

Ensemble Methods

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Advanced Machine Learning: Lecture 06

May 6, 2018



POLYTECHNIQUE
MONTREAL



CART

Bagging and
Boosting

Random Forest

SVM

① CART

② Bagging and Boosting

③ Random Forest

④ SVM



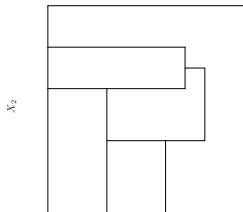
Classification and Regression Trees

CART

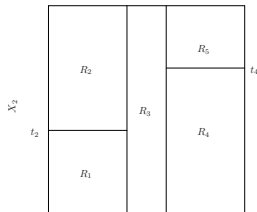
Bagging and
Boosting

Random Forest

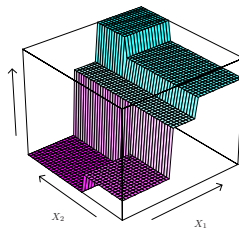
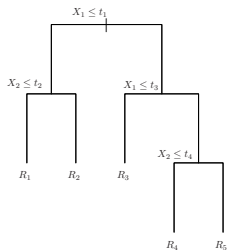
SVM



X_1



X_1

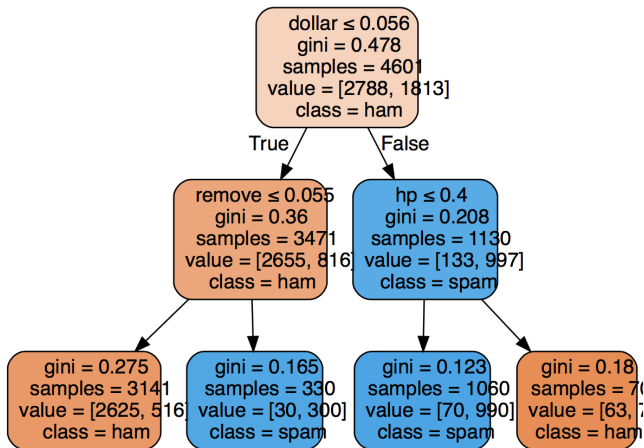


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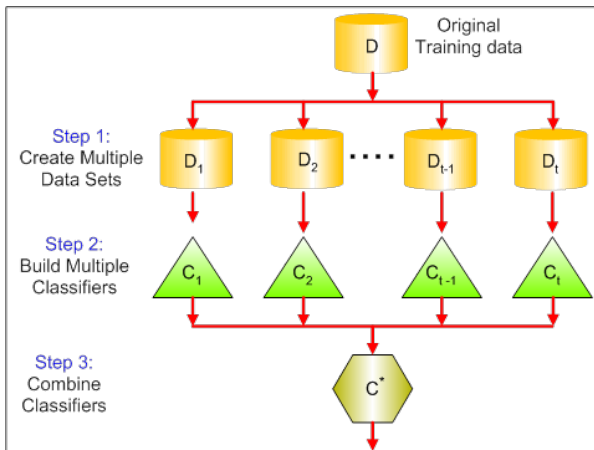


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http://arogozhnikov.github.io/2016/07/05/gradient_boosting_playground.html

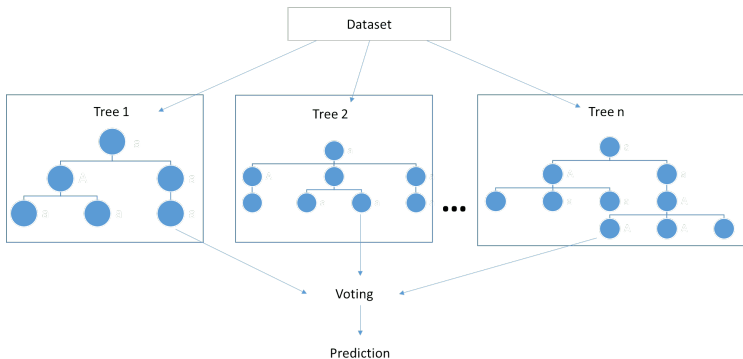


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Shake the data

- Shake the rows
- Shake the columns

<https://cs.stanford.edu/~karpathy/svmjs/demo/demoforest.html>

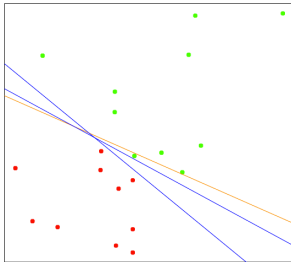


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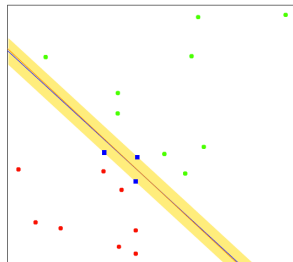
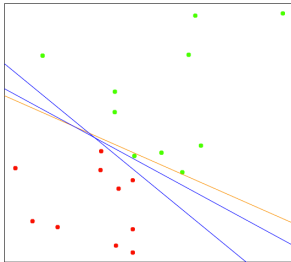


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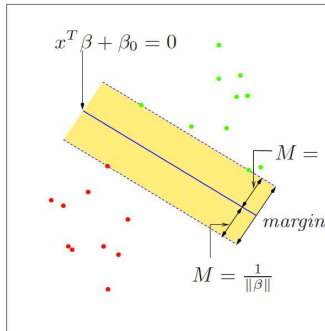
Maximum Margin

CART

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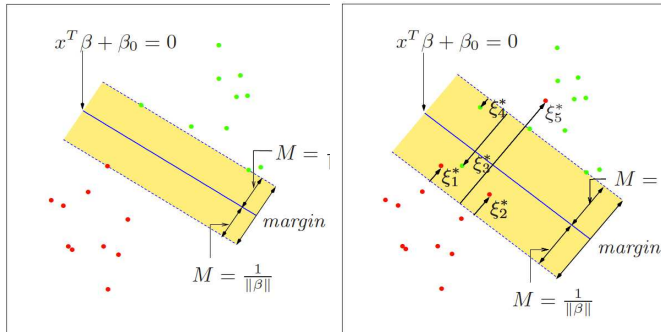
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<https://cs.stanford.edu/~karpathy/svmjs/demo/>

