

Eduardo Mucelli | Software Engineer

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Education

École Polytechnique

Computer Science, Ph.D

Paris, France

October 2011 — May 2015

Federal University of Minas Gerais

Computer Science, Master's degree

Minas Gerais, Brazil

March 2009 — July 2011

Pontifical Catholic University of Minas Gerais

Computer Science, Bachelor's degree

Minas Gerais, Brazil

August 2004 — August 2008

Ph.D thesis

Title: *From Your Routine to Better Network Services* 🔗

Supervisor: Aline C. Viana ✉

Description: Investigated characteristics of human mobility and their impact on the network data traffic, planning and deployment. I've analyzed large-scale datasets from mobility and traffic demands generated by millions of users. Several parallelization techniques were used to summarize and assess massive amounts of data. Python multiprocessing, thread and R multi-core libraries were largely employed.

Results: 5 conference papers were published, 3 journal papers are in submission, and a data traffic simulator was created.

Master's thesis

Title: *Centrality-based Routing for Wireless Sensor Networks*

Supervisors: Antonio A. F. Loureiro ✉ and Heitor S. Ramos ✉

Description: Aimed to use centrality information on the design of routing algorithms for Wireless Sensor Networks. New topological metrics were proposed, distributed algorithms to calculate them, and a tree-based routing algorithms that take advantage of them. Simulators Castalia (C++) and Sinalgo (Java) were used.

Results: 1 conference and 1 journal paper published.

Bachelor's thesis

Title: *Data Codification, Fusion and Communication in Wireless Sensor Networks*

Supervisors: Raquel A. F. Mini ✉ and Pedro O. V. Melo ✉

Description: Aimed to create a wireless sensor's application for fire detection using real dataset of weather measurements. A novel way to fuse and codify data was proposed. Simulation used NS 2 (C++ and TCL).

Results: 1 conference paper published.

Skills

Language: Python, Ruby, R, and Javascript

Framework: Ruby on Rails, and jQuery

VCS: Subversion, Git, and Bazaar

DB: MySQL, and PostgreSQL

OS: Linux

Others: Machine learning, full-stack development, REST API development, Web crawlers, and D-Bus

Languages

Portuguese: Native speaker

English: Fluent

French: Fluent

Italian: Advanced

Professional Experiences

Orange

Postdoctoral Researcher

Developing techniques for geolocalized Radio Engineering in order to improve the mobile network's KPIs.

Paris, France

June 2015 – Nowadays

Dito Internet

Software Engineer

Part of a Ruby on Rails team developing a Telecom Italia Mobile's project called Tim Beta, timbeta.com.br.

Minas Gerais, Brazil

July 2011 — September 2011

Telecom Italia Future Centre

Intern

Developed, in Python, a project called Future of Enterprises aiming to improve the real-time interaction among employees.

Venice, Italy

November 2010 — May 2011

Task Internet

Systems Analyst

Ruby on Rails development of a social network.

Minas Gerais, Brazil

February 2008 — February 2009

Web Applications

Easy Bike – <http://easy.bike>

Ruby, Python, and Javascript

It finds the best cycling routes using bike-sharing systems in more than 390 cities distributed in 42 countries. It considers real-time information of how many bicycles are available closest to you and how many available bike stands are available in the stations close to the destination address. It then chooses the best stations and route for you. Besides, it provides city-specific domains such as paris.easy.bike, london.easy.bike, or ny.easy.bike, etc., to directly access the service in the respective cities.

Proconfie – <http://www.proconfie.com>

Ruby, Python, and R

It helps people to choose companies based on historical problems presented with other customers. Received Honorary Mention award from the Brazilian Ministry of Justice. Refer to Section [Awards](#) for further information.

CEP Aberto – <http://www.cepaberto.com>

Ruby, Python, and Javascript

Collaborative application that aims to publicly open the Brazilian Postal Code (CEP) data. It currently contains information of about 1 million CEPs. It provides an API for developers willing to use geolocalized Postal Code data and, for the end-users, the possibility to edit, add, fix, follow, etc, specific postal-coded-locations in order to improve the quality of the data.

Some Open Source Projects

Twitter applet – Code [🔗](#)

Twitter applet for Cairo-Dock which, among other features, handles the Twitter's streaming API.

WebSearch applet – Code [🔗](#)

Metasearch applet for Cairo-Dock capable of retrieving text and image results from several sources, e.g., Google, Bing, Yahoo!, Youtube, and Twitter.

Repeat One Song – Code [🔗](#)

The Repeat One Song feature for Rhythmbox.

Translator – Code [🔗](#)

Full-featured Google Translator-based translator applet for Cairo-Dock.

Quote – Code [🔗](#)

“Quote of the day” applet for Cairo-Dock. It crawls Internet sources, e.g., Bash.org, Xkcd.com, Qdb.us.

Recent publications

- Oliveira, Eduardo Mucelli Rezende and Carneiro Viana, Aline and Naveen, K. P. and Sarraute, Carlos., “*Analysis and Modeling of Mobile Data Traffic in Mexico City*”, NetMob, April 2015, Mit Media Lab, Cambridge, MA, United States.
- Oliveira, Eduardo Mucelli Rezende and Carneiro Viana, Aline and Naveen, K. P. and Sarraute, Carlos., “*Measurement-driven mobile data traffic modeling in a large metropolitan area*”, IEEE Percom, March 2015, Saint Louis, United States.
- Oliveira, Eduardo Mucelli Rezende and Viana, Aline Carneiro., “*From Routine to Network Deployment for Data Offloading in Metropolitan Areas*”, IEEE SECON, June 2014, Singapore.
- Oliveira, Eduardo Mucelli Rezende and Viana, Aline Carneiro., “*Routine-based Network Deployment*”, IEEE INFOCOM, Student workshop, April 2014, Toronto, Canada.
- Oliveira, Eduardo Mucelli Rezende and Viana, Aline Carneiro., “*From Routine To Better Network Services*”, IEEE/IFIP WMNC, May 2014, Algarve, Portugal.
- Oliveira, Eduardo Mucelli Rezende and Viana, Aline Carneiro., “*Routine-based network deployment for data offloading in metropolitan areas*”, IEEE WCNC 2014, Istanbul, Turkey.

Awards

Honorary mention

Brazilian Ministry of Justice

May 2013

Open Data Applications Contest. Lead developer of a Ruby on Rails application called Proconfie. Refer to Section [Web Applications](#) for more details about this application.

Silver Medal

Pontifical Catholic University of Minas Gerais

July 2008

Second best overall score during the bachelor.

Honorary mention

Pontifical Catholic University of Minas Gerais

May 2007

For the work “*Game Theory in Decision Making in Wireless Sensor Networks*” presented in the 15th Sciences Seminar.

Hobbies

Music: Amateur drummer for 2 years and currently playing pandeiro (Brazilian percussion).

Sport: Swimming, BMX, soccer player on a youth professional team for 5 years, Brazilian dancing lessons for 3 years.

Photography: Specially Moon, and macro of flowers.