

#### Data Science A-Z™: Real-Life Data Science Exercises Included by Kirill Eremenko and the SuperDataScience Team via Udemy

Kirill Eremenko's Data Science A-Z excels in breadth and depth of coverage of the data science process. The instructor's natural teaching ability is frequently praised by reviewers. It has a 4.5-star weighted average rating over 5,078 reviews.



The promo video for Data Science A-Z™, taught by Kirill Eremenko.

### Intro to Data Analysis by Udacity

Udacity's Intro to Data Analysis covers the data science process cohesively using Python. It has a 5-star weighted average rating over 2 reviews.

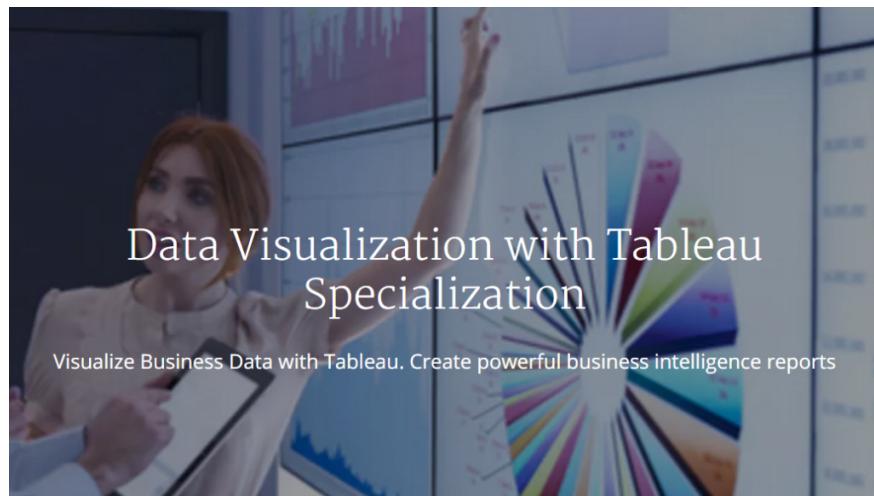
### Data Science Fundamentals by Big Data University

Big Data University's Data Science Fundamentals covers the full data science process and introduces Python, R, and several other open-source tools. There are no reviews for this course on the review sites used for this analysis.

### **Subject #4: Data Visualization**

#### Data Visualization with Tableau Specialization by the University of California, Davis via Coursera

A five-course series, UC Davis' Data Visualization with Tableau Specialization dives deep into visualization theory. Opportunities to practice Tableau are provided through walkthroughs and a final project. It has a 4-star weighted average rating over 2 reviews.



### Data Visualization with ggplot2 Series by DataCamp

Endorsed by ggplot2 creator Hadley Wickham, a substantial amount of theory is covered in DataCamp's Data Visualization with ggplot2 series. You will know R and its quirky syntax quite well leaving these courses. There are no reviews for these courses on the review sites used for this analysis.

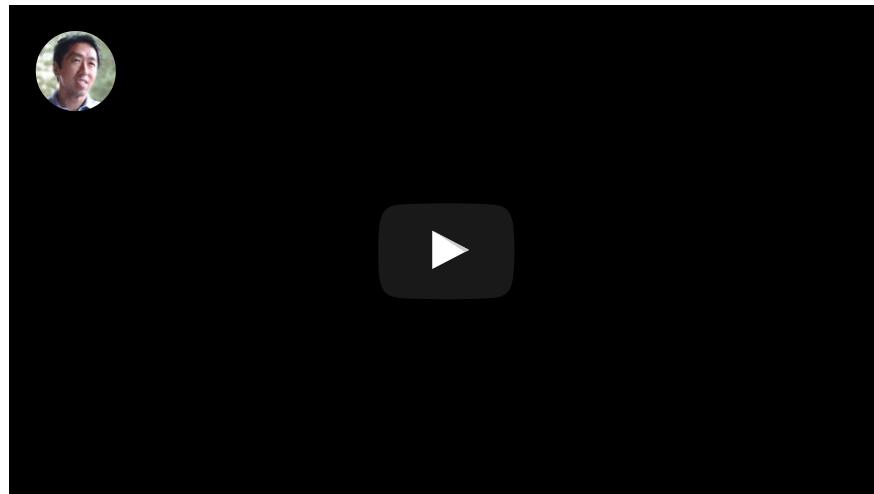
Tableau 10 Series ([Tableau 10 A-Z](#) and [Tableau 10 Advanced Training](#))  
by Kirill Eremenko and the SuperDataScience Team on Udemy

An effective practical introduction, Kirill Eremenko's Tableau 10 series focuses mostly on tool coverage (Tableau) rather than data visualization theory. Together, the two courses have a 4.6-star weighted average rating over 3,724 reviews.

