

# Resume

Yann Esposito

26 July 2016

## Abstract

Yann Esposito's Resume

## Contents

<b>1</b>	<b>Yann Esposito</b>	<b>2</b>
1.1	Resume . . . . .	3
1.1.1	Professional Background . . . . .	3
1.1.2	Education . . . . .	3
1.1.3	Research Activies: Publications . . . . .	3
1.2	Presentation . . . . .	4
1.3	Public things done . . . . .	5
<b>2</b>	<b>Technical Competences</b>	<b>6</b>
<b>3</b>	<b>Jobs</b>	<b>7</b>
3.1	Clojure Software Engineer for Cisco <i>2016</i> → . . . . .	7
3.2	Machine Learning Scientist & Software Engineer for Vigiglobe <i>2013</i> → <i>2016</i> . . . . .	7
3.3	Co-Founder & freelance for GridPocket <i>2010</i> → . . . . .	7
3.4	Consultant, AirFrance <i>2007</i> → . . . . .	7
3.5	Post Ph.D <i>10/2006</i> → <i>3/2007</i> . . . . .	8
3.6	ATER <i>10/2004</i> → <i>9/2006</i> . . . . .	8
3.7	Moniteur des Universités <i>10/2001</i> → <i>9/2004</i> . . . . .	9

<b>4</b>	<b>Diploma</b>	<b>10</b>
<b>5</b>	<b>Scientific Publications</b>	<b>11</b>
5.1	International . . . . .	11
5.2	National (French) . . . . .	11
<b>6</b>	<b>Projects</b>	<b>12</b>
6.1	Haskell libraries . . . . .	12
6.2	YPassword <i>2008</i> → . . . . .	12
6.3	Anonymous Network Project <i>02/2006</i> → <i>06/2006</i> . . . . .	12
6.4	Other projects . . . . .	13

# 1 Yann Esposito

## 1.1 Resume

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### 1.1.1 Professional Background

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2016 →	Clojure Software Engineer for Cisco (Threatgrid), Remote
2013 → 2016	Machine Learning Scientist & Software Engineer at Vigiglobe, Sophia Antipolis, France
2010 →	Co-Founder of GridPocket, Sophia Antipolis, France
2007 → 2013	AirFrance, Sophia Antipolis, France
10/2006 → 3/2007	Post Ph.D., Hubert Curien Laboratory, St-Etienne, France
10/2004 → 9/2006	ATER (College Degree Teach & Research), Marseille, France
10/2001 → 9/2004	University Monitor (College Degree Teach & Research), Marseille, France
1995 → 2000	Miscellaneous summer jobs

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### 1.1.2 Education

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2004	CS Ph.D. in Machine Learning at Université de Provence
2001	D.E.A. (Equivalent to Master in Computer science)
2000	Maîtrise in Computer Science
1999	Licence in Computer Science
1998	DEUG MIAS (Math)
1995	BAC S (Math)

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### 1.1.3 Research Activies: Publications

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<i>International Journal</i>	[Fundamenta Informaticæ, 2008] [Pattern Recognition, 2004]
<i>Internation Conferences</i>	[ECML 2008] [ICGI 2006] [COLT 2006] [COLT 2004] [ICALP 2003] [ICGI 2002]
<i>National Journal</i>	[JEDAI 2002]
<i>National Conferences</i>	[CAp'06] [CAp'04] [CAp'03]

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## 1.2 Presentation

I am French with a Post Ph.D in Machine Learning<sup>1</sup>. Furthermore I love web programming and design.

I am currently working remotely for Cisco Security team as a Clojure Software Engineer.

Previously I worked for Vigiglobe. The first six months I worked with `node.js` (API/MongoDB/Web). Then we upgraded our stack to *Clojure*, *Haskell*, *Mesos*, *Kafka*, *Druid*, etc... At that time we were two to make all technical decisions. In the end we made a real time analytics of social media content on a scalable architecture. Actually our architecture is able to manage (Aggregation & Machine Learning) thousands of messages per second.<sup>2</sup> In particular, I've written an Haskell twitter stream absorber able to handle thousands of tweets per seconds. And I coded myself a real time sentiment analysis module taking algebraic properties into account to optimize its efficiency.

