

# Marina Vinyes

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## Education

- 2013–present **Phd in Machine Learning**, *Imagine lab, Ecole des Ponts ParisTech*, France.  
"Machine learning algorithms for large matrix models" under the supervision of Guillaume Obozinski.
- 2012–2013 **Msc in Computer Vision and Machine Learning (MVA)**, *ENS Cachan*, France, GPA 3.9/4.0.
- 2009–2011 **Engineering degree in Mathematics and Computer Science**, *Ecole des Ponts ParisTech*, France.

## Experience

- 2015–2016 **Teaching Introductory course of C++ programming**, *Ecole des Ponts ParisTech*, France.
- 2011–2012 **Research intern in medical imaging**, *Philips Healthcare*, Suresnes.  
Designed and developed an interface for cardiologists with C# to compare MRI images and echocardiographies of heart failure patients. Included automatic registration and segmentation of the MRIs.
- April–June **Lab assistant**, *Tongji University*, Shanghai.  
2010 Analyzed data for a study of heavy metals leaching in the soil.
- Sept. 2009 **Internship**, *Sanofi Aventis*, France.  
Worker in a line work labeling drugs

## Projects

- April 2014 **Google Paris Hash Code 2014**, *Paris*, France.  
One day team programming competition. The task was, given a map of Paris and limited time, choose a route for 8 cars which allows you to cover as many streets as possible.
- 2013 **Master thesis on large scale online collaborative filtering**, *Paris*, France.  
New online algorithm for making automatic predictions about the interests of a user by collecting preferences or taste information from many users (recommender systems problem).

## Publications

- M. Vinyes, G. Obozinski. **Fast column generation for atomic norm regularization**, Proceedings of the 20th Conference on Artificial Intelligence and Statistics, 2017.
- M. Vinyes, G. Obozinski. **Column generation for atomic norm regularization**, NIPS workshop Learning in High Dimension with Structure, 2016.

## Programming experience and skills

- Computer skills Advanced knowledge in **Matlab**, **C++**. Competent in **Python** and **C#**
- Other Machine Learning, Convex Optimization, Sparsity, Structured Optimization, Large Scale Variable Selection, Matrix Factorisation, Recommender Systems, Collaborative Filtering, Statistical Learning, Probabilistic Graphical Models, Image Processing

## Languages

Fluent in **English**. Native speaker in **French**, **Spanish** and **Catalan**. Basic knowledge of **Chinese**.