## **Subject #5: Machine Learning**

Machine Learning by Stanford University via Coursera

Taught by the famous Andrew Ng, Google Brain founder and former chief scientist at Baidu, Stanford University's Machine Learning covers all aspects of the machine learning workflow and several algorithms. Taught in MATLAB or Octave, It has a 4.7-star weighted average rating over 422 reviews.



The promo video for Stanford University's Machine Learning, taught by Andrew Ng.

### Machine Learning by Columbia University via edX

A more advanced introduction than Stanford's, Columbia University's Machine Learning is a newer course with exceptional reviews and a revered instructor. The course's assignments can be completed using Python, MATLAB, or Octave. It has a 4.8-star weighted average rating over 10 reviews.

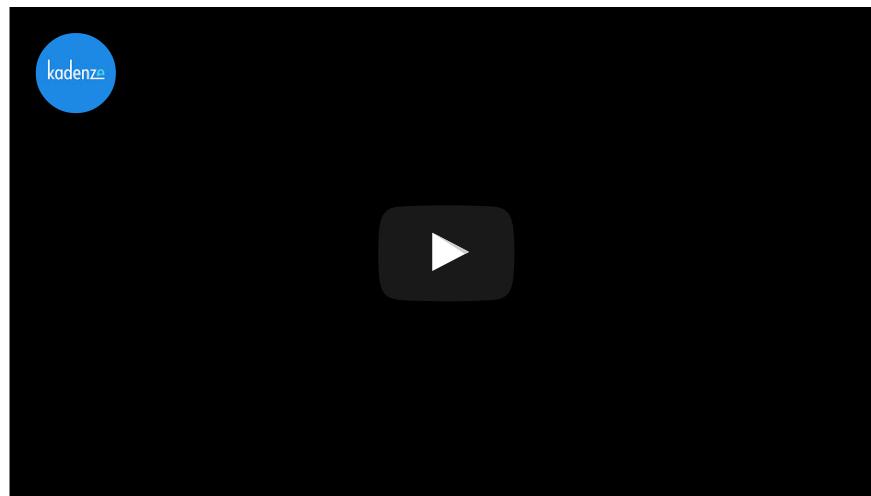
### Machine Learning A-Z™: Hands-On Python & R In Data Science by Kirill Eremenko and Hadelin de Ponteves via Udemy

Kirill Eremenko and Hadelin de Ponteves' Machine Learning A-Z is an impressively detailed offering that provides instruction in both Python and R, which is rare and can't be said for any of the other top courses. It has a 4.5-star weighted average rating over 8,119 reviews.

### **Subject #6: Deep Learning**

#### Creative Applications of Deep Learning with TensorFlow by Kadenze

Parag Mital's Creative Applications of Deep Learning with Tensorflow adds a unique twist to a technical subject. The "creative applications" are inspiring, the course is professionally produced, and the instructor knows his stuff. Taught in Python, It has a 4.75-star weighted average rating over 16 reviews.



The promo video for Kadenze's Creative Applications of Deep Learning with TensorFlow, taught by Parag Mital.

### Neural Networks for Machine Learning by the University of Toronto via Coursera

Learn from a legend. Geoffrey Hinton is known as the “godfather of deep learning” is internationally distinguished for his work on artificial neural nets. His Neural Networks for Machine Learning is an advanced class. Taught in Octave with exercises also in Python, it has a 4.11-star weighted average rating over 35 reviews.

### Deep Learning A-Z™: Hands-On Artificial Neural Networks by Kirill Eremenko and Hadelin de Ponteves via Udemy

Deep Learning A-Z is an accessible introduction to deep learning, with intuitive explanations from Kirill Eremenko and helpful code demos from Hadelin de Ponteves. Taught in Python, it has a 4.6-star weighted average rating over 1,314 reviews.

