

# Drago's long list of Deep Learning and NLP Resources

November 26, 2016

## \* Intro

<http://www.wildml.com/2015/09/implementing-a-neural-network-from-scratch/>  
<http://iamtrask.github.io/2015/07/12/basic-python-network/>  
<https://iamtrask.github.io/2015/07/27/python-network-part2/>  
<https://iamtrask.github.io/2015/11/15/anyone-can-code-lstm/>

## \* Statistics

<https://github.com/rouseguy/intro2stats>  
<http://stattrek.com/tutorials/statistics-tutorial.aspx>

## \* Linear Algebra

<http://stattrek.com/tutorials/matrix-algebra-tutorial.aspx>

## \* Dimensionality Reduction

<http://glowingpython.blogspot.com/2011/06/svd-decomposition-with-numpy.html>  
<http://radialmind.blogspot.com/2009/11/svd-in-python.html>  
<http://bigdata-madesimple.com/decoding-dimensionality-reduction-pca-and-svd/>  
<http://blog.josephwilk.net/projects/latent-semantic-analysis-in-python.html>  
<http://bl.ocks.org/ktaneishi/9499896#pca.js>  
<http://www.cs.cmu.edu/~christos/TALKS/09-KDD-tutorial>  
<http://glowingpython.blogspot.com/2011/05/latent-semantic-analysis-with-term.html>  
<http://glowingpython.blogspot.com/2011/07/principal-component-analysis-with-numpy.html>  
<http://glowingpython.blogspot.com/2011/09/eigenvectors-animated-gif.html>  
<http://www.denizyuret.com/2005/08/singular-value-decomposition-notes.html>  
<http://www.kdnuggets.com/2016/06/nutrition-principal-component-analysis-tutorial.html>  
<http://cs.stanford.edu/people/karpathy/tsnejs/>

## \* Logistic Regression

<https://triangleinequality.wordpress.com/2013/12/02/logistic-regression/>  
<http://www.dataschool.io/logistic-regression-in-python-using-scikit-learn/>  
<http://deeplearning.net/software/theano/tutorial/examples.html#a-real-example-logistic-regression>  
<http://deeplearning.net/tutorial/logreg.html>  
<https://florianhartl.com/logistic-regression-geometric-intuition.html>

## \* sk-learn

<http://peekaboo-vision.blogspot.cz/2013/01/machine-learning-cheat-sheet-for-scikit.html>  
<https://github.com/aigamedev/scikit-neuralnetwork>  
<http://www.kdnuggets.com/2016/01/scikit-learn-tutorials-introduction-classifiers.html>  
<https://github.com/mmmayo13/scikit-learn-classifiers>  
<https://pythonprogramming.net/flat-clustering-machine-learning-python-scikit-learn/>  
<https://www.analyticsvidhya.com/blog/2016/08/tutorial-data-science-command-line-scikit-learn/>

<https://www.analyticsvidhya.com/blog/2016/07/practical-guide-data-preprocessing-python-scikit-learn/>

<http://www.markhneedham.com/blog/2015/02/15/pythonscikit-learn-calculating-tfidf-on-how-i-met-your-mother-transcripts/>

<https://github.com/GaelVaroquaux/scikit-learn-tutorial>

<https://github.com/justmarkham/scikit-learn-videos>

<https://pythonprogramming.net/machine-learning-python-sklearn-intro/>

#### \* Theano

<http://nbviewer.jupyter.org/github/craffel/theano-tutorial/blob/master/Theano%20Tutorial.ipynb>

[https://github.com/goodfeli/theano\\_exercises](https://github.com/goodfeli/theano_exercises)

<http://deeplearning.net/tutorial/>

<http://deeplearning.net/reading-list>

<http://deeplearning.net/tutorial/dA.html>

<http://deeplearning.net/tutorial/deeplearning.pdf> - Just tutorials from the source above

<http://deeplearning.net/software/theano/> - Scientific computing framework in Python

<https://pypi.python.org/pypi/theanets>

<http://deeplearning.net/software/theano/tutorial/gradients.html>

<http://deeplearning.net/tutorial/logreg.html#logreg>

<http://deeplearning.net/software/theano/tutorial/>

[https://github.com/goodfeli/theano\\_exercises](https://github.com/goodfeli/theano_exercises)

