

Interested in software engineering, especially design and implementation of distributed systems. Ambitious and passionate by clean and structured code, logic problems in general, and intuitive modern interfaces.



## LINKS

*github* [github.com/frroliveira](https://github.com/frroliveira)  
*website* [frroliveira.github.io](https://frroliveira.github.io)  
*linkedin* [linkedin.com/in/frroliveira](https://linkedin.com/in/frroliveira)

## SKILLS

*advanced* Java, Scala, Android, HTML, CSS, Data Structures  
*intermediate* C#, C/C++, Python, JavaScript, AngularJS, Bash, Puppet, Algorithms  
*basic* PHP, Perl  
*tools* Jenkins, Git, JUnit  
*languages* Native Portuguese, English

## EXPERIENCE

**HomeAway** Software Engineer Feb 2017 - Current  
Enabling growth of conversion rates using **Scala**.

**Net-A-Porter Group** Associate Developer Nov 2015 - Feb 2017  
Development, maintenance and support of **REST** services and payment APIs using **Spring** and **Hibernate**.  
Design of a **ElasticSearch** index. Pipeline configuration using **Puppet**. Prototype of a functional approach to API development with **Java 8**. Prototype of model-driven **GraphQL** implementation.

**Critical Manufacturing** Summer Internship Jul - Sep 2014  
WPF application in **C#** that deploys data from a staging system to a production one, almost ready for being sold. It used flexible and efficient **Data Structures** to accommodate a configurable data model, configurable behavior (through **Runtime Reflection**), and large amounts of data.

## PROJECTS

**Metamorphic Framework** [github.com/frroliveira/metamorphic](https://github.com/frroliveira/metamorphic) Mar - Jun 2015  
Model-driven **REST** framework in **Scala** developed during master's dissertation. It uses an internal **DSL** for modeling applications that are generated with **Macros**. Performs better, in most cases, than common model-

driven REST frameworks (LoopBack, Sails, Django REST), using **Spray** and **Slick**.

#### Academic/Others

2013 - 2015

- Web application for connecting students and teachers, in **Python** using the Google cloud platform. It integrates with Google Sign In and the Hangouts API. [gcdc2013-studies.appspot.com](http://gcdc2013-studies.appspot.com)
- Web application for the elderly in **.NET** and **AngularJS**, requested by a company. Integrates with: Google Sign In, Google Calendar, and Google Contacts.
- SQLite parser for **Java** with JavaCC using **TDD**. It enabled improvements of the official documentation.
- 2 native **Android** applications that implement: local database, data synchronization, QR codes, and NFC.
- 4 cross-platform games in **C++** developed with **Cocos2d-X**: 1 used AdMob, and 2 used a physics engine.

## EDUCATION

#### Master in Informatics and Computer Engineering

2010 - 2015

Faculty of Engineering of the University of Porto, Portugal

*grade* 18,15 out of 20

*thesis* Exploring the Scala Macro System for Compile Time Model-Based Generation of Statically Type-Safe REST Services

## ACHIEVEMENTS

### INFORMATICS

- Finalist of the 'Google Cloud Developer Challenge', Google - Online, 2013.
- 2nd in 'Agile Marathon for E-Commerce' (with team Agile Runners), Sonae / CiPS / FEUP, 2013.
- 9th in 'Ninja Challenge', AuditMark - Online, 2013.

### MATH

- 'New Talents in Mathematics' fellowship, Calouste Gulbenkian Foundation, 2011/2012.
- Winner at the 'MAT12' competition, University of Aveiro, 2008 & 2009.
- Bronze Medal at the 25th Portuguese Mathematical Olympiad, Lisbon, 2007.

### OTHER

- Merit fellowship, University of Porto, 2013 & 2015. Regarding 2010/2011 & 2011/2012.
- 'Prémio Incentivo' award, University of Porto, 2012. Regarding 2010/2011.
- 'Prémio de Valor' award, Oliveira Júnior Basic and Secondary School, 2010.
- 4th at the Portuguese 'F1 in Schools' Final, Porto, 2010.