## **And here's our top course pick for each of the supplementary subjects within data science.**

### **Python & its tools**

Python Programming Track by DataCamp, plus their individual pandas courses:

- pandas Foundations

- [Manipulating DataFrames with pandas](#)
- [Merging DataFrames with pandas](#)

DataCamp's code-heavy instruction style and in-browser programming environment are great for learning syntax. Their Python courses have a 4.64-star weighted average rating over 14 reviews. Udacity's Intro to Data Analysis, one of our recommendations for intro to data science courses, covers NumPy and pandas as well.

## R & its tools

[R Programming Track](#) by DataCamp, plus their individual dplyr and data.table courses:

- [Data Manipulation in R with dplyr](#)
- [Joining Data in R with dplyr](#)
- [Data Analysis in R, the data.table Way](#)

Again, DataCamp's code-heavy instruction style and in-browser programming environment are great for learning syntax. Their R Programming Track, which is also one of our recommendations for programming courses in general, effectively combines programming fundamentals and R syntax instruction. The series has a 4.29-star weighted average rating over 14 reviews.

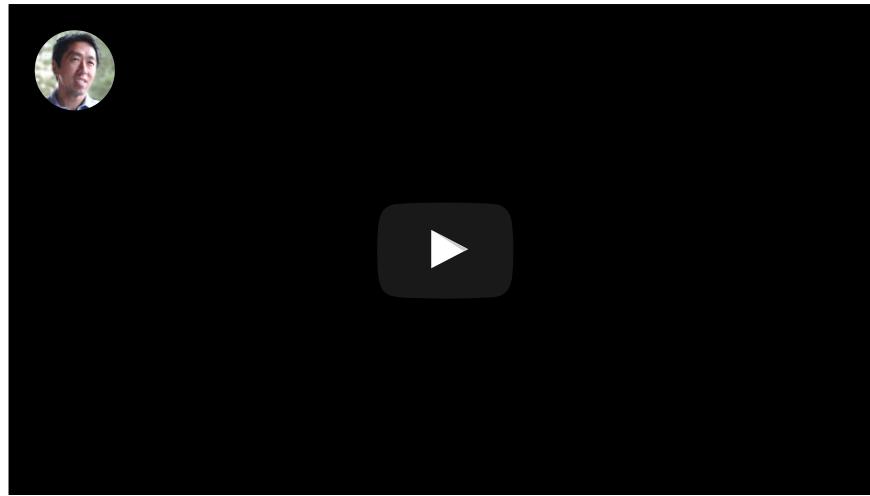


## Databases & SQL

[Introduction to Databases](#) by Stanford University via Stanford OpenEdx (note: [reviews](#) from the deprecated version on Coursera)

Stanford University's Introduction to Databases covers database theory comprehensively while introducing several open source tools.

Programming exercises are challenging. Jennifer Widom, now the Dean of Stanford's School of Engineering, is clear and precise. It has a 4.61-star weighted average rating over 59 reviews.



The promo video for Stanford University's Introduction to Databases, taught by Jennifer Widom.

## Data Preparation

Importing & Cleaning Data Tracks by DataCamp:

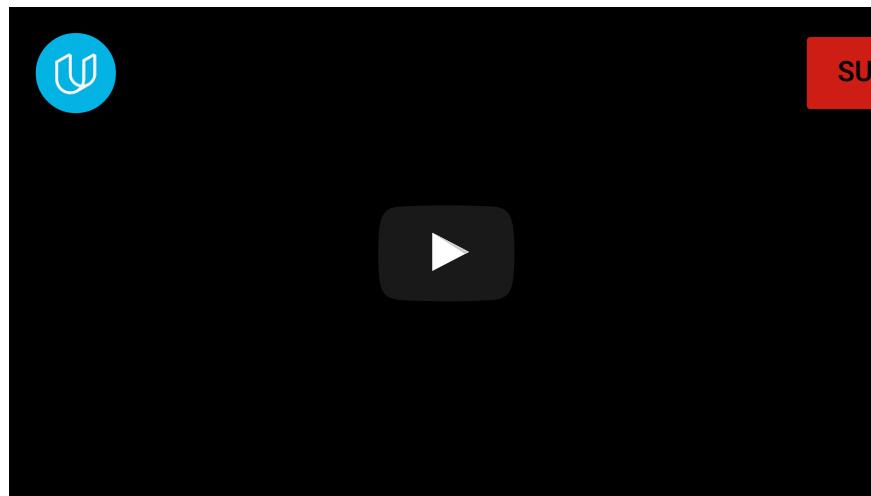
- Importing & Cleaning Data with Python Track
- Importing & Cleaning Data with R Track

