

Deep Learning Self-Study Resources

This is a list of free material that I have personally used to study deep learning (and related topics) or have been recommended to me.

Deep Learning

Courses

- [Deep Learning Specialization](#) (Andrew Ng)
- [MIT 6.S191 Introduction to Deep Learning](#)
- [Stanford CS231n: Convolutional Neural Networks for Visual Recognition](#) (Fei-Fei Li, Andrej Karpathy)
- [Google's Machine Learning Crash Course](#)
- [Deep Unsupervised Learning](#) (Pieter Abbeel)
- [Deep Reinforcement Learning](#) (Sergey Levine)

Textbooks

- [Deep Learning](#) (Ian Goodfellow, Yoshua Bengio, and Aaron Courville)
- [Neural Networks and Deep Learning](#) (Michael Nielsen)
- [Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow, 2nd Edition](#) (Aurelion Geron)

Mathematics

Courses

- [Khan Academy](#)
 - [Linear Algebra](#)
 - [Probability and Statistics](#)
 - [Calculus](#)
- [MIT OCW Linear Algebra](#) (Gilbert Strang)

- [3blue1brown Youtube Channel](#)
 - [Deep Learning](#)
 - [Calculus](#)
 - [Linear Algebra](#)
- [MIT OCW Single Variable Calculus](#)

Artificial Intelligence

Courses

- [Udacity: Intro to Artificial Intelligence](#) (Peter Norvig and Sebastian Thrun)
- [Berkeley CS188: Introduction to Artificial Intelligence](#) (Pieter Abbeel and Dan Klein)
- [UCL Course on Reinforcement Learning](#) (David Silver)

Textbooks

- [Artificial Intelligence: A Modern Approach](#) (Stuart Russel and Peter Norvig)
- [Pattern Recognition and Machine Learning](#) (Christopher Bishop)
- [Reinforcement Learning: An Introduction](#) (Andrew Barto and Richard S. Sutton)

Coding

Tutorials

- [PyTorch Tutorials](#)
- [TensorFlow Tutorials](#)

Online Coding Environment (with GPU resource)

- [Google Colabs](#)
- [Gradient by Paperspace](#)

Practical

- [Kaggle](#)
 - Community of people interested in science, data and artificial intelligence who share data, models, and collaborate
 - Host competitions where participants compete to design techniques to achieve the best score on a given problem and dataset
- [GitHub](#)
 - Site for hosting open source code
 - Great place to look for example code to refer to

Useful

Asking Questions

- [Quora](#)
- [Stack Overflow](#)

Podcasts

- [Artificial Intelligence Podcast](#) (Lex Fridman)

Articles

- [The Batch](#) (Andrew Ng)
- [The Gradient](#)