## Machine Learning techniques applied to cosmological problems.

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#### Resumen

Introduction to Machine Learning techniques.

The MeSsI (Merging Systems Identification) Algorithm.

Analysis of individual merging clusters candidates.

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Statistical analysis of the magnetic fields in merging clusters.

CosmoM1: Machine Learning techniques applied to the CMB.

Construction of the data set

Unsupervised methods.

Supervised methods.

Cosmological parameters Angular distributions.



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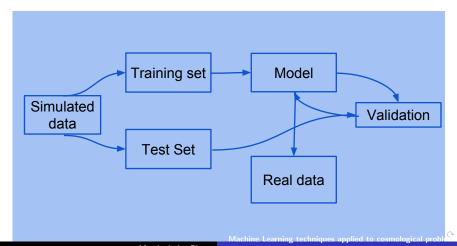
Cosmological parameters Angular distributions



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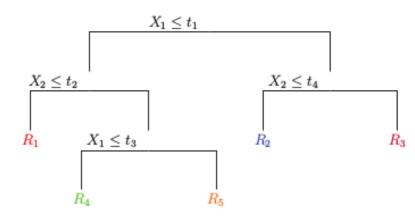
The Messi (Merging Systems Identification) Algorithm.
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Conclusions.

## Supervised Learning.



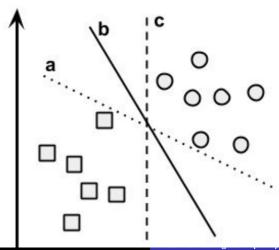
## Random Forest

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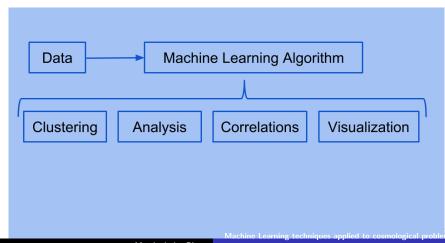


## Support Vector Machines

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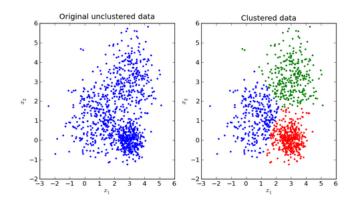


## Unsupervised Learning.

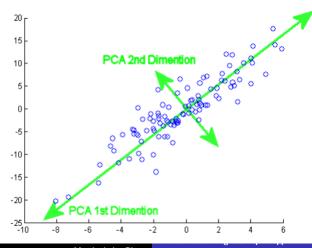


### Mixture of Gaussians

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## Principal Components Analysis.



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