<https://github.com/Newmu/Theano-Tutorials>

<https://www.analyticsvidhya.com/blog/2016/04/neural-networks-python-theano/>

<http://deeplearning.net/software/theano/tutorial/>

<http://outlace.com/Beginner-Tutorial-Theano/>

#### \* Keras

<https://github.com/fchollet/keras> - Extension of Theano, meant specifically for ANN work

<https://keras.io/>

<https://github.com/fchollet/keras>

<https://blog.keras.io/introducing-keras-10.html>

<https://blog.keras.io/keras-as-a-simplified-interface-to-tensorflow-tutorial.html>

#### \* Perceptrons

<https://datasciencelab.wordpress.com/2014/01/10/machine-learning-classics-the-perceptron/>

<https://triangleinequality.wordpress.com/2014/02/24/enter-the-perceptron/>

<http://glowingpython.blogspot.com/2011/10/perceptron.html>

#### \* word2vec/embeddings

<http://radimrehurek.com/gensim/models/word2vec.html> - Gensim implementation of Word2Vec

<https://radimrehurek.com/gensim/tutorial.html>

<https://code.google.com/p/word2vec/> - Google implementation of word2vec

<http://alexminnaar.com/word2vec-tutorial-part-i-the-skip-gram-model.html> - Word2Vec

<http://rare-technologies.com/word2vec-tutorial/> - Gensim Word2Vec tutorial (training, loading, using, etc.)

<https://rare-technologies.com/making-sense-of-word2vec/>

<https://rare-technologies.com/fasttext-and-gensim-word-embeddings/>

<https://research.facebook.com/blog/fasttext/>

<https://www.kaggle.com/c/word2vec-nlp-tutorial>  
<http://www-personal.umich.edu/~ronxin/pdf/w2vexp.pdf> - Detailed write-up explaining Word2Vec  
<https://code.google.com/p/word2vec/>  
<https://code.google.com/p/word2vec/source/browse/trunk/>  
<http://u.cs.biu.ac.il/~nlp/resources/downloads/word2parvec/>  
<http://deeplearning4j.org/word2vec.html>  
<http://textminingonline.com/getting-started-with-word2vec-and-glove-in-python>  
<http://www.johnwittenauer.net/language-exploration-using-vector-space-models/>

#### \* LSTM

<http://colah.github.io/posts/2015-08-Understanding-LSTMs/>  
<http://www.cs.toronto.edu/~graves/handwriting.html>  
[https://en.wikipedia.org/wiki/Long\\_short-term\\_memory](https://en.wikipedia.org/wiki/Long_short-term_memory) - Wikipedia article about LSTMs  
<https://github.com/HendrikStrobel/lstmvis>  
<https://github.com/wojzaremba/lstm>  
<http://lstm.seas.harvard.edu/>  
<https://github.com/stanfordnlp/treelstm>  
<https://github.com/microth/PathLSTM>  
<https://github.com/XingxingZhang/td-treelstm>  
<http://deeplearning.net/tutorial/lstm.html#lstm>  
<https://apaszke.github.io/lstm-explained.html>  
<https://deeplearning4j.org/lstm.html>  
<https://github.com/dennybritz/rnn-tutorial-gru-lstm>  
<http://deeplearning.net/tutorial/lstm.html#lstm>

#### \* Embeddings

<http://ronxin.github.io/wevi/>  
<https://github.com/ronxin/wevi>  
wevi (from Rong Xin)  
<https://levyomer.wordpress.com/2014/04/25/dependency-based-word-embeddings/>  
Dependency-based word embeddings  
<https://github.com/stanfordnlp/GloVe>  
<http://nlp.stanford.edu/projects/glove>  
<https://github.com/maciejkula/glove-python>  
<http://lebret.ch/words/>  
word embeddings from Remi Lebret (+ a tool for generating embeddings)  
<http://metaoptimize.com/projects/wordreprs/>  
embeddings and tools for basic NLP tasks  
<http://wordvectors.org/suite.php>  
word similarity data sets  
<http://wordvectors.org/suite.php>  
<http://www.kdnuggets.com/2016/05/amazing-power-word-vectors.html>  
<http://deeplearning4j.org/eigenvector>  
<http://wordvectors.org/>  
<https://github.com/semanticvectors/semanticvectors/wiki>  
<http://clic.cimec.unitn.it/composes/semantic-vectors.html>  
<https://blog.acolyer.org/2016/04/21/the-amazing-power-of-word-vectors/>

