Eduardo Mucelli — Software Engineer

Paris – France

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Education

École Polytechnique	**France**
Computer Science, Ph.D	*October 2011 — May 2015*
Federal University of Minas Gerais	**Brazil**
Computer Science, Master's degree	*March 2009 — July 2011*
Pontifical Catholic University of Minas Gerais	**Brazil**
Computer Science, Bachelor's degree	*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. Python's multiprocessing, thread and R multi-core libraries were used to summarize and assess massive amounts of data.

Results: Published 5 conference papers, 2 journal papers, and created a data traffic simulator.

Professional Experiences

Synthesia	**Remote**
Senior Software Engineer	*January 2023 – Present*

Working on improving the robustness of the video generation.

Canonical	**Remote**
Software Engineer II	*December 2021 – November 2022*

Improving the data pipeline Python codebase to serve technical and non-technical internal teams. Working on the service behind Livepatch in Golang.

Software Engineer   *June 2020 – November 2021*

Working on the services behind Ubuntu Advantage in Golang and Python. Introduced a BDD suite to our main Golang services. Revamping team's data pipelines: large refactoring of the Python codebase, type checking, linting, moving from Openstack to Kubernetes (Argo), Grafana, Prometheus, Pushgateway, alerting.

BlaBlaCar	**France**
Software Engineer	*July 2016 – May 2020*

Developed features, optimized performance, deployed and monitored a dozen of Java services at the Trip Search team. Wrote and integrated the first library to handle Machine Learning predictions at scale for which I have extensively measured performance. Significantly worked on the new search, routing and matching algorithm. Main technologies were Java, Elasticsearch, PostgreSQL, PostGIS, XGBoost, OSRM, MySQL and Redis, R and Python.

Orange	**France**
Postdoctoral Researcher	*June 2015 – June 2016*

Developed machine-learning assisted techniques to predict users' QoE based on network's KPIs.

Dito Internet	**Brazil**
Software Engineer	*July 2011 — September 2011*

Developed in Ruby on Rails, as part of a team, Telecom Italia Mobile's project called TIM Beta, *timbeta.com.br*.

Telecom Italia Future Centre	**Italy**
Researcher Intern	*November 2010 — May 2011*

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

Task Internet	**Brazil**
Software Engineer	*February 2008 — February 2009*

Lead developer of a social network in Ruby on Rails.

Full-stack, Android and iOS side-project applications

Rosto.io – https://www.rosto.io

Python, Keras, Tensorflow, Ruby

Full-featured face recognition SaaS. It provides face detection features such as age, gender, emotion, ethnicity, landmark, glasses, smile, hair segmentation and much more. All based on end-to-end machine learning models written in Keras and Tensorflow. It runs on top of Flask, Rails, Nginx, Docker all monitored with Prometheus and Grafana.

Eazy.bike – http://eazy.bike, Android app, iOS app

Ruby, Python, Java (Android), Swift (iOS), Javascript

Finds bike-sharing cycling routes in more than 443 cities in 45 countries. Uses real-time information of bike availability and proximity to predict the best stations to pick-up and drop-off. Mobile apps provide automatic trajectory redirection whenever destination station fills up during user's ride. City-specific domains for improved usage, e.g., paris.eazy.bike.

Proconfie – http://www.proconfie.com

Ruby, Python, R

It helps people to choose companies based on complains presented by other customers. Received Honorary Mention award from the Brazilian Ministry of Justice. Refer to the Awards section for further information.

CEP Aberto – http://www.cepaberto.com

Ruby, Python, Javascript

Collaborative application that aims to publicly open the Brazilian Postal Code (CEP) data. Contains information of about 1 million CEPs. It provides an API for developers and, for the end-users, a collaborative platform to improve the quality of the data. About 30K registered users.

Skills

Language: Java, Python, Golang, Ruby, R

Machine learning: Keras, Pytorch, Caret, XGBoost

VCS: Git

Framework: Springboot, Flask, FastAPI, Ruby on Rails

OS: Linux

DB: MySQL, PostgreSQL (PostGIS), Redis, Elasticsearch

Recent publications &

- Machine Learning for Predicting QoE of Video Streaming in Mobile Networks, IEEE ICC Communication QoS, reliability and modeling symposium, May 2017. &
- Mobile Data Traffic Modeling: Revealing Temporal Facets, Elsevier Computer Networks, November 2016. &
- On the regularity of human mobility, Elsevier Pervasive and Mobile Computing, May 2016. &

Languages

Portuguese: Native speaker

English: Fluent

French: Fluent

Italian: Advanced

Some Open Source Projects

Benchmark XGBoost Java &

Comprehensive benchmark of XGBoost libraries for Java.

Twitter applet &

Twitter applet for Cairo-Dock which handles most of Twitter's API features, including streaming.

Repeat One Song &

The Repeat One Song feature for Rhythmbox.

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 Full-stack, Android and iOS 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 for Decision Making in Wireless Sensor Networks"* presented in the 15th Sciences Seminar.