Biologically Inspired Computation

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Lecture 7

How to continue learning Deep Neural Networks

- Online Resources
  - Online Courses
  - Class contents
  - Tutorials
  - Books
  - For Computer Vision
  - For Natural Language Processing
- Top Conferences
- Top Journals
- Twitter
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Online Resources: Online Courses

Online Courses:

Andrew NG (Stanford)
https://www.coursera.org/learn/machine
https://www.coursera.org/specializations/deep

Hinton (Toronto) - Hardest
https://www.coursera.org/learn/neural-networks

Romeo Kienzler (IBM Watson)
https://www.coursera.org/learn/ai

Google - Easiest
https://developers.google.com/machine-learning/crash-course/

Udacity Tensor Flow course
https://www.udacity.com/course/deep-learning--ud730

Online Resources: Learning Material

Learning material from Universities:

Deep learning at Oxford 2015 Taught by Nando de Freitas
https://www.youtube.com/playlist?list=PLE6Wd9FR--
EfW8dtjAuPoTuPcqmOV53Fu&app=desktop

Neural Networks Class by Hugo Larochelle
http://info.usherbrooke.ca/hlarochelle/neural_networks/content.html

Deep Learning Class at Moodle
https://moodle.technion.ac.il/course/view.php?id=4128

Deep Learning Course by Yann LeCun
https://www.college-de-france.fr/site/en-yann-lecun/course-2016-02-12-
14h30.htm

Online Resources: Books & Tutorials

Books and Tutorials:

Deep Learning Tutorial by Standford
http://ufldl.stanford.edu/tutorial/

Deep Learning Tutorial by LISA lab, University of Montreal (Jan 6 2015)
http://deeplearning.net/tutorial/deeplearning.pdf

Neural Networks and Deep Learning Book by Michael Nielsen
http://neuralnetworksanddeeplearning.com/

Deep Learning Book by Ian Goodfellow, Yoshua Bengio and Aaron Courville
https://www.deeplearningbook.org/

Deep Learning: Methods and Applications by Microsoft Research (2013)
goo.gl/qKycFv

Online Resources: Data Science

For Computer Vision:

Stanford class CS231n: Convolutional Neural Networks for Visual Recognition
http://cs231n.github.io/

Getting Started in Computer Vision by Mostafa S. Ibrahim
https://sites.google.com/site/mostafasibrahim/research/articles/how-to-start

For Natural Language Processing (NLP):

Stanford class CS224n: Natural Language Processing with Deep Learning
http://web.stanford.edu/class/cs224n/

Getting Started in Computer Vision by Mostafa S. Ibrahim
https://sites.google.com/site/mostafasibrahim/research/articles/how-to-start

Dan Jurafsky & Chris Manning: Natural Language Processing
https://www.youtube.com/watch?
v=3Dt_yh1mf_U&list=PLQiyVNMpDLKnZYBTUOlSI9mi9wAErFtFm

Top Conferences

General Machine Learning / Neural Networks conferences

NIPS
Conference on Neural Information Processing Systems

IJCAI
International Joint Conference on Artificial Intelligence and the European Conference on Artificial Intelligence

For Computer Vision

CVPR
Premier annual computer vision event comprising the main conference and several co-located workshops and short courses.

ECCV
European Conference on Computer Vision

ICCV
IEEE International Conference on Computer Vision

Top Journals

General Machine Learning / Neural Networks conferences

PAMI
IEEE Transactions on Pattern Analysis and Machine Intelligence
Impact Factor: 9.455

For Computer Vision

IJCV
International Journal of Computer Vision
Impact Factor: 8.222

Twitter

Some people to follow for Machine Learning/Deep Learning

@drfeifei: Fei-Fei Li - Director of Stanford AI Lab, creator of ImageNet
@ylecun: (Yann LeCun) Leading Facebook AI/ML Research
@karpathy: Andrej Karpathy - Teaches Deep Learning at Stanford, Research Scientist at OpenAI
@AndrewYNg (Andrew Ng) : Led ML research in google, now leads AI research in Baidu
@Kdnuggets (Gregory Piatetsky) : Leading KDnuggets - tweets/retweets lots of relevant stuff.
@OpenAI
@googleresearch
@BaiduResearch

You can also subscribe to twitter **Machine Learning List** members by Ali Sohani (@alisohani)

Once I know enough, what?

https://www.kaggle.com/competitions