# RAIMON GRAU

## **EDUCATION**

## Facultat Informatica de Barcelona (UPC), Barcelona

January 2010

B.S. in Computer Science

Final thesis on Evolutionary Algorithms graded with Honours.

### LANGUAGES

Spanish - native

Catalan - native

English - high ('writen' and spoken (yes, it's a joke :) ))

#### **EXPERIENCE**

## RavenPack International - https://ravenpack.com

June 2016 - August 2017

Software Engineer, Common Lisp Developer

Marbella, Spain

- · Modernizing a 10 y.o Common Lisp codebase adding a test suite and a build system for it migrating it into continuous integration.
- · Writting a streamming api for advanced filtering of information (think twitter hose with more advanced filters). Using Common Lisp for backend and Nginx+Nchan for the distribution. Delivering 2.5M unique events per day.
- · Improving a REST API performance by using worker queues when possible in different parts of the system. Using both internal in-memory queues and AWS SQS. Common Lisp + Python.

## ${\bf 3scale,\,Inc\,\text{-}\,http://www.3scale.net/}$

July 2011 - June 2016

Software Engineer, Team Lead

Barcelona, Spain

- · Maintaining and developing a Ruby on Rails application to manage API authentication and rate limitings. Team lead since 2014.
- · Develop a code generator to create Nginx Lua configurations from rules introduced by the users. Also run nginx on cloud to host these configurations. Developed in Ruby, Lua, Nginx and Redis.
- · Work in an Nginx+Lua solution to cache calls to external apis to reduce the outbound traffic and be able to not get hit by rate limits (500rps). Highly concurrent calls and heavy redis usage. Lua, Nginx and Redis.
- · Write an openresty module (lua) to perform the full oauth2 authentication process (both 2 and 3 legged).
- · Work in apitools.com (http://www.apitools.com) project from the beginning until current state. Nginx platform + docker to allow users to proxy all the outbound traffic through apitools and monitor and code middleware to modify the API calls. Did a talk on that in ApiDays Barcelona 2014. Basic usage of Docker.
- · 3scale itself is an API management company, so I've been dealing with different kinds of API models, authentications, rate-limitings, documentation models, testing, etc...

# Gnuine Web Developer

December 2010 - July 2011

Barcelona, Spain

· First contact with web development, Ruby, and Rails. Working in different Ruby on Rails projects. First serious testing and Git usage.

## Intelligent Pharma - http://intelligentpharma.com/ Developer

July 2008 - December 2010

Barcelona, Spain

- · Developing Artificial intelligence software for drug discovery.
- · Evolutionary algorithms and Genetic programming.
- · Development in Perl, C++ and using unix everywhere. First usage of Mercurial.
- $\cdot$  coarse grained paralelization of jobs running in supercomputers (MareNostrum, the 2nd biggest supercomputer at that time)

AMES S.A. Developer

September 2007 - 2003

Barcelona, Spain

- · Developing internal applications in Dataflex, Crystal Reports, and Perl.
- · Developing industrial apps to manage machinery by reading barcodes.

## **SKILLS**

Computer Languages: Ruby, Perl, Lua, Common Lisp, Elisp, Clojure, Smalltalk. I'm a programming language fanatic so I've dabbled with lots of others (either at university or for fun): C, Rust, Python, Prolog, C++, Java, Scheme, Assembly, Dylan, Io, Factor, Forth, Shen, Erlang, Elixir, Haskell, Oz, and written some very basic Lisp interpreters (see github).

Protocols & APIs: Working experience with HTTP, JSON, XML, REST, SQL, Redis, MongoDB, Redshift, Oracle. Some experience with lots of others: EventStore, Tarantool, influxdb, Gemstone/S, DataFlex. No real world experience with those though.

Development tools: Deep knowledge of zsh, screen, Vim (heavy user for 5 years, written some plugins), Emacs (VERY heavy user for 5 years, written some plugins and contributed code to emacs itself), git, Openresty (nginx+lua). Knowledge of elasticsearch, redis, statsd+Graphite+grafana, AWS (experience with dynamodb, ec2, s3, cloudwatch).

Passionate learner, and willing to transmit enthusiasm for learning technologies and balance them with the current stable stack. I'm quite cautious on "The next big thing" hypes (there is no silver bullet), and like to usually keep things very simple (http://suckless.org). I believe simplicity and uniformity sometimes wins 'the perfect tool for the job' x Number-of-jobs.

Good communication skills and enthusiast both teacher & learner.

I used to be into reverse engineering software (1997-2000). Most of it is outdated now, but my approach to problem solving stayed.

### CONFERENCES

I love attending conferences (preferably not very crowded/mainstream ones). I'm trying to attend at least 1 conference per year as a healthy measure.

## PROJECTS AND FREE SOFTWARE

I'm a convinced advocate of Free software, and I have several projects opensourced in github (http://www.github.con and I've contributed to several others. Also I've been involved in several open source communities. For example:

Member of Barcelona Perl Mongers.

Member of Smalltalk.cat.

Patch published in Vimperator (2008)

Closely following Emacs development. Committed some code. There's much to learn from a 30 year old software project at both code level and management level.

(ex-)member of Vectorlinux crew. I developed a few apps to package apps for vectorlinux and maintaining the repos. Also a migration tool for old packages to new packages, tracking dependencies and recursively building them in preorder.

Following GNU Guix development and IRC. I package and maintain a few packages (luajit, openresty, xmlstarlet).

Helm-dash.el (coauthor/maintainer). Browse documentation offline from within emacs. It reads Dash docsets. (300 stars)

erc-image.el / erc-youtube.el (author/maintainer). Visualize images inline in erc irc client. (Included in spacemacs project)

router.lua (author/maintainer). Trie-based router in lua using unification instead of simple matching, so that traveling a route is O(route.size).

eva.lua. supersimple and toy-like lisp interpreter in lua

hascheme(half assed scheme). not so supersimple but still toy-like scheme interpreter in Perl.

redditfs.lua. fuse module written in lua to mount reddit as a file system.

More on github. I've written are some pet projects I wrote in elixir/factor/elisp/Io ...

Backend of a geocaching-like app in clojure using ring, compojure, secretary, korma, postgres+GIS and google cloud messaging. Frontend of the app for mobile, using cordova and Google maps api.

## **PERSONAL**

I love music (from rock and jazz to funk and psy ...).

Reading is another passion of mine. ("Obviously", my favourite technical books are those that are known by their initials:

- 1. SICP
- 2. GEB
- 3. PAIP
- 4. HOP
- 5. CTM

I used to play Guitar and bass guitar. (very bad)

I also love good conversations over beers about programming languages.

I blog in http://puntoblogspot.blogspot.com since 2008. Sharing mostly technical stuff.

I like wordplays.

I currently live in Tenerife.

My Cv is on Github