

# Christophe-Marie Duquesne

Software engineer  
Python, Golang, C++, Linux, Operations Research

## Corporate Experience

- Since June 2014 *Data Scientist for [Amadeus Travel Intelligence](#) | [Germany](#)* (Munich, Germany).  
Designed (nginx+lua) an http authentication layer allowing webservice to be written in different programming languages and yet be authenticated against the same user database. Ensured that every request to every server got logged in Elastic Search in real time. Worked on the redesign of a large scale mathematical model for estimating passenger traffic over airline networks.
- Nov 2013-Jun 2014 *Data Scientist for [Airconomy](#)* (Frankfurt am Main, Germany).  
Hadoop-based Mining on Travel Industry Data. Implemented Flask web services, shipped as debian package and continuously integrated with Jenkins.
- 2009-2012 *PhD in Operations Research with [Amadeus](#)* (Sophia Antipolis, France).  
Researched how to assign aircraft on an airline network in the most efficient way. Authored a C++ solver, a Python suite of 20+ command line tools, and Hadoop data mining scripts. Worked as a teaching assistant at the university and further improved my communication and public speaking skills.
- 2008 (3 months) *Internship at [Rio Tinto Alcan](#)* (Clermont Ferrand, France).  
Co-authored a C++ library for optimizing the revenue of a metal factory. This work was published in the corporate journal of the company.
- 2007 (3 months) *Internship at [GE Healthcare](#)* (Paris, France).  
Elaborated an UML spec for the refactoring of 20.000 lines of C++.

## Selected Open Source Contributions

- Python Contributor to [pulp-or](#), a linear programming Python library. Author of [flasfka](#), an http bridge for posting/getting messages to Apache Kafka. Small tools, like [michel](#), a command line program providing bidirectionnal synchronization of google tasks with text files.
- Golang Author of [github.com/chmduquesne/rollinghash/adler32](#), a rolling version of the Adler32 hash.
- C++ Author of [yaposib](#), a Python binding to COIN-OSI that is now supported by [pulp-or](#).
- C Author of [lazylpsolverlibs](#), a set of proxy libraries targeting cplex, gurobi and xpress. Author of [sharebox](#), a distributed FUSE file system based on git (unfinished).
- Java Author of [talkmyphone](#), an android application allowing phone control via gtalk (10.000+ downloads, forked 50 times on googlecode). It was then successfully handed over to [other developers](#).
- Misc Lua, Ada, Bash, Makefile, m4, autotools, cmake... See my [github résumé](#). My [kudorank](#) on ohloh is 9, among the top 2% of opensource developers.
- Linux My daily operating system: I [blog](#) about it sometimes.

## Education

- 2009-2012 *PhD in Mathematics and Computer Science at G-SCOP Laboratory* (Grenoble, France).  
Title: Integration of Fleet Deployment and of Passenger Service in Airline Schedule

Management. Done at Amadeus, in the Operation Research team led by [Semi Gabteni](#).  
Advisors: [Denis Naddef](#), [Olivier Briant](#). Defended in January 2013.

2005-2009

*MS in Computer Science in ENSIMAG* (Grenoble, France).

Top French school of Applied Mathematics and Computer Science with highly selective recruitment.

2002-2005

*Preparatory classes in Lycée Thiers* (Marseille, France).

Mathematics and Physics courses before a national competitive examination to Grandes Écoles.

## Activities and interests

Hobbies

I like travelling. I backpacked in 13 countries in Eastern Europe and South East Asia.

Sports

Running, Cycling, Hiking. I also played rugby union for 7 years.

Activities

I was the president of the [grand cercle](#), one of the largest French campus student associations (5.000 members) during university.

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