

Rafael Polo / Curriculum Vitae

Personal

First name: Rafael
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Marital Status: Single, no children
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Education

- Master in Information Systems - July 2010 to July 2012
 - Research Area: Knowledge Representation and Reasoning
 - Federal University of Rio de Janeiro State ([PPGI/UNIRIO](#))
- Bachelor in Computer Science - July 2003 to July 2009 [[diploma](#)]
 - Thesis: Agile Systems Development for Web 2.0 with Rails [[pt-br](#)]
 - Centro Universitário Metodista Bennett - Rio de Janeiro, Brazil

Courses

- Extension in Digital Culture - first semester 2010
 - Communication School ([ECO/UFRJ](#))
 - Rio de Janeiro Federal University
- Java Software Development - February 2006 to February 2007
 - Department of Electronic Computation ([NCE/UFRJ](#))
 - Rio de Janeiro Federal University
- Open Source Software Workshop - April 2005
 - Fundação Educacional Serra dos Órgãos
 - Teresópolis, Rio de Janeiro, Brazil
- Linux System Engineer - February to December 2004
 - M.Cury Computação - Rio de Janeiro, Brazil
- Visual Basic Programming - last semester 1998
 - Index Informática - Nova Friburgo, Brazil

Skills

- System Analyses & Modeling with UML
- MVC System Architecture, Design Patterns & Object-Oriented Programming
- Data Engineering, Relational Databases & SQL + MongoDB
- Developing Web Crawlers & Scrappers for Data Mining & ETL
- Linux Systems, VPS, DevOps, SSH, Git & Deploy with Continuous Integration processes
- Full Stack Developer & Front-end Web Design with HTML, CSS and Javascript frameworks
- Multidisciplinary approach. Working with linguists, designers, journalists, economists, artists

Technologies & Tools

- Ruby on Rails; RSpec, paperclip, kaminari, redis, sidekiq, byebug, nokogiri, capistrano...
- Development Environment: Zsh, tmux, screen, vi, spacevim, rvm, git...
- Regular Expressions, RabbitMQ, Web Services, JSON, REST & APIs integration.
- MySQL, MongoDB, PostgreSQL, MariaDB, SQLite & GraphQL
- Processing.org Media Framework, ffmpeg, imagemagik, convert...

- Javascript frameworks: Coffescript, jQuery, Vue.js + DataVizualization libs.
- Full understatement of TCP/IP, HTTP, UDP, XMPP, nmap, Sockets & Unix processes.
- Projects developed in PHP, Python, Java, Pascal, Crystal and pure Bash over last 10 years.
- Agile Methodologies, Extreme programming, Scrum, Kanban, TDD.

Professional Experience

- [Code+Create School](#) - *first Semester 2018*
 - Web Development Teacher (RoR, Javascript, HTML, CSS)
 - Athens, Greece
- [Khora Community Center](#) - *May 2017 to May 2018*
 - Opened a Computer Lab in Khora as a volunteer, organizing classes, managing computers, routers and helping with all the the Association digital infra-structure.
 - Athens, Greece
- [Tactical Tech Collective](#) - *November 2014 to June 2016*
 - Senior Ruby on Rails Developer & Consultant under the Exposing the Invisible team. Had meetings with external partners such as European Center for Constitutional and Human Rights and journalists to understand requirements and developed 18 distinct projects.
 - Berlin, Germany
- [Trommsdorff + Drüner](#) - *December 2013 to February 2014*
 - Senior RoR Developer - Innovation + Marketing consultants team.
 - System Analyst & Developer using Docker, Capybara, MySQL, RSpec, RabbitMQ, jQuery...
 - Berlin, Germany
- [Cortex Intelligence](#) - *September 2007 to November 2008*
 - Developer in the Competitive Intelligence and Data Mining R&D team. System Analyst and Developer with Java and Hibernate.
 - Rio de Janeiro, Brazil
- [Logical Systems](#) - *first semester 2007*
 - SysAdmin and Java developer of the Company main Software in PHP
 - Rio de Janeiro, Brazil
- INPP - Instituto Nacional de Pesquisas Públicas - *April to July 2004*
 - Main developer of the "Planning" System in Pascal Delphi and MySQL
 - Teresópolis, Brazil
- [MeuServidor](#) - *2002 to 2003*
 - Co-founder of a Web Hosting Server in Brazil based on Linux & PHP

ExtraPolo!

Since 2008 Rafael Polo works as an independent Software Developer and IT Consultant, developing more than 30 Software Projects in between Brazil, Portugal, Holland, Germany and Greece for public and private contractors. Also published open-source projects with diverse technologies.

Selected works

- [Moeda.Casa](#) – 2021
 - RoR platform using the new Brazilian payment systems PIX/APIs to allow users to buy cryptocurrency using fiat BRL and the Zcash anonymous crypto as intermediary.
- [AmbienteJá](#) – 2020
 - RoR platform + many tasks using mechanize and cron jobs that scraps thousands of articles about environment in Portuguese language with self classification and tagging system with MongoDB and Semantic Search.

