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SELF-PACED LEARNING

A Compilation of Free Data Science Resources

For those interested in learning data science



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Free Data Science Resources!

The background of this section is a photograph of a bookshelf filled with books of various colors (blue, red, brown, white). A white rectangular box with a red border is centered over the books, containing the title and subtitle.

For Learning On Your Own

Want to teach yourself data science? Don't know where to start? Or, maybe you want to deepen your understanding of certain topics? Keep reading.

I've sorted a compilation of free resources by media type, and some of them may contain a mix of topics such as statistics, data analysis, python, machine learning, and/or deep learning. I will state (whenever it is applicable) when a resource is for just one data science topic in particular. There are also lots of websites out there to help you learn/practice coding skills in R, Python, SQL, etc. (HackerRank is a fun one), but this article will focus more on ones that help you learn the concepts of data science and how to use coding languages in a data analysis/machine learning application.

Happy learning!

Websites

Data Science 101

This website has an awesome archive of resources (the heading for this section links directly to the free ones). From **textbooks** to **Ivy League course notes** to **blog posts**, you can learn a ton from Data Science 101.

GitHub

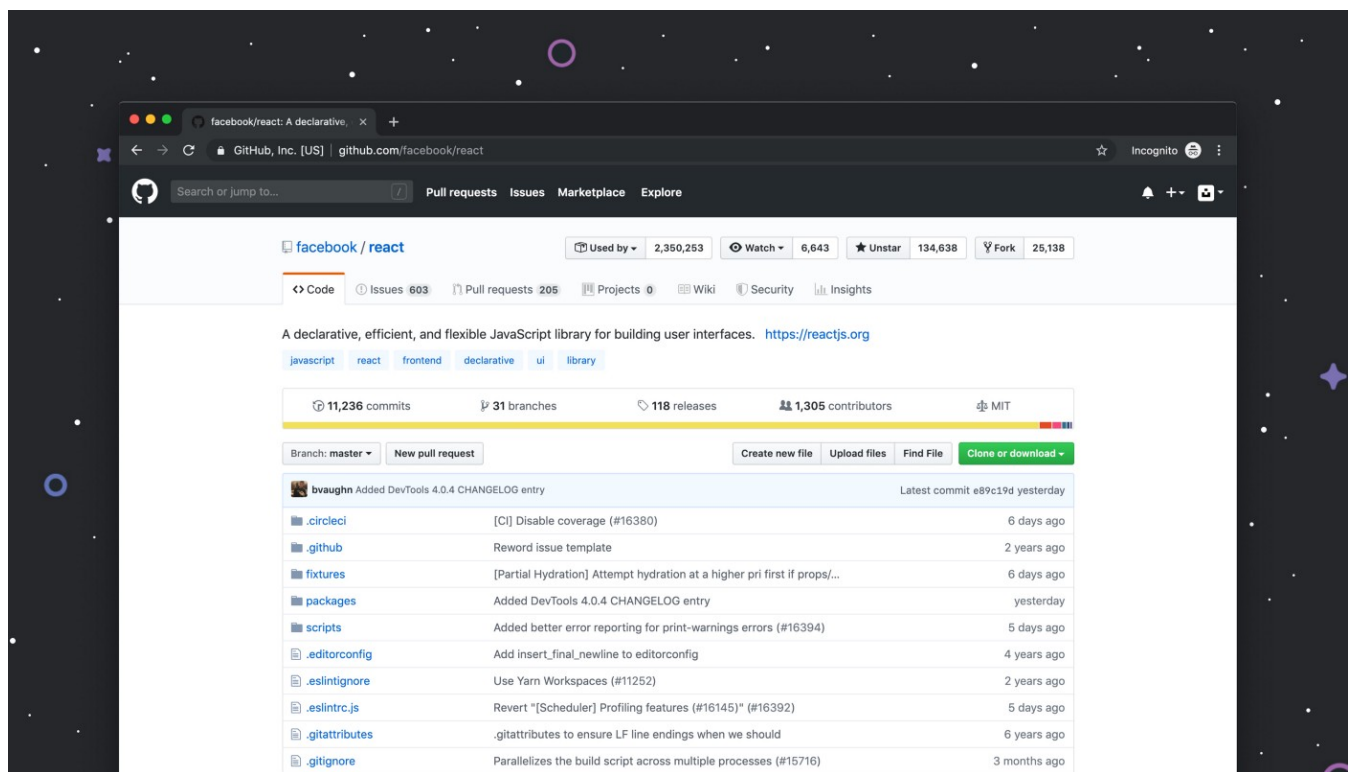


Photo by [Luke Chesser](#) on [Unsplash](#)

The wonderful collaborative spirit of GitHub led to [this mega list](#) of **data science blogs**. There is an overwhelming amount of blogs here, so I would make sure that the ones you choose to read/follow are credible.

Penn State Online Statistics

This online course material is really great for learning **basic statistics** before you jump right into learning data science. I have quite a few pages from Penn State bookmarked for reference.

Free Machine Learning Courses on Udemy

Wow! So many free courses on **machine learning** on this page. I recommend looking at the highest-rated ones and also reading the reviews to find one that suits your needs.

