Rafael Alfredo Capucho

Curriculum Vitae

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Professional Goals

System Architect, Full Stack Developer

I started to learn about programming when I was only 12 years old, self-taught, before I studied and graduated in Computer Science. Over the last 13 years I have been working on increasingly complex projects, mainly related to Distributed Systems and Web Crawlers, that way I gained a lot of experience with Big Data and Infrastructure. I am very interested to work with challenging projects that allow me to apply my knowledge in different areas to develop, maintain and improve useful services.

Computer Skills

Languages	Python expert (since 2008), PHP (since 2003) and C/C++ (since 2008).
Client-Side	HTML5, ReactJS, Bootstrap, CSS, Javascript, JQuery and AngularJS.
Database	MySQL, MongoDB, Cassandra, Redis and Memcached.
Systems	Linux Specialist (7+ years), Docker and IPTables Firewalls.
Servers	Nginx, Apache, Tornado and WSGI Servers in general.
Frameworks	Django specialist, Tornado and Flask.
Web API	Socket.io, Web Services, REST, SOAP, JSON and XML.
Tools	Scrapy, Consul, Vim, Mercurial, Git, Supervisord, PhoneGap, Celery, Fabric and Ansible.

Skills

5+ years of experience as Web Crawler architect.

Fast-paced environments.

Search Engine Optimization (SEO).

Design Patterns, MVC architecture, UX design and Refactoring Code.

Implemented neural networks like SOM, Hopfield, Perceptron, ART-1, MLP and AI algorithms like Simulated Annealing, A* Search and Genetic Algorithms.

Loves cryptography, implemented encryption algorithms like S-DES, RC4, 3-DES and Diffie-Hellman during the Computer Security Course at University.

▬▬▬ Education

2008-2013 **Bachelor's Degree in Computer Science**, Federal University of São Paulo (UNIFESP), São Paulo, Brazil.

The UNIFESP is considered one of the best universities in Brazil, the third educational institution founded in the country. Had the first course of Brazil's Medicine and is still the most recognized in South America. In the year I joined the UNIFESP was elected for the second consecutive year the best university in the country by the Ministry of Education (MEC) ranking[1].

Awards - I earned a Merit Scholarship that covered 100% of the university costs due to a high score in scholar tests.

- I am member of Free Software Program Education Group (PESL) since 2010. My level of knowledge was considered high, so starting that year and until 2012 I weekly taught at UNIFESP about topics such as Python, MongoDB, OpenPGP, Linux, free software in general. Those classes were open to the public without charge, paid by the University.

Specialization Courses

12/2011 **Hybrid Computing**, National Institute for Space Research (INPE), São
(12 hours) José dos Campos, Brazil.

INPE main goals are fostering scientific research and technological applications and qualifying personnel in the fields of space and atmospheric sciences, space engineering, and space technology.

Course about VHDL/FPGA and CUDA (NVIDIA) by INPE Scientists[3].

2005-2006 **Leaders Training's Project**, LWART Group, São Paulo, Brazil.
(430 hours) Module: Ethics and Group Leadership[2].

Lwart Group is a private held industrial conglomerate that conducts its business in line with sustainability guidelines, providing the market with products and solutions for people's daily lives.

The aim of the course was to train 25 people chosen through a rigorous selection process to assume managerial and trustworthy positions within the Lwart Group through ethics classes, wording, planning, group work and especially hold forth. Classes were given weekly by the american citizen, Mss. Sara Margaret Hughes, one of the partners of the industry.

This group gave me the basis to start my career teaching courses and training in an appropriate and respectful manner.

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[1]Unifesp is the best university in the country, according to Ministry of Education: http://goo.gl/aKm8GM
[2]http://www.lwart.com.br/site/en/group.asp
[3]http://www.lac.inpe.br/minicursoch/

Featured Experience

06/2016-
08/2016

Backend Developer, RebelMouse, Inc., New York, US.

RebelMouse is the first digital publishing platform that is fully wired for social. Works with leading companies including GE, T-Mobile, United and The Dodo, regularly seeing 4-7x increases in high-quality traffic, sharing and sign-ups within just days of implementation and nowadays powers more than 500,000 sites around the world.

I was invited to work remotely, providing new features implementations and bug fixes. Unfortunately, the company had to changes the contracts with some investors resulting in a reduction of 32 employees, including me.

The CTO Nike Gurin-Petrovych could be consulted for recommendations: *nike@rebelmouse.com*

09/2015-
05/2016

Lead Developer, System Architect, Nexus Edge, São Paulo, Brazil.

I was invited and hired to design solutions to challenging projects, such as the Distributed Cluster (a.k.a Atlas Project) to solve Nexus Edge's Big Data needs; it was responsible for the overall computing infrastructure of our Artificial Intelligence and Distributed Database, providing Redundancy, Reliability and High Availability of our infrastructure.

As a Development Leader, I was responsible for all planning and execution of our Crawlers, Data Engineering and key projects inside Nexus Edge, the most notable one was CW-Workers one proprietary distributed platform to crawl data built on top of Python/Redis/Cassandra used to crawl large Facebook Pages.

I was responsible for facilitating all team's work, being a technical advisor, with a unique combination of management and expert in-depth technical knowledge, responsible for conducting, leading and coordinating software development activities throughout the projects, including key decisions on technology design, structure and configuration of the system.

02/2015-
07/2015

Senior Web Developer, Infrastructure, Alpina Web & Branding, Passo Fundo, Brazil.

Alpina Web is an important brazilian advertising company, attending over 300 clients needs. They were interested in creating a service infrastructure that provides redundancy to their systems, to enhance their reliability and satisfy clients demands.

In order to grant high availability and decrease the sites latency, I created a net of mirrored servers using GlusterFS + MySQL Cluster, and the 300 sites were distributed in that set of computers.

09/2012-
02/2015

Lead Developer, E-Commerce Manager, Ouroval Jewelry, São Paulo, Brazil.

Ouroval is an jewelry company with over 60 employees and more that 10 stores, maintaining an important e-commerce activity. I provided consulting services, installing and customizing their e-commerce platfom, distributed in 4 Linux servers. Due to the system knowledge and the involvement with the company, I became e-commerce manager and then also an store manager, even attending customers directly, as can be watched in this video: tinyurl.com/mkrgGRA

Notable Personal Project

I'm developing a price comparison web site, focused on women beauty and cosmetic products (temporary available at http://198.58.116.186:8089/). Beyond the front-end system (the site itself), the main difficulty was adapting Scrapy to operate as distributed system in several servers managing a central queue with com Redis, and creating an external tool to control the execution of the Scrapy processes, requesting new VPS as needed to complete the data collection according to temporal requirements.

I released these Scrapy adaptations (and monitoring) as Open Source in a project called scrapy-eagle[4].

Sample: http://tinyurl.com/scrapydist

Used Tools: Python3, Tornado, MongoDB, Scrapy, Redis, ReactJS, Flask, Socket.io

Languages

English	Advanced
Portuguese	Advanced
Spanish	Basic

Info

Born	Sept 17th, 1990 at Brazil	Citizenship	Brazilian
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Blog	`http://rafaelcapucho.com`	Skype	rafacapucho

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[4]https://github.com/rafaelcapucho/scrapy-eagle