**PIP Summer School 2016
Unsupervised & deep learning references**

**Books about machine learning**

David Barber's [Bayesian Reasoning and Machine Learning](http://web4.cs.ucl.ac.uk/staff/D.Barber/pmwiki/pmwiki.php?n=Brml.HomePage" \t "_blank)

Bishop's [Pattern Recognition and Machine Learning](http://research.microsoft.com/en-us/um/people/cmbishop/prml/%22%20%5Ct%20%22_blank)

Hastie, Tibshirani, and Friedman's [The Elements of Statistical Learning](http://statweb.stanford.edu/~tibs/ElemStatLearn/%22%20%5Ct%20%22_blank)

Kevin Murphy's [Machine learning: a Probabilistic Perspective](http://www.cs.ubc.ca/~murphyk/MLbook/%22%20%5Ct%20%22_blank)

Foundations of Machine Learning,[Mehryar Mohri, Afshin Rostamizadeh, Ameet Talwalkar](http://www.amazon.com/dp/026201825X%22%20%5Ct%20%22_blank)

Learning From Data,[Yaser S. Abu-Mostafa, Malik Magdon-Ismail, Hsuan-Tien Lin](http://www.amazon.com/gp/product/1600490069%22%20%5Ct%20%22_blank)

Information Theory, Inference, and Learning Algorithms,[David J. C. MacKay](http://www.inference.phy.cam.ac.uk/itila/)[

All of Statistics,[Larry Wasserman](http://www.amazon.com/All-Statistics-Statistical-Inference-Springer/dp/0387402721%22%20%5Ct%20%22_blank)

Probabilistic Graphical Models: Principles and Techniques, [Daphne Koller, Nir Friedman](http://www.amazon.com/Probabilistic-Graphical-Models-Principles-Computation/dp/0262013193%22%20%5Ct%20%22_blank)

[Machine Learning with R](http://bit.ly/16bxAum%22%20%5Ct%20%22_blank)

[Building Machine Learning Systems with Python](http://bit.ly/1vHzOWS%22%20%5Ct%20%22_blank)

 [Matrix Computations (Johns Hopkins Studies in the Mathematical Sciences): Gene H. Golub, Charles F. Van Loan: 9781421407944: Amazon.com: Books](http://www.amazon.com/Computations-Hopkins-Studies-Mathematical-Sciences/dp/1421407949/ref%3Dsr_1_1?ie=UTF8&qid=1456795538&sr=8-1&keywords=matrix+computations" \t "_blank)

 **Clustering**

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**Useful links**

General machine learning: <https://github.com/josephmisiti/awesome-machine-learning/>

Website for competitions, datasets, etc. <https://www.kaggle.com/>

t-SNE website: <https://lvdmaaten.github.io/tsne/>

**Deep Learning**

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**Useful links:**

<http://deeplearning.net>

- Detailed list of books, tutorials, code, etc.

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

Introductory references:

<http://deeploria.gforge.inria.fr/stories/introductory-references/>

- Deep vision: <https://github.com/kjw0612/awesome-deep-vision>

- Recurrent neural networks literature: <https://github.com/kjw0612/awesome-rnn>