<https://www.kaggle.com/c/word2vec-nlp-tutorial/details/part-2-word-vectors>  
<https://www.kaggle.com/c/word2vec-nlp-tutorial/details/part-3-more-fun-with-word-vectors>  
<http://ronan.collobert.com/senna/>  
Code and embeddings from SENNA.  
<https://levyomer.wordpress.com/2014/04/25/dependency-based-word-embeddings/>  
<http://colinmorris.github.io/blog/1b-words-char-embeddings>  
<http://www.cis.upenn.edu/~ungar/eigenwords/>  
<http://www.offconvex.org/2016/07/10/embeddingspolysemy/>  
<https://www.tensorflow.org/versions/r0.10/tutorials/word2vec/index.html>  
<http://www.tensorflow.org/tutorials/word2vec/index.md>  
<https://www.tensorflow.org/versions/r0.11/tutorials/word2vec/index.html>  
[http://ronxin.github.io/lamvi/dist/#model=word2vec&backend=browser&query\\_in=good&query\\_out=G\\_bennet,B\\_circumstances](http://ronxin.github.io/lamvi/dist/#model=word2vec&backend=browser&query_in=good&query_out=G_bennet,B_circumstances)  
<https://www.quora.com/How-does-word2vec-work/answer/Ajit-Rajasekharan>  
<https://www.kaggle.com/c/word2vec-nlp-tutorial/details/part-1-for-beginners-bag-of-words>  
<https://www.kaggle.com/c/word2vec-nlp-tutorial/details/part-4-comparing-deep-and-non-deep-learning-methods>  
<https://deeplearning4j.org/word2vec.html>  
<http://mccormickml.com/2016/04/12/googles-pretrained-word2vec-model-in-python/>

\* Autoencoders

<http://cs.stanford.edu/people/karpathy/convnetjs/demo/autoencoder.html>  
<http://ufldl.stanford.edu/tutorial/unsupervised/Autoencoders/>  
<https://triangleinequality.wordpress.com/2014/08/12/theano-autoencoders-and-mnist/>

\* Introductions

<http://www.kdnuggets.com/2016/10/beginners-guide-neural-networks-python-scikit-learn.html>  
<http://cl.naist.jp/~kevinduh/a/deep2014/>  
Kevin Duh lectures  
<http://www.deeplearningbook.org/>  
Deep Learning Book  
<http://ciml.info/>  
Hal Daume's book  
<http://nlp.stanford.edu/courses/NAACL2013/>  
Deep Learning for NLP Without Magic  
[http://info.usherbrooke.ca/hlarochelle/neural\\_networks/content.html](http://info.usherbrooke.ca/hlarochelle/neural_networks/content.html)  
<http://www.deeplearning.net/>  
Tutorials, software packages, datasets, and readings (in Theano)  
<http://web.stanford.edu/~jurafsky/slp3/>  
Jurafsky - chapter 19 about word2vec and related methods  
<http://u.cs.biu.ac.il/~yogo/nnlp.pdf>  
Yoav Goldberg - Primer on Neural Network Models for NLP  
<http://neuralnetworksanddeeplearning.com/>  
<http://neuralnetworksanddeeplearning.com/chap1.html>  
<http://neuralnetworksanddeeplearning.com/chap2.html>  
<http://neuralnetworksanddeeplearning.com/chap3.html>  
<http://neuralnetworksanddeeplearning.com/chap4.html>  
<http://neuralnetworksanddeeplearning.com/chap5.html>

<http://neuralnetworksanddeeplearning.com/chap6.html>  
<https://github.com/neubig/nlptutorial>  
<http://deeplearning.net/reading-list/>

#### \* Summarization

<https://github.com/gregdurrett/berkeley-doc-summarizer>  
<http://nlp.cs.berkeley.edu/projects/summarizer.shtml>  
<https://www.linkedin.com/pulse/lex-rank-textrank-based-document-summarization-system-niraj-kumar>  
<https://research.googleblog.com/2016/08/text-summarization-with-tensorflow.html?m=1>  
<http://rare-technologies.com/text-summarization-with-gensim/>  
<https://github.com/tensorflow/models/tree/master/textsum>  
<https://github.com/harvardnlp/NAMAS>