DataCamp's Importing & Cleaning Data Tracks (one in Python and one in R) excel at teaching the mechanics of preparing your data for analysis and/or visualization. There are no reviews for these courses on the review sites used for this analysis.

## Exploratory Data Analysis

Data Analysis with R by Udacity and Facebook

Udacity's Data Analysis with R is an enjoyable introduction to exploratory data analysis. The expert interviews with Facebook's data scientists are insightful and inspiring. The course has a 4.58-star weighted average rating over 19 reviews. It also serves as a light introduction to R.



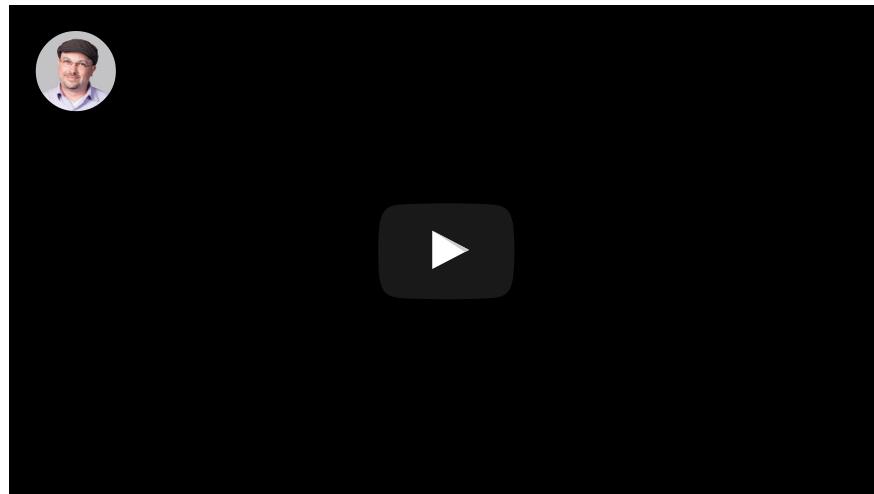
An interview with Aude Hofleitner, Facebook Data Scientist, in Udacity's Data Analysis with R.

## Big Data

The Ultimate Hands-On Hadoop—Tame your Big Data! by Frank Kane via Udemy, then if you want more on specific tools (all by Frank Kane via Udemy):

- Taming Big Data with Apache Spark and Python—Hands On!
- Taming Big Data with MapReduce and Hadoop—Hands On!
- Apache Spark 2.0 with Scala—Hands On with Big Data!
- Taming Big Data with Spark Streaming and Scala—Hands On!

Frank Kane's Big Data series teaches all of the most popular big data technologies, including over 25 in the "Ultimate" course alone. Kane shares his knowledge from a decade of industry experience working with distributed systems at Amazon and IMDb. Together, the courses have a 4.52-star weighted average rating over 6,932 reviews.



The promo video for Frank Kane's The Ultimate Hands-On Hadoop—Tame your Big Data!