- [AreYouSyrious](#) – 2020
 - RoR platform + MongoDB semantic searches that creates a CMS platform for World Wide collaborators on articles about the Refugees situation per country.
- [Speculari](#) – 2019
 - Open source Ruby scripts that constantly shows Arbitrage trade opportunities in between German and Brazilianian crypto-exchange brokers.
- [SubZKU.space](#) - 2019
 - Interactive Audio Guide: a multi layered sonic response to five years of making at ZK/U Zentrum für Kunst und Urbanistik, Berlin. Written in pure html+css+js + ruby scripts.
- [Holistic Security \[TTC\]](#) – 2018
 - RoR platform and CMS. It is a strategy manual to help human rights defenders maintain their well-being in action.
- [Exposing the Invisible \[TTC\]](#)- 2016
 - RoR platform. Through a series of short films, video interviews, guides and resources, Tactical Tech Collective looks at different techniques, tools and methods along with the individual practices of those working at the new frontiers of investigation, empowering people to uncover hidden information, expose corruption and bring the truth to light.
- [Av. Atlântica 1101](#) - 2014
 - PHP+jQuery website. Its a interactive user-interface in which background, pictures and videos are defined based on Rio de Janeiro time zone to promote the flat at Avenida Atlântica 1101 in Copacabana.
- [Agenda Água na Escola](#) - 2013
 - RoR Platform developed to the Municipal Secretary of Environment of Rio de Janeiro to follow water metrics through participation of municipal school's students across all State.
- [Studio Zanini](#) - 2013
 - From-scratch RoR multi-language Content Management System developed to the Product Designer Zanini de Zanine, awarded Furniture Designer.
- [WebDoc Graffiti](#) - 2012
 - RoR Award-winning collaborative Web-documentary Platform of São Paulo street-art Graffiti.
- [Pensar Público](#) - 2012
 - Website, 3-floor exhibition & Interactive Systems to inaugurate the Centro Carioca de Design at Rio de Janeiro.
- [Etaoin Shrdlu](#) - 2012
 - Is a PHP CMS which generates all typographic portfolio of Pedro Moraes artworks.
- [Gráfica Utópica](#) - 2011
 - Experimental Interactive Website to present the namesake collective exhibition at Belas-Artes Museum of Rio de Janeiro.
- [Victor Haim](#) - 2011
 - RoR Innovative and inspiring Content Management System to present and manage photographer Victor Haim blog & portfolio.
- [Razão e Ambiente](#) - 2010
 - Website & Interactive System for Modern Art Museum of São Paulo (MAM/SP) Razão e Ambiente exhibition.

Selected self-initiated projects

- [Tribuna](#) - 2018
 - This software project corrects, integrates, structures and optimizes all Brazilian Electoral Supreme Court's Electoral Repository Data into a single query-able relational database to facilitate further investigation.
- [Renda](#) - 2018
 - Written in Crystal lang, this framework for cryptocurrency experiments conceptualizes and operates Wallets, Markets, Ticks, Orders, Brokers, Arbitrage and Strategies.

- [Steganos](#) - 2014
 - Ruby conceptual-algorithm to encode & decode any digital file into an image, and vice-versa.
- [Mostre!me Cultura](#) - 2013
 - Full RoR system with many tasks and crawlers using mechanize. It is an Experimental Culture & Communication system, exposing with many filters and data visualization all Brazilian Ministry of Culture data-mined financed projects of the last 10 years. [[DataViz](#)]
- [Rastros](#) - 2012
 - Written using the Processing.org Media Framework. Traces, in English, is an open-source software project that enables real-time detection and manipulation of movements in beautiful ways.
- [Graphs](#) - 2010
 - A series of dynamic scripts which generates different data-visualization use-cases & graphs from twitter follower-following circle to Wikipedia semantic networks.
- [Mostre!me Links](#) - 2009
 - RoR system, is a - still used in Brazil - simple & fast URL shortener and router with clicks referrer and monitor, before bit.ly.
- [Consulta Natural](#) - 2009
 - Ruby implementation of the 'Natural Language Query System for RDF Repositories' paper from Nokia Research Center Cambridge, 2007, applied to a Google Talk chat agent.
- [Chat-RSA](#) - 2008
 - ChatRSA is a Java software which provides automatic RSA encryption/decryption messages in a simple safe chat box using basic TCP/IP connections.

Languages

- Native Brazilian Portuguese
- Advanced Spoken Spanish (*girlfriend*)
- A2 level German (2 years in Berlin)
- Basic Greek (2 years in Athens)
- Fluent English (8 years in between international groups)

Fellowships & Awards

- The Zcash Foundation - 2021
 - Grant for a 2 months projects involving cryptocurrency and Brazilian BRL
- WebDoc Graffiti Platform - 2012
 - Collaborative Cartographies Initiatives [[link](#)]
 - By Brazilian Federal Ministry of Culture
- Dammatio Memoriae | Software-Art - 2011 [[link](#)]
 - By Memefest: International Festival of Social Responsive Communication & Art
- CAPES Fellowship for Postgraduate Research - first semester of 2010
 - By Brazilian Federal Ministry of Education