#### \* Neural Machine Translation

<https://devblogs.nvidia.com/parallelforall/introduction-neural-machine-translation-with-gpus/>  
<http://lisa.iro.umontreal.ca/mt-demo>  
[https://github.com/mila-udem/blocks-examples/tree/master/machine\\_translation](https://github.com/mila-udem/blocks-examples/tree/master/machine_translation)  
<https://github.com/nyu-dl/dl4mt-tutorial>  
[dl4mt](https://github.com/nyu-dl/dl4mt)  
<https://github.com/lmthang/nmt.matlab>  
<https://github.com/neubig/nmt-tips>  
<https://github.com/jonsafari/nmt-list>  
<https://research.googleblog.com/2016/09/a-neural-network-for-machine.html>  
<https://devblogs.nvidia.com/parallelforall/introduction-neural-machine-translation-with-gpus/>  
<https://devblogs.nvidia.com/parallelforall/introduction-neural-machine-translation-gpus-part-2/>  
<https://devblogs.nvidia.com/parallelforall/introduction-neural-machine-translation-gpus-part-3/>

#### \* Natural Language Generation

<https://github.com/simplenlg>

#### \* Neural Language Models

<https://github.com/turian/neural-language-model> - Code for various neural language models

#### \* NLP General

<http://blog.mashape.com/list-of-25-natural-language-processing-apis/>  
25 NLP APIs  
<http://www.denizyuret.com/2015/07/parsing-with-word-vectors.html>  
<http://www.denizyuret.com/2015/03/parallelizing-parser.html>  
[http://memkite.com/deep-learning-bibliography/#natural\\_language\\_processing](http://memkite.com/deep-learning-bibliography/#natural_language_processing)  
<http://www.kdnuggets.com/2015/12/natural-language-processing-101.html>  
<https://techcrunch.com/2016/07/20/google-launches-new-api-to-help-you-parse-natural-language/>  
<http://www.degeneratestate.org/posts/2016/Apr/20/heavy-metal-and-natural-language-processing-part-1/>  
<http://www.degeneratestate.org/posts/2016/Sep/12/heavy-metal-and-natural-language-processing-part-2/>  
<http://metamind.io/research/multiple-different-natural-language-processing-tasks-in-a-single-deep-model/>

<https://gigadom.wordpress.com/2015/10/02/natural-language-processing-what-would-shakespeare-say/>

<https://blog.monkeylearn.com/the-definitive-guide-to-natural-language-processing/>

\* NLTK

<http://www.nltk.org/book/ch01.html>

NLTK Book

<https://pythonprogramming.net/tokenizing-words-sentences-nltk-tutorial/>

<https://www.youtube.com/watch?v=FLZvOKSckxY&list=PLQVvva0QuDf2JswnfiGkliBlnZnC4HL>

<http://textminingonline.com/dive-into-nltk-part-i-getting-started-with-nltk>

Tokenizing words and sentences

<http://glowingpython.blogspot.com/2013/07/combining-scikit-learn-and-nltk.html>

\* Image Processing

<https://pythonprogramming.net/image-recognition-python/>

\* Natural Language Generation

[https://github.com/nltk/nltk\\_contrib/tree/master/nltk\\_contrib/fuf](https://github.com/nltk/nltk_contrib/tree/master/nltk_contrib/fuf)

\* Support Vector Machines

<https://pythonprogramming.net/linear-svc-example-scikit-learn-svm-python/>

<http://tullo.ch/articles/svm-py/>

<https://github.com/ajtulloch/svmpy>

<https://www.quora.com/What-does-support-vector-machine-SVM-mean-in-laymans-terms>

<https://www.quora.com/How-does-deep-learning-work-and-how-is-it-different-from-normal-neural-networks-and-or-SVM>

<https://github.com/mesnilgr/nbsvm>

<https://www.csie.ntu.edu.tw/%7Ecjlin/libsvm/>

\* Conditional Random Fields

<http://sourceforge.net/projects/crfpp/files/crfpp/0.54/>

<http://blog.echen.me/2012/01/03/introduction-to-conditional-random-fields/>

\* Convolutional NN

<http://www.wildml.com/2015/11/understanding-convolutional-neural-networks-for-nlp/>

<http://stats.stackexchange.com/questions/114385/what-is-the-difference-between-convolutional-neural-networks-restricted-boltzma>

<http://www.wildml.com/2015/12/implementing-a-cnn-for-text-classification-in-tensorflow/>

<http://www.kdnuggets.com/2015/11/understanding-convolutional-neural-networks-nlp.html>

