

Curriculum Vitæ

Yann Esposito

Expert en Machine Learning

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Professional Background

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

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

<i>International Journal</i>	[Fundamenta Informaticæ, 2008] [PatternRecognition, 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]

Softwares

GridPocket server architecture GridPocket Web Client GridPocket iPhone app SEDiL DEES	API (Ruby/Rack/JSON/REST) Full Javascript (jQuery) Web client (Objective-C/Cocoa) client Learn Tree Edit Distances (Java/Swing) Multiplicity Automata/HMM (C++/STL)
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What did I done?

- Written a thesis in Machine Learning about Probabilistic Automata Inference.
- Made YPassword. A password management system, and tools to use it ; an iOS app, a Dashboard Widget, a web interface, a command line tool. I also done the complete website to promote it: ypassword.esposito.com
- Published results about this thesis in major international conferences: [ICALP₂₀₀₃], [COLT₂₀₀₄] & [COLT₂₀₀₆].
- 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.
- An API oriented Ruby framework. For now it is not public.
- For GridPocket I have made two private API server. They manage Electric consumption information.
- I have made a full javascript oriented website to 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.
- Many other things, like 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...

3 I tried many computer things

Mac Objective-C with Cocoa (Mac & iOS), Dashboard widget, Quartz Composer

Object Orient Languages Ruby, Javascript, Perl, C++, Java, Python, PHP

Web Ajax (xmlHttpRequest, prototype.js, jQuery, scriptaculous...), XML, JSON
Ruby (nanoc), PHP/MySQL, Python (Django), REST, SOAP, XML-RPC

Norms HTML, XHTML, CSS, SVG

Libraries (API) C++(STL), Java (Swing/Java 2D), Python (PySQLite, wxPython, crypto, socket), Objective-C (Cocoa, iOS, Core Data, Quartz Composer, Core Plot, ASI HTTP Request)

Languages *haskell*, scheme, C, camL

Unix Shell scripts (zsh, bash), awk, \LaTeX , ConTeXt, metapost

Conception methodology UML, Merise

IDE XCode, Environnement Unix (make, gcc,...)

Data Mining Tools Enterprise Miner (SAS), weka, SVMlight

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

Programming environments Mac OS X, Unix/Linux (Solaris, Ubuntu, Debian), WindowsXP

UI Cappuccino, jQuery, scriptaculous, prototype.js, Java Swing, wxPython, Cocoa

Network protocols Ethernet, TCP/IP, UDP, FTP, DNS, DHCP

Network tools ifconfig, tcpdump, wireshark (Ethereal), Irfp...

Security bcrypt, scrypt, AES, DES, 3DES, Hamming, PGP, GPG...

Databases DataMapper (Ruby ORM), MySQL, PostgreSQL, SQLite

4.1 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

4.2 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

4.3 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

4.4 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,

Languages C++

API STL

Environment Linux (Debian) & Windows XP

4.5 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).

- *2004* CS 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)

International**Journals** [FundamentaInformaticævol.862008] [PatternRecognition,2004]**Conferences** [ECML2008] [COLT2006] [ICGI2006] [COLT2004] [ICALP2003]
[ICGI2002]**Workshop** [TAGI05]**National (French)****Journals** [JEDAI,2003]**Conferences** [CAP2006] [CAP2004] [CAP2003]**Thesis** [UniversitédeProvence2004]

YPassword 2008 →

Many different application to manage passwords. Mainly an iOS application:

- **YPassword**

But there is also:

- 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.

Some other things

- 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 2003 → 2004
Objective-C, Quartz Composer, Cocoa