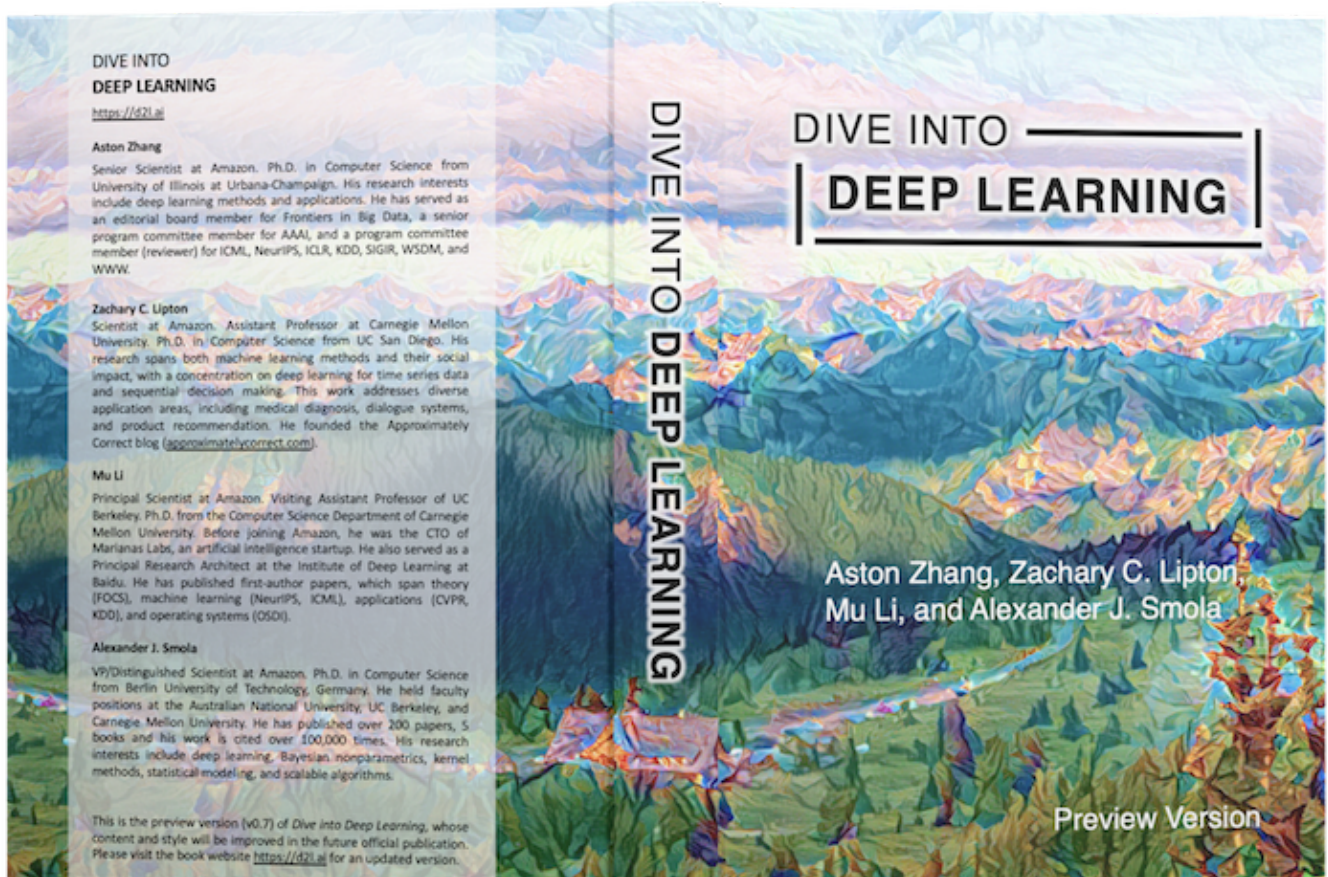


Open-Source Textbooks

Python for Data Analysis

I honestly cannot believe this book is free. It goes very deep into using the **Pandas** and **NumPy** libraries for data analysis in **Python**. There is also a GitHub repository with Jupyter Notebooks for each chapter and the solutions to the exercises!

Dive into Deep Learning



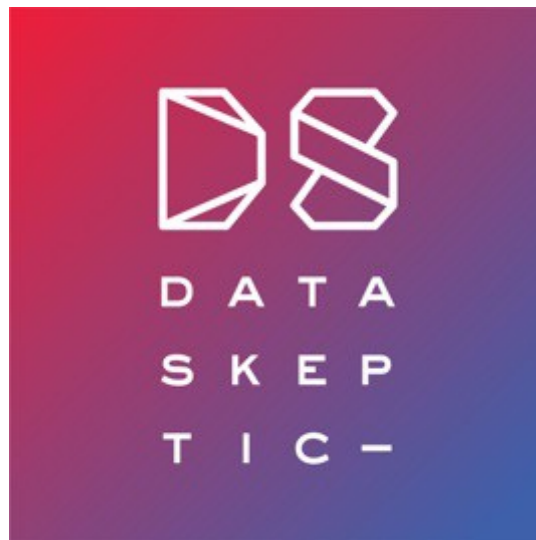
Open source, find contributors [here](#).

I have not read this one myself, but it comes recommended to me from my data science mentor. It is formatted *very* nicely and comes with discussion boards and links to supplementary code on GitHub. Topics include **many types of neural networks**, **optimizing algorithms & computational performance**, **natural language**

processing, recommendation systems, and more. I'm personally excited to read through this one when I have the time.



Podcasts



from dataskeptic.com

Data Skeptic

This is the only data science podcast that I have listened to, but it has been so interesting! A large focus right now for the host is the **interpretability of machine learning**, but he covers other related topics in his latest section as well (like [adversarial neural networks](#) and [ethical algorithm design](#)). Some episodes are a bit too in-depth on the computer science side of things for me to grasp, but overall it has deepened my understanding of hot topics in the field and helped increase my passion for data science. ([Data Skeptic](#))



Other

Data Science Meetups

Go on [meetup.com](https://www.meetup.com) and search for data science meetups in your area (this mainly applies to those who live in or near larger cities)*. I live near Denver and I attended a meetup for [women in data science](#) called “Code and Coffee.” It was a sweet time to discuss data science with other women who were either already in the field or wanting to break in. The leaders of the group were awesome — they truly wanted to help other women succeed in their career goals or with their side projects.

**with the coronavirus epidemic, meetups are currently not being scheduled. You can still, however, search for groups on their page.*



With the number of links I have included in this article, some are bound to expire or change at some point. Please comment below if you find that a link no longer works. Also, feel free to comment with your own favorite free resource that is not included in this list!

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