

Bayesian Methods for Machine Learning

<https://www.coursera.org/learn/bayesian-methods-in-machine-learning>

Variational Inference: A Review for Statisticians <https://arxiv.org/pdf/1601.00670.pdf>

<https://www.cs.princeton.edu/courses/archive/fall11/cos597C/lectures/variational-inference-i.pdf>

An Introduction to Variational Methods for Graphical Models

<https://link.springer.com/content/pdf/10.1023/A:1007665907178.pdf>

Variational Inference in Nonconjugate Models <https://arxiv.org/pdf/1209.4360.pdf>

A Mean Field Theory Learning Algorithm for Neural Networks (peterson,Anderson)

<http://wpmedia.wolfram.com/uploads/sites/13/2018/02/01-5-6.pdf>

Variational Inference (NIPS 2016 tutorial) https://www.youtube.com/watch?v=ogdv_6dbvVQ

<https://media.nips.cc/Conferences/2016/Slides/6199-Slides.pdf>

Deep Generative models <https://www.shakirm.com/slides/DeepGenModelsTutorial.pdf>

Deep Gen Models Tutorial <https://www.youtube.com/watch?v=JrO5fSskISY>

<https://www.shakirm.com/slides/DeepGenModelsTutorial.pdf>

Deep Gen Models Tutorial <https://ermongroup.github.io/generative-models/>

GeorgiaTech Bayesian Statistics: Handouts

<https://www2.isye.gatech.edu/~brani/isyebayes/handouts.html>

ICML 2011 Tutorial: Learning Kernels <https://cs.nyu.edu/~mohri/icml2011-tutorial/>

Generative Adversarial Nets and Variational Autoencoders at ICML 2018

<https://medium.com/peltarion/generative-adversarial-nets-and-variational-autoencoders-at-icml-2018-6878416ebf22>

<http://bayesiandeeplearning.org/2016/index.html>

Bayesian Deep Learning NIPS 2017 Workshop <http://bayesiandeeplearning.org/>

Lecture notes on Bayesian deep learning <https://github.com/sjchoi86/bayes-nn>

http://www.cs.ox.ac.uk/people/yarin.gal/website/PDFs/2017_OReilly_talk.pdf

Variational Bayes and The Mean-Field Approximation <http://bjlkeng.github.io/posts/variational-bayes-and-the-mean-field-approximation/>

EM <http://bjlkeng.github.io/posts/the-expectation-maximization-algorithm/>

Latent Dirichlet Allocation <http://www.jmlr.org/papers/volume3/blei03a/blei03a.pdf>

<https://stlong0521.github.io/20160326%20-%20LDA.html>

Variational Inference and Normalising Flows

A Beginner's Guide to Variational Methods: Mean-Field Approximation

<https://blog.evjang.com/2016/08/variational-bayes.html>

Variational Auto-encoders <https://jaan.io/what-is-variational-autoencoder-vae-tutorial/>

A Tutorial on Information Maximizing Variational Autoencoders (InfoVAE)

<https://ermongroup.github.io/blog/a-tutorial-on-mmd-variational-autoencoders/>

Differentiable Inference and Generative Models

<http://www.cs.toronto.edu/~duvenaud/courses/csc2541/index.html>

Variational Inference with Normalizing Flows <http://proceedings.mlr.press/v37/rezende15.pdf>

Intuitively Understanding Variational Autoencoders <https://towardsdatascience.com/intuitively-understanding-variational-autoencoders-1bfe67eb5daf>

Normalizing Flows Tutorial <https://blog.evjang.com/2018/01/nf1.html>

Analyzing Inverse Problems with Invertible Neural Networks <https://hci.iwr.uni-heidelberg.de/vislearn/inverse-problems-invertible-neural-networks/>

CHANGE OF VARIABLES: A PRECURSOR TO NORMALIZING FLOW

<http://ruishu.io/2018/05/19/change-of-variables/#fnref:1>
Normalising Flows Overview <https://ferrine.github.io/blog/2017/07/11/normalizing-flows-overview/>
Normalizing Flows http://akosiorek.github.io/ml/2018/04/03/norm_flows.html
Variational Auto-Encoder & Normalising Flows
<http://www.machinelearning.ru/wiki/images/f/f2/LebedevTuzovaVaeNfSlides.pdf>
Posterior Approximation for Variational Inference <https://tonghehehe.com/blog/2017/1/1/vae>
Markov Chain Monte Carlo and Variational Inference: Bridging the Gap
<https://arxiv.org/pdf/1410.6460.pdf>
Fixing a Broken ELBO <http://proceedings.mlr.press/v80/alemi18a/alemi18a.pdf>
Ferenc Huszar <https://www.inference.vc/variational-inference-with-implicit-probabilistic-models-part-1-2/>
<https://www.inference.vc/variational-renyi-lower-bound/>

GLOW

<https://blog.openai.com/glow/>
https://www.reddit.com/r/MachineLearning/comments/8xe5lx/d_glow_better_reversible_generative_models/

Density estimation using Real NVP

<https://openreview.net/forum?id=HkpbnH9lx>
https://www.reddit.com/r/MachineLearning/comments/4lvc9m/160508803_density_estimation_using_real_nvp/
<http://www.shortscience.org/paper?bibtexKey=journals/corr/1605.08803#hlarochelle>
https://archive.org/details/Redwood_Center_2015_10_14_Laurent_Dinh

MCMC <https://homepages.inf.ed.ac.uk/imurray2/teaching/09mlss/slides.pdf>
https://hciweb.iwr.uni-heidelberg.de/sites/default/files/profiles/mkandemi/files/lecture4_0.pdf

Gibbs Sampling / Dirichlet process

GIBBS SAMPLING FOR THE UNINITIATED <http://legacydirs.umiacs.umd.edu/~resnik/pubs/gibbs.pdf>

Stepping Into the Mixtures With Gibbs Sampling

<http://fozziethebeat.github.io/blog/2012/05/17/stepping-into-the-mixtures-with-gibbs-sampling/>

Getting to the Mixtures in Dirichlet Process Mixture Models

<http://fozziethebeat.github.io/blog/2012/05/04/getting-to-the-mixtures-in-dirichlet-process-mixture-models/>

Infinite Mixture Models with Nonparametric Bayes and the Dirichlet Process

<http://blog.echen.me/2012/03/20/infinite-mixture-models-with-nonparametric-bayes-and-the-dirichlet-process/>

<https://stats.stackexchange.com/questions/92034/understanding-and-implementing-a-dirichlet-process-model>

The Dirichlet Process the Chinese Restaurant Process and other representations

<http://blog.datumbox.com/the-dirichlet-process-the-chinese-restaurant-process-and-other-representations/>

Probability:

Generating Functions and Convolutions

https://web.williams.edu/Mathematics/sjmiller/public_html/331Sp17/handouts/ProbLifesaver_GeneratingFns.pdf

PROBABILISTIC-PROGRAMMING

<http://probabilistic-programming.org/wiki/Home>

An Introduction to Model-Based Machine Learning

<https://blog.dominodatalab.com/an-introduction-to-model-based-machine-learning/>

<http://www.mbmlbook.com/toc.html>

Stanford classes:

- 1.statistical learning theory
- 2.Representation Learning in Computer Vision
- 3.Probabilistic Graphical Models