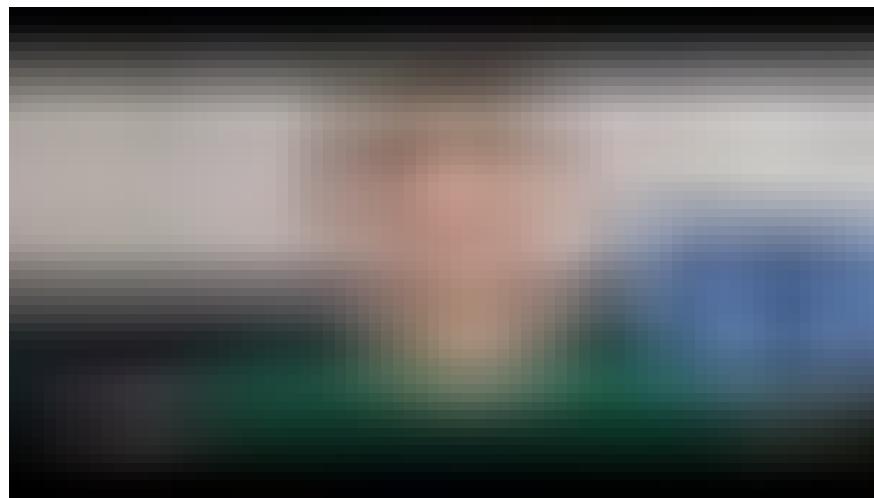
## Software Skills

Software Testing by Udacity

Software Debugging by Udacity

Version Control with Git and GitHub & Collaboration by Udacity  
(updates to Udacity's popular How to Use Git & GitHub course)

Software skills are an oft-overlooked part of a data science education. Udacity's testing, debugging, and version control courses introduce three core topics relevant to anyone who deals with code, especially those in team-based environments. Together, the courses have a 4.34-star weighted average rating over 68 reviews. Georgia Tech and Udacity have a new course that covers software testing and debugging together, though it is more advanced and not all relevant for data scientists.



The intro video for Udacity's GitHub & Collaboration, taught by Richard Kalehoff.

## Miscellaneous

[Building a Data Science Team](#) by Johns Hopkins University via Coursera

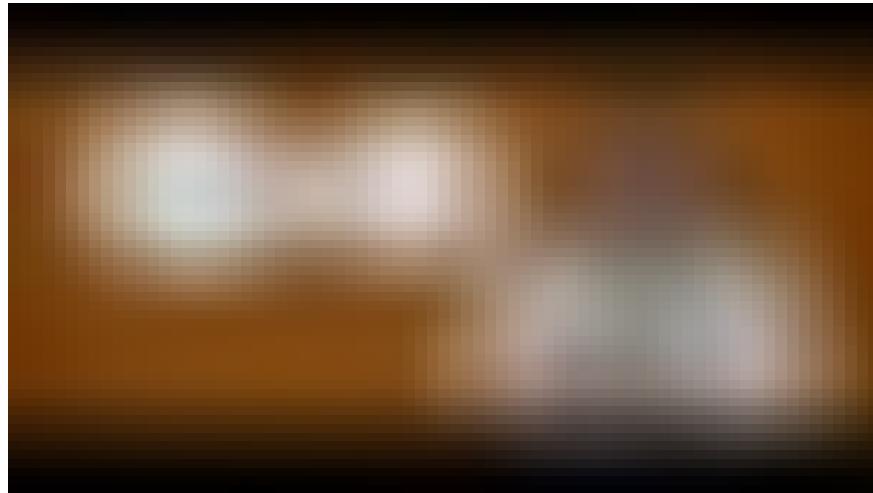
[Learning How to Learn: Powerful mental tools to help you master tough subjects](#) by Dr. Barbara Oakley and the University of California, San Diego via Coursera

[Mindshift: Break Through Obstacles to Learning and Discover Your Hidden Potential](#) by Dr. Barbara Oakley and McMaster University via Coursera

Johns Hopkins University's Building a Data Science Team provides a useful peek into data science in practice. It is an extremely short course that can be completed in a handful of hours and audited for free. Ignore its 3.41-star weighted average rating over 12 reviews, some of which were likely from paying customers.

Dr. Barbara Oakley's Learning How to Learn and Mindshift aren't data science courses per se. Learning How to Learn, the [most popular online course ever](#), covers best practices shown by research to be most effective for mastering tough subjects, including memory techniques and dealing with procrastination. In Mindshift, she demonstrates how to get the most out of online learning and MOOCs, how to seek out and work with mentors, and the secrets to avoiding career ruts and general ruts in life. These are two courses that *everyone* should take. They have a 4.74-star and a 4.87-star weighted average rating over 959

and 407 reviews, respectively. Both courses are four weeks in duration.



The promo video for Learning How to Learn, taught by Dr. Barbara Oakley.

## This Future of This Guide

This Data Science Career Guide will continue to be updated as new courses are released and ratings and reviews for them are generated.

