

Augustin Lefèvre

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Born February 21st, 1985
Single

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<https://alf3000.github.io/whoami>

WORK EXPERIENCE

2014 (3 months) Paris	Niland Research and development
2008 (6 months) New York, Paris	CAST Software Software developer : C#
2007 (3 months) Paris, France	Capital Fund Management (CFM) Research assistant Data mining on high frequency data
2006 (3 months) France	Poulet bicyclette Catering for cultural events

ACADEMIC BACKGROUND

		<i>Diplomas</i>
2012 – 2013	Université Catholique de Louvain Postdoctoral researcher	
2008 - 2012	INRIA Paris PhD in machine learning / music processing	<i>PhD</i>
2008 - 2009 Paris	École Normale Supérieure de Cachan Mathematics, computer vision, and machine learning	<i>Master 2</i>
2007 - 2008 New York	Columbia University Financial Mathematics	<i>Master</i>
2004 - 2008	École Polytechnique Top ranking engineer school major in applied mathematics and economics	<i>Master</i>
2002 - 2004 Paris	French Classes Préparatoires Two year intensive preparation of national competitive exams Major in Mathematics/Computer Science Lycée Henri 4	<i>Licence</i>

PROGRAMMING SKILLS

Versioning tools : Git (see [puzzlist](#) and [whoami](#)), SVN (at INRIA)

Matlab 6 years experience, daily use. Specifically, I implemented the following algorithms :

- Random forests for linear/logistic regression
- Least Angle Regression (LAR) method for sparse linear regression (a.k.a "lasso")
- Nonnegative matrix factorization and extensions for audio applications
- Short time Fourier transform
- Subgradient algorithm on the ellipsoid, with box constraints
- Topic models for information retrieval of text data.

C++/C# Some specific programs I have used :

- Graphical user interface for tree manipulation (at CAST)
- Clustering of long, multivariate time series with Principal Component Analysis (at CFM)
- [ALIZE](#) toolbox Clustering of of music database with GMM supervectors (at Niland)

Java For fun :

- Short time Fourier transform (Android SDK)
- Spline interpolation (Android SDK)
- Phase vocoder for changing the tone/speed of audio (Android SDK)

Excel

- Personal expenses management
- Pricing of options (at Columbia University)
- Linear regression, pruning of outliers with the "jackknife" (at Columbia University)

Unix suite : BASH, Perl, awk.

SKILLS

Natural Languages

French : mother tongue
English : bilingual
German : spoken, read, written

Certificates

*TOEFL, GMAT
ZD*

Vehicles

Driving license : cars, lightweight motorcycles
Sailing, motor boat (unlicensed)

Publications in international journals

A. Lefèvre, F. Glineur, and P.-A. Absil, *A convex formulation for informed source separation in the single channel setting*, **Neurocomputing**, 2014

Publications in international peer-reviewed conferences

A. Lefevre, F. Glineur, and P.-A. Absil, *A nuclear-norm based convex formulation for informed source separation*, in **Proc. of ESANN**, 2013

A. Lefèvre, F. Bach, and C. Févotte. *Itakura-Saito Nonnegative Matrix Factorization With Group Sparsity*, in **Proc. of the International Conference on Acoustics, Speech, and Signal Processing (ICASSP)**, 2011.

A. Lefèvre, F. Bach, and C. Févotte. *Online algorithms for Nonnegative Matrix Factorization with the Itakura-Saito divergence*, in **Proc. IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA)** 2011.

A. Lefèvre, F. Bach, and C. Févotte. *Semi-supervised NMF with time-frequency annotations for single-channel source separation*, in **Proc. International Conference on Music Information Retrieval (ISMIR)**, 2012.

A. Lefèvre, *Dictionary learning methods for single-channel source separation*, **Phd Thesis defended at ENS Cachan**, 2012.

Reviewing activities

IEEE Transactions on Pattern Analysis and Machine Intelligence, 2013
International Conference in Machine Learning, 2012-2014

Teaching

2009-2010 : Functional and Convex Analysis, master's level at ENSAE
2010 : Probability theory, master's level at ENSAE