# Christophe-Marie Duquesne

Software engineer, Doctor in Applied Mathematics  
 Python, C++, Linux

## Corporate Experience

November 2013-Now

*Data Scientist for* [*Amadeus | Travel Intelligence*](http://www.amadeus.com) (Munich, Germany).

Hadoop-based Mining on Travel Industry Data (Max 1 PetaByte so far). Wrote Flask web services, shipped as debian package and continuously integrated with Jenkins. Participated in various devops tasks: log collection, user authentication, transfer between data centers.

2009-2013

*PhD in Operations Research with* [*Amadeus*](http://www.amadeus.com) (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*](http://www.riotintoalcan.com/) (Clermont Ferrand, France).

Co-authored a C++ library for optimizing the revenue of a metal factory.

2007 (3 months)

*Internship at* [*GE Healthcare*](http://www3.gehealthcare.com/en/Global_Gateway) (Paris, France).

Elaborated an UML spec for the refactoring of 20.000 lines of C++.

## Selected Open Source Contributions

Python

Contributor to [pulp-or](https://pythonhosted.org/PuLP/), a Linear Programming library. Author of [flasfka](https://github.com/travel-intelligence/flasfka), an http bridge for posting/getting messages to Apache Kafka. Author of [persistentdicts](https://github.com/chmduquesne/persistentdicts), a library exposing various databases with Python dict-like interfaces

Lua

Author of [lighttpd-external-auth](https://lighttpd-external-auth.chmd.fr/), a lighttpd magnet script allowing access control via mechanisms such as openid.

Golang

Author of [github.com/chmduquesne/rollinghash/adler32](https://godoc.org/github.com/chmduquesne/rollinghash), a rolling version of the adler32 hash. Contributor to [jackpal/gateway](https://github.com/jackpal/gateway), a library for discovering the address of a LAN gateway used in [Tapei-Torrent](https://github.com/jackpal/Taipei-Torrent).

C++

Author of [yaposib](http://yaposib.readthedocs.org/en/latest/index.html), a Python binding to [coin-Osi](https://projects.coin-or.org/Osi). Awarded [full membership](http://www.coin-or.org/members.html) in the coin-or foundation in return.

C

Author of [lazylpsolverlibs](https://github.com/chmduquesne/lazylpsolverlibs), a set of proxy libraries targeting cplex, gurobi and xpress.

Java

Author of [talkmyphone](https://github.com/chmduquesne/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](https://github.com/Yakoo63/GTalkSMS).

Misc

Ada, Bash, Makefile, m4, autotools, cmake... See my [github résumé](http://resume.github.com/?chmduquesne).

Linux

My daily operating system: I [blog](http://blog.chmd.fr) 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](http://www.linkedin.com/in/semigabteni). Advisors: [Denis Naddef](http://www.g-scop.inpg.fr/~naddefd/), [Olivier Briant](http://www.g-scop.inpg.fr/~brianto/). 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.

## 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](http://www.grandcercle.org), one of the largest French campus student associations (5.000 members) during university.

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