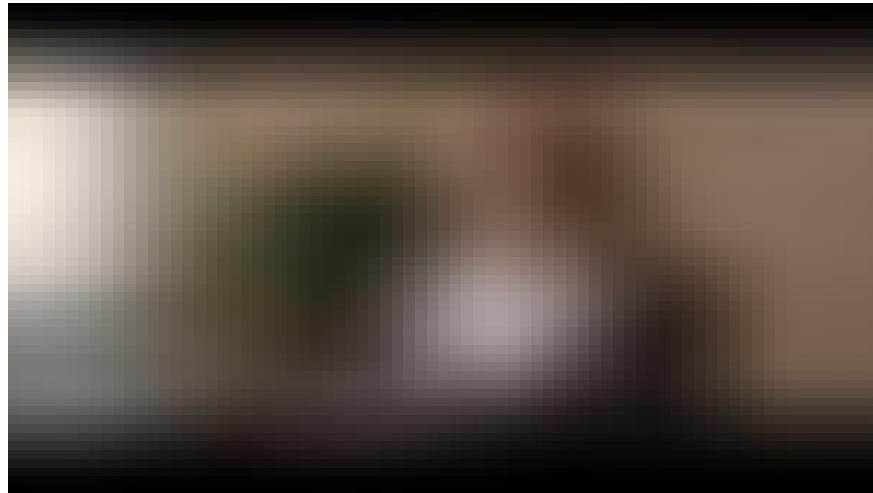
Are you passionate about another discipline (e.g. Computer Science)? Would you like to help educate the world? If you are interested in creating a Career Guide similar in structure to this one, drop us a note at [guides@class-central.com](mailto:guides@class-central.com).

## My Future

As for my future, I'm excited to share that I have taken a position with Udacity as a Content Developer. That means I'll be creating and teaching courses. That also means that this guide will be updated by somebody else.

I'm joining Udacity because I believe they are creating the best education product on the planet. Of all of the courses I have taken, online or at university, I learned best while enrolled a Nanodegree. They are incorporating the latest in pedagogy and production, and still boast the best-in-class project review system, upbeat instructors, and healthy student and career support teams. Though a piecewise approach like the one we took in this guide can work, a cohesive

program with projects and reviews throughout is much more student-friendly.



What is a Nanodegree?

Updating the [Data Analyst Nanodegree](#) is my first task, which is a part of a larger effort to create a clear path of Nanodegrees for all things data. Students will soon be able to start from scratch with data basics at Udacity and progress all the way through [machine learning](#), [artificial intelligence](#), and even [self-driving cars](#) if they wish.

## Wrapping it Up

This is the final piece of a six-piece series that covers the best online courses for launching yourself into the data science field. We covered programming in the [first article](#), statistics and probability in the [second article](#), intros to data science in the [third article](#), data visualization in the [fourth](#), and machine learning in the [fifth](#).

Every single Machine Learning course on the internet, ranked by your reviews

[medium.freecodecamp.com](https://medium.freecodecamp.com/the-best-data-science-courses-on-the-internet-ranked-by-your-reviews-6dc5b910ea40)



Here, we summarized the above five articles, and recommended the best online courses for other key topics such as databases, big data, and even software engineering.

If you're looking for a complete list of Data Science online courses, you can find them on Class Central's [Data Science and Big Data](#) subject page.

If you enjoyed reading this, check out some of [Class Central's](#) other pieces:

Here are 250 Ivy League courses you can take online right now for free

250 MOOCs from Brown, Columbia, Cornell, Dartmouth, Harvard, Penn, Princeton, and Yale.

[medium.freecodecamp.com](https://medium.freecodecamp.com/the-50-best-free-online-university-courses-according-to-data-10a2a2f3a2d1)



The 50 best free online university courses according to data

When I launched Class Central back in November 2011, there were around 18 or so free online courses, and almost all of...

[medium.freecodecamp.com](https://medium.freecodecamp.com/the-50-best-free-online-university-courses-according-to-data-10a2a2f3a2d1)



If you found this helpful, click the so more people will see it here on Medium.

*This is a modified version of my original article published on Class Central, where a simple list of the courses mentioned here is also provided.*

