Yann Esposito

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Professional Background

2013 →	Machine Learning Scientist & Software Engineer at Vigiglobe,
2010 →	Co-Founder of GridPocket,
2007 → 2013	AirFrance,
10/2006 → 3/2007	Post Ph.D., Hubert Curien Laboratory,
10/2004 → 9/2006	ATER (College Degree Teach & Research),
10/2001 → 9/2004	University Monitor (College Degree Teach & Research),
1995 → 2000	Miscellaneous summer jobs

Education

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)

Research Activies: Publications

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

Presentation

I am French with a Post Ph.D in Machine Learning[1]. Furthermore I love web programming and design.

I am currently working 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.[2] 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[3] and resume[4]). 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[5].

- 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[6] web application.

- I've also written an iOS application to manage passwords[7].

- I am the author of some quite popular blog posts[8].

For an almost exhaustive list of my projects, you could check my github account: github.com/yogsototh

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[1]To be more precise in Grammatical Inference

[2]http://vigiglobe.com

[3]https://github.com/yogsototh/DEES

[4]http://yann.esposito.free.fr/dees.php?lang=en

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

[6]Sorry the code is private I can't show it :(.

[7]http://ypassword.espozito.com

[8]http://yannesposito.com/Scratch/en/blog/

Public things done

- 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, ypassword.espozito.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 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

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, LaTeX, ConTeXt, `metapost`

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

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

Jobs

▷ **Machine Learning Scientist & Software Engineer for Vigiglobe** *2013 →*

Sophia Antipolis, France

Product Scalable Real Time Social Media Analytics

Sentiment Analysis

Many client side web applications (Angular.js & reagent)

Role Machine Learning Scientist (fast sentiment analysis, learning protocols, etc..)

Full stack engineer (backend to frontend architecture)

Technical Keywords: Clojure, Haskell, node.js, reagent, Angular.js, Stream computing

▷ **Co-Founder & freelance for GridPocket** *2010 →*

Sophia Antipolis, France

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

Technical Keywords: Ruby, REST, JSON, HTML, CSS, Javascript, AJAX, jQuery, Objective-C, ASIHTTPRequest, CorePlot, CoreData, C

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▷ **AirFrance** *2007 →*

Consultant

Role   In charge of the Airfrance CMS for their website.

Technical Keywords TeamSite, Perl, XML, XHTML, CSS, javascript, JSP, Unix (Solaris/Linux), Bazaar

Environnement Windows (Cygwin), Sun Solaris, Linux

▷ **Post Ph.D** *10/2006 → 3/2007*

Université Jean Monet, Laboratoire Hubert Curien, Saint-Etienne

Product SeDiL

Role Developer

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/

Research

Similarity measure between strings or XML trees

Contact Marc Sebban

Technical Keywords UML, Java 1.5, Swing, Java 2D, Java Web Start, Applet, subversion, XML, XHTML, PHP

Environnement Mac OS X, Linux (Debian), Windows XP

▷ **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:

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

  Languages C++

  API STL

  Environment Linux (Debian) *&* Windows XP

▷ **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).

Diploma

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

Scientific Publications

International

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

National (French)

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

Projects

Most of my latest programming activities are publicly available at github.com/yogsototh

▷ **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 tehcnic:

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

▷ **Rubyzome** *2009 →*

Ruby API oriented framework. Done with Luc Juggery. This framework is REST oriented and output can be either JSON (preferred), but also XML or HTML.

▷ **Anonymous Network Project** *02/2006 → 06/2006*

Made a protocol similar to TOR for student.

▷ **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 personnal website: `http://yannesposito.com`

- My github account: `http://github.com/yogsototh`