<http://cs231n.github.io/>

<http://cs.stanford.edu/people/karpathy/convnetjs/>

<http://colah.github.io/posts/2014-07-Understanding-Convolutions/>

<http://colah.github.io/posts/2014-07-Conv-Nets-Modular/>

<http://cs231n.github.io/convolutional-networks/>

<http://www.kdnuggets.com/2016/06/peeking-inside-convolutional-neural-networks.html>

<http://www.kdnuggets.com/2015/11/understanding-convolutional-neural-networks-nlp.html>

<http://www.kdnuggets.com/2015/04/inside-deep-learning-computer-vision-convolutional-neural-networks.html>

<http://www.kdnuggets.com/2016/09/beginners-guide-understanding-convolutional-neural-networks-part-1.html>  
<http://www.kdnuggets.com/2016/09/beginners-guide-understanding-convolutional-neural-networks-part-2.html>  
[http://brohrer.github.io/how\\_convolutional\\_neural\\_networks\\_work.html](http://brohrer.github.io/how_convolutional_neural_networks_work.html)  
<https://github.com/hohoCode/textSimilarityConvNet>  
<https://www.analyticsvidhya.com/blog/2016/04/deep-learning-computer-vision-introduction-convolution-neural-networks/>  
<http://www.kdnuggets.com/2016/11/intuitive-explanation-convolutional-neural-networks.html>  
<https://github.com/dennybritz/cnn-text-classification-tf>  
<http://scs.ryerson.ca/~aharley/vis/conv/>  
<https://ujjwalkarn.me/2016/08/11/intuitive-explanation-convnets/>

#### \* Recurrent NN

<http://www.wildml.com/2015/09/recurrent-neural-networks-tutorial-part-1-introduction-to-rnns/>  
<http://www.wildml.com/2015/09/recurrent-neural-networks-tutorial-part-2-implementing-a-language-model-rnn-with-python-numpy-and-theano/>  
<http://www.wildml.com/2015/10/recurrent-neural-networks-tutorial-part-3-backpropagation-through-time-and-vanishing-gradients/>  
<http://www.wildml.com/2015/10/recurrent-neural-network-tutorial-part-4-implementing-a-gru-lstm-rnn-with-python-and-theano/>  
<http://www.kdnuggets.com/2015/12/deep-learning-outgrows-bag-words-recurrent-neural-networks.html>  
<http://www.kdnuggets.com/2015/06/rnn-tutorial-sequence-learning-recurrent-neural-networks.html>  
<http://www.kdnuggets.com/2015/10/recurrent-neural-networks-tutorial.html>  
<http://karpathy.github.io/2015/05/21/rnn-effectiveness/>  
<http://colah.github.io/posts/2014-07-NLP-RNNs-Representations/>  
<https://github.com/karpathy/char-rnn>  
<http://www.kdnuggets.com/2016/05/intro-recurrent-networks-tensorflow.html>  
<http://www.kdnuggets.com/2015/10/recurrent-neural-networks-tutorial.html>  
<http://www.kdnuggets.com/2015/06/rnn-tutorial-sequence-learning-recurrent-neural-networks.html>  
<http://www.kdnuggets.com/2015/11/samim-recurrent-neural-net-describe-images-taylor-swift.html>  
<http://research.microsoft.com/en-us/projects/rnn/>  
<http://www.rnnlm.org/>  
<http://distill.pub/2016/augmented-rnns/>  
<https://github.com/distillpub/post--augmented-rnns>  
<https://github.com/dennybritz/tf-rnn>  
<https://github.com/dennybritz/rnn-tutorial-rnnlm>  
<http://www.wildml.com/2016/08/rnns-in-tensorflow-a-practical-guide-and-undocumented-features/>  
<https://github.com/shawnwun/RNNLG>  
[https://github.com/isi-nlp/Zoph\\_RNN](https://github.com/isi-nlp/Zoph_RNN)  
<https://github.com/facebook/Stack-RNN>  
<https://github.com/kjw0612/awesome-rnn>

#### \* Sequence to sequence

<http://www.tensorflow.org/tutorials/seq2seq/index.md>  
<https://github.com/harvardnlp/seq2seq-attn>  
<https://www.tensorflow.org/versions/r0.11/tutorials/seq2seq/index.html>

