

KEY TOPICS FOR ML

1. Basic mathematical concepts in ML - Regularization-- and how they would apply in production.
2. Basic Statistics.
3. Data collection and noise reduction, overfitting and why they occurs etc
4. [Kernel Methods](#)
5. Supervised Learning Algorithms
 - K Nearest Neighbors
 - Decision Trees
 - Naive Bayes and Probability theory
 - Support Vector Machines. Optimization problem to solve to train a support vector machine
 - Regression, Linear, Logistic Regression, Tree-based regression
6. Unsupervised Learning Algorithms
 - K-Means clustering
 - FP - tree
 - Apriori Analysis
7. PageRank
8. Expectation Maximization
9. Dimensionality Reduction, detecting redundant features using filters, PCA, KPCA, ICA uses
10. Reinforcement Learning
11. Bayesian Networks
12. Ensemble Learning
13. Gaussian Processes
14. Anomaly Detection
15. Tools for parallelizing machine learning algorithms.
16. Useful Links

[Edwin Chen's blog](#)

[ML Theory](#)

[Simply Statistics](#)