- During my Ph.D. I made a C++ program (github<sup>3</sup> and resume<sup>4</sup>). I coded most of standard HMM learning algorithms. I developed an algorithm which I invented during my Ph.D. which use some operational optimization algorithm. During this period I published articles in international conferences and I taught Computer Science to college students.
- At the Hubert Curien Laboratory I made my post Ph.D. I developed a scientific application in Java/applet/JWS that should be used by biologists. The code has been updated a bit since my 6 month post Ph.D.<sup>5</sup>.
- I worked in the web industry for Airfrance. My work environment was quite heterogeneous. From shell scripting to manage huge amount of data, web design and production environment.
- I worked for GridPocket (I am a co-founder). This is a French startup specialized in Electric Grid. I created a private<sup>6</sup> web application.
- I've also written an iOS application to manage passwords<sup>7</sup>.
- I am the author of some quite popular blog posts<sup>8</sup>.

For an almost exhaustive list of my projects, you could check my github account: [github.com/yogsototh](https://github.com/yogsototh)

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<sup>1</sup>To be more precise in Grammatical Inference

<sup>2</sup><http://vigiglobe.com>

<sup>3</sup><https://github.com/yogsototh/DEES>

<sup>4</sup><http://yann.esposito.free.fr/dees.php?lang=en>

<sup>5</sup><http://labh-curien.univ-st-etienne.fr/SEDiL/faq.php?lang=en> (I like to believe I became a better designer )

<sup>6</sup>Sorry the code is private I can't show it :(.

<sup>7</sup><http://ypassword.esposito.com>

<sup>8</sup><http://yannesposito.com/Scratch/en/blog/>

### 1.3 Public things done

- **Cisco (threatgrid)** Security & Threat Management.
- **Vigiglobe** architecture able to analyze thousands of social media messages in realtime. In particular, real time Machine Learning & Statistics.
- YPassword iOS application
- Gridpocket web services (from conception to realization, works in correlation with a mobile app)
- **DEES**: a 10.000 line C++ command line program. This program implement most **HMM** standard algorithms & inference algorithms.
- **SeDiL**: a Java application using Swing UI. The goal is to provide biologist an easy way to use an algorithm that generate Similarity Matrices for strings but also for Tree structures. Most graphics was done by me, including the drawing of trees. I didn't used a library for that purpose.
- For YPassword ; a Dashboard Widget, a web interface, a command line tool.
- Some websites: [yannesposito.com](http://yannesposito.com), [ypassword.esposito.com](http://ypassword.esposito.com)
- Written a thesis in Machine Learning and published in major international conferences: [ICALP 2003], [COLT 2004] & [COLT 2006].
- A full javascript web application which display Electric consumption in real time.
- **krambook** (the engine I use to create this document. I exported it in HTML, PDF (using  $\text{\LaTeX}$ ) and SVG.
- some Mac OS X screensaver, a MetaPost plugin to draw Automata, an RFC-like document to help my student to make a TOR like network, etc...
- a bunch of other projects see <http://github.com/yogsototh>

## 2 Technical Competences

**Languages:** Haskell, Clojure, Javascript, scheme, C, camL, C++, Ruby, Perl, Java, Python, PHP

**Web frontend:** elm, Clojurescript, Reagent, Angular.js, sass, etc...

**Web framework:** compojure-api, Yesod (Haskell web framework), action-hero (node.js)

**Programming environments:** Mac OS X, Unix/Linux (Solaris, Ubuntu, Debian), Windows XP

**Data Mining Tools:** weka, SVMlight

**Stream Computing:** storm (with clojure)

**Unix:** Shell scripts (zsh, bash), awk, L<sup>A</sup>T<sub>E</sub>X, ConTeXt, metapost

**Version Control Tools:** git, Bazaar (DCVS), subversion (svn), CVS

**Mac:** Objective-C Cocoa (Mac & iOS), Dabsboard widget, Quartz Composer

### 3 Jobs

#### 3.1 Clojure Software Engineer for Cisco 2016 →

- *Remote*

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Product	Security Threat Management
Role	Clojure Software Engineer

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#### 3.2 Machine Learning Scientist & Software Engineer for Vigiglobe 2013 → 2016

- *Sophia Antipolis, France*

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Product	Scalable Real Time Social Media Analytics Sentiment Analysis
Role	Many client side web applications (Angular.js & reagent) Machine Learning Scientist (fast sentiment analysis, learning protocols, etc..) Full stack engineer (backend to frontend architecture)
Keywords	Clojure, Haskell, node.js, reagent, Angular.js, Stream computing

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#### 3.3 Co-Founder & freelance for GridPocket 2010 →