\* k-means

<https://datasciencelab.wordpress.com/2013/12/12/clustering-with-k-means-in-python/>  
<https://datasciencelab.wordpress.com/2014/01/21/selection-of-k-in-k-means-clustering-reloaded/>  
<http://glowingpython.blogspot.com/2012/04/k-means-clustering-with-scipy.html>  
<https://codesachin.wordpress.com/2015/11/14/k-means-clustering-with-tensorflow/>

\* k-nearest neighbors

<http://glowingpython.blogspot.com/2012/04/k-nearest-neighbour-classifier.html>  
<http://glowingpython.blogspot.com/2012/04/k-nearest-neighbor-search.html>

\* Recursive NN

<http://www.kdnuggets.com/2016/06/recursive-neural-networks-tensorflow.html>

\* Network Analysis

<http://snap.stanford.edu/node2vec/>  
<http://glowingpython.blogspot.com/2012/11/first-steps-with-networx.html>  
<http://glowingpython.blogspot.com/2013/02/betweenness-centrality.html>  
<https://snap.stanford.edu/data/>  
<https://pypi.python.org/pypi/python-graph>  
<http://glowingpython.blogspot.com/2011/05/four-ways-to-compute-google-pagerank.html>  
<https://www.quora.com/Is-there-a-simple-explanation-of-the-Louvain-Method-of-community-detection>

\* Parsing

<https://spacy.io/blog/parsing-english-in-python>  
Parsing English in Python  
<https://pypi.python.org/pypi/blipparser/>  
<https://github.com/BLLIP/blip-parser>  
<http://nlp.stanford.edu/software/lex-parser.shtml>  
<http://demo.ark.cs.cmu.edu/parse>  
[https://github.com/tensorflow/models/tree/master/syntaxnet/syntaxnet/models/parsey\\_mcparseface](https://github.com/tensorflow/models/tree/master/syntaxnet/syntaxnet/models/parsey_mcparseface)  
<https://github.com/tensorflow/models/tree/master/syntaxnet>  
<https://research.googleblog.com/2016/05/announcing-syntaxnet-worlds-most.html>  
<https://research.googleblog.com/2011/03/building-resources-to-syntactically.html>  
<https://research.googleblog.com/2016/05/announcing-syntaxnet-worlds-most.html>  
<https://research.googleblog.com/2016/08/meet-parseys-cousins-syntax-for-40.html>  
<http://universaldependencies.org/>  
<https://github.com/tensorflow/models/tree/master/syntaxnet>  
<https://github.com/tensorflow/models/blob/master/syntaxnet/universal.md>

\* Semantic Parsing

<https://github.com/wcmac/sippycup>  
Assignment from Stanford  
<http://nbviewer.jupyter.org/github/wcmac/sippycup/blob/master/sippycup-unit-0.ipynb>  
<http://nbviewer.ipython.org/github/wcmac/sippycup/blob/master/sippycup-unit-1.ipynb>  
<http://nbviewer.ipython.org/github/wcmac/sippycup/blob/master/sippycup-unit-2.ipynb>  
<http://nbviewer.ipython.org/github/wcmac/sippycup/blob/master/sippycup-unit-3.ipynb>  
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<http://www.isi.edu/natural-language/software/amrparser.tar.gz>

<http://www.isi.edu/natural-language/software/amr2eng.zip>

<http://www.dipanjandas.com/files/reddy.etal.2016.pdf>

Transforming Dependency Structures to Logical Forms for Semantic Parsing

<https://github.com/sivareddyg/deplambda>

<http://www-nlp.stanford.edu/software/sempr/>

<https://github.com/percyliang/sempr>

<http://nlp.stanford.edu/projects/snli/>

The Stanford Natural Language Inference (SNLI) Corpus

\* CCG

<https://github.com/mikelewis0/easyccg>

<http://openccg.sourceforge.net/>

<https://github.com/OpenCCG/openccg>

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\* Linear Regression

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<http://blog.echen.me/2011/08/22/introduction-to-latent-dirichlet-allocation/>

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<http://www.wildml.com/2016/04/deep-learning-for-chatbots-part-1-introduction/>

<http://www.wildml.com/2016/07/deep-learning-for-chatbots-2-retrieval-based-model-tensorflow/>

\* Videos of presentations

<https://www.youtube.com/watch?v=qSA9v7ZkC7Q&feature=youtu.be>

Lecture by Chris Potts on Distributed word representations: dimensionality reduction

