**Gradient Descent**

**Machine Learning Andrew Ng Coursera course**

**Linear regression**

[**Caltech Machine Learning Course Lecture 3**](https://www.youtube.com/watch?v=FIbVs5GbBlQ&index=3&list=PLD63A284B7615313A)

**Logistic regression**

[**Caltech Machine Learning Course Lecture 9**](https://www.youtube.com/watch?v=qSTHZvN8hzs&index=9&list=PLD63A284B7615313A)

**Maximum likelihood estimation**

[**wiki**](https://en.wikipedia.org/wiki/Maximum_likelihood_estimation)

[**YouTube**](https://www.youtube.com/watch?v=2iRIqkm1mug)

**Generalized linear models**

[**Andrew Ng Stanford CS229 Lecture 4**](https://www.youtube.com/watch?v=nLKOQfKLUks)

[**wiki**](https://en.wikipedia.org/wiki/Generalized_linear_model)

**Naive Bayes Classifier, Gaussian Discriminant Analysis**

[**Andrew Ng Stanford CS229 Lecture 5**](https://www.youtube.com/watch?v=qRJ3GKMOFrE&t=3723s) **and** [**Lecture 6**](https://www.youtube.com/watch?v=qyyJKd-zXRE&t=616s)

**Regularization**

[**Caltech Machine Learning Course Lecture 12**](https://www.youtube.com/watch?v=I-VfYXzC5ro&list=PLD63A284B7615313A&index=12)

**SVM. Kernels**

[**Caltech Machine Learning Course Lecture 14**](https://www.youtube.com/watch?v=eHsErlPJWUU&index=14&list=PLD63A284B7615313A) **and** [**Lecture 15**](https://www.youtube.com/watch?v=XUj5JbQihlU&index=15&list=PLD63A284B7615313A)

**Neural Networks**

[**Caltech Machine Learning Course Lecture 10**](https://www.youtube.com/watch?v=Ih5Mr93E-2c&list=PLD63A284B7615313A&index=10)

**K-means**

[**Caltech Machine Learning Course Lecture 16**](https://www.youtube.com/watch?v=O8CfrnOPtLc&index=16&list=PLD63A284B7615313A)

**PCA**

[**Andrew Ng Stanford CS229 Lecture 14**](https://www.youtube.com/watch?v=ey2PE5xi9-A&index=14&list=PLA89DCFA6ADACE599)

[**YouTube video**](https://www.youtube.com/watch?v=TSYL-oHx4T0&t=525s)

[**CS 229 Lecture Notes**](http://cs229.stanford.edu/notes/cs229-notes10.pdf)

**ICA(Ng Stanford course – Lecture 15)**

[**Andrew Ng Stanford CS 229 Lecture 15**](https://www.youtube.com/watch?v=QGd06MTRMHs&list=PLA89DCFA6ADACE599&index=15)

[**CS 229 Lecture Notes**](http://cs229.stanford.edu/notes/cs229-notes11.pdf)

[**https://sccn.ucsd.edu/~arno/indexica.html**](https://sccn.ucsd.edu/~arno/indexica.html)