*Sophia Antipolis, France*

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Product	Two API server (one for client, another for administration) A private client side web application An iPhone Application Some Linux boxes to send data to the servers A Linux driver
Role	Full technical responsibilities
Keywords	Ruby, REST, JSON, HTML, CSS, Javascript, AJAX, jQuery, Objective-C, ASIHTTPRequest, CorePlot, CoreData, C

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#### 3.4 Consultant, AirFrance 2007 →

*Sophia Antipolis, France*

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Role	In charge of the Airfrance CMS for their website.
Keywords	TeamSite, Perl, XML, XHTML, CSS, javascript, JSP, Unix (Solaris/Linux), Bazaar

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### 3.5 Post Ph.D 10/2006 → 3/2007

*Université Jean Monet, Laboratoire Hubert Curien, Saint-Etienne*

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Product	SeDiL
Role	Java Developer
Research	Similarity measure between strings or XML trees
Contact	Marc Sebban
Keywords	UML, Java 1.5, Swing, Java 2D, Java Web Start, Applet, subversion, XML, XHTML, PHP

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Details:

Java application: *11 000 lines with javadoc*

Main functionalities

- learn edit matrices
- compute edit distances between trees or strings
- visualize trees or sequences (JAVA 2D)
- classification using K means
- Generate random tree couple from an edit distance matrice

Web: <http://labh-curien.univ-st-etienne.fr/SEDiL/>

### 3.6 ATER 10/2004 → 9/2006

Research & Teacher, Université de Provence, Marseille

*teach 1/2, research 1/6, C++ development 1/3*

DEES ; a C++ software

*7500 lines of C++ code, 10.000 with comments*

Main functionalities:

- Multiplicity Automata, HMM & PDA Inference,
- Baum Welch & Viterbi Algorithms,
- GraphViz export,
- String Generation from many Models,



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Languages	C++
API	STL
Environment	Linux (Debian) & Windows XP

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### **3.7 Moniteur des Universités 10/2001 → 9/2004**

Université de Provence, Marseille

*teach 1/3, research 1/3, C++ Development 1/3*

Creation of DEES (see preceeding entry).

## 4 Diploma

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<i>2004</i>	Ph.D. degree in Machine Learning
<i>2001</i>	D.E.A. in Computer Science (equivalent to master)
<i>2000</i>	Maîtrise d'Informatique
<i>1999</i>	Licence in Computer Science
<i>1998</i>	DEUG MIAS (math)
<i>1995</i>	BAC S (math)

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## 5 Scientific Publications

### 5.1 International

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Journals	[Fundamenta Informaticæ vol.86 2008] [Pattern Recognition, 2004]
Conferences	[ECML 2008] [COLT 2006] [ICGI 2006] [COLT 2004] [ICALP 2003] [ICGI 2002]
Workshop	[TAGI05]

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### 5.2 National (French)

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Journals	[JEDAI, 2003]
Conferences	[CAP 2006] [CAP 2004] [CAP 2003]
Thesis	[Université de Provence 2004]

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## 6 Projects

Most of my latest programming activities are publicly available at [github.com/yogsototh](https://github.com/yogsototh)

### 6.1 Haskell libraries

- [Link to list of packages](#)
- holy-project
- human-readable-duration
- wai-middleware-caching-lru
- wai-middleware-caching-redis
- wai-middleware-caching

### 6.2 YPassword *2008* →

Mainly an iOS application:

- YPassword, <http://ypassword.espozito.com>

I've done fully the website from scratch. Also there are some javascript implementation of YPassword method:

- a Mac OS X dashboard widget,
- a Cappuccino Web application,
- a jQuery Web application,
- a command line tool,
- an Applescript helper

### 6.3 Anonymous Network Project *02/2006* → *06/2006*

Made a protocol similar to [TOR](#) for student.

## 6.4 Other projects

- Web Application used for private team usage at AirFrance 2008 → This application is just done *for teh lulz*. Not related to the Airfrance work. But still pleasant. *Javascript(Prototype.js, Scriptaculous), CSS, PHP/MySQL, Google Talk*
- *metapost* package to draw Automata 2003 → 2004 metapost
- Mac OS X Screensavers (*YClock* & *YAquaBubbles*) 2003 → 2004 *Objective-C, Quartz Composer, Cocoa*

You could find even more information by looking at:

- My personal website: <http://yannesposito.com>
- My github account: <http://github.com/yogsototh>