<https://www.youtube.com/watch?v=JSNZA8jVcm4>  
Schmidhuber

<https://www.youtube.com/watch?v=HrMU1GgyxL8>  
LeCun

<https://www.youtube.com/watch?v=DLItuVVKJOW>  
Duh (part 1 of 4)

\* Skip-thoughts

<https://github.com/ryankiros/skip-thoughts>

<https://github.com/kyunghyuncho/skip-thoughts>

<https://gab41.lab41.org/lab41-reading-group-skip-thought-vectors-fec68c05aa92>

<http://deeplearning4j.org/thoughtvectors>

\* Sentiment

<http://sentiment.christopherpotts.net/> - Tutorial on deep sentiment analysis

<http://sentiment.christopherpotts.net/lexicons.html>

<http://nlp.stanford.edu/sentiment/> - dataset (and code) for Richard Socher's sentiment system

<http://www.kdnuggets.com/2015/12/sentiment-analysis-101.html>

<http://sentiment140.com>

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bibtex file for the above PDF

<http://clair.si.umich.edu/clair/homepage/bib2html/misc-bib.html>

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\* Courses

<http://cs224d.stanford.edu/syllabus.html>

Deep Learning for NLP @ Stanford

<http://ace.cs.ohiou.edu/~razvan/courses/dl6890/index.html>

<https://www.youtube.com/playlist?list=PL6Xpj9I5qXYEcOhn7TqghAJ6NAPrNmUBH>

Neural networks class - University de Sherbrooke

<http://web.stanford.edu/class/cs224w/>

Social and Information Network Analysis - Jure Leskovec

<http://rll.berkeley.edu/deeprlcourse/>

Deep RL at Berkeley

<https://github.com/thejakeyboy/umich-eecs545-lectures>

Jake Abernethy's 545 at Michigan

<https://github.com/lmarti/machine-learning>

<https://classroom.udacity.com/courses/ud730>

Vincent Vanhoucke

<https://ocw.mit.edu/courses/electrical-engineering-and-computer-science/6-034-artificial-intelligence-fall-2010/lecture-videos/>

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<https://www.youtube.com/playlist?list=PLehuLRPyt1Hyi78UOkMPWCGRxGcA9NVOE>

STAT 946: Deep Learning, Ali Ghodsi

<https://www.college-de-france.fr/site/en-yann-lecun/course-2015-2016.htm>

\* Quora links

<https://www.quora.com/What-are-the-best-resources-to-learn-about-deep-learning>

<https://www.quora.com/What-are-some-good-resources-to-learn-about-deep-learning-in-Natural-Language-Processing>

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<http://icml.cc/2015/tutorials/icml2015-nlu-tutorial.pdf>

Percy Liang Tutorial

\* Backpropagation

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<http://code.activestate.com/recipes/578148-simple-back-propagation-neural-network-in-python-s/>

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<http://colah.github.io/posts/2014-10-Visualizing-MNIST/>

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<http://glowingpython.blogspot.com/2012/10/visualizing-correlation-matrices.html>

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<https://github.com/thejakeyboy/Python-Lectures>

\* Language Modeling

<https://github.com/turian/neural-language-model>

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<https://github.com/aymericdamien/TensorFlow-Examples>

<https://github.com/tensorflow/skflow>

<https://github.com/jtoy/awesome-tensorflow>

<https://pseudoprofound.wordpress.com/2016/06/20/recursive-not-recurrent-neural-nets-in-tensorflow/>

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<http://knowitall.cs.washington.edu/paralex/>

<http://openie.allenai.org/>

<http://reverb.cs.washington.edu/>

<https://github.com/dmorr-google/relation-extraction-corpus>

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<https://blog.insightdatascience.com/graph-based-machine-learning-6e2bd8926a0>

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<https://github.com/ChristosChristofidis/awesome-deep-learning>

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<http://speechkitchen.org/home/experiments/>

<http://www.speech.cs.cmu.edu/SLM/toolkit.html>

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<http://caffe.berkeleyvision.org/> - Deep learning framework in Python and Matlab

<http://deeplearning4j.org/> - Deep learning framework in Java

<http://cs224d.stanford.edu/reports.html> - Final reports from the Stanford DL for NLP class.

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<http://jsoup.org/>

<http://www.cs.cmu.edu/~mfaruqui/soft.html> - list of datasets and tools maintained by Manaal Faruqui

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