

Christophe-Marie Duquesne

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

Corporate Experience

June 2014 - Now *Data Scientist for Amadeus | Travel Intelligence* (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.

2009-2012 *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.

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 library. Author of flasfka , an http bridge for posting/getting batches of messages to Apache Kafka. Author of persistentdicts , a library exposing various databases with Python dict-like interfaces
Lua	Author of lighttpd-external-auth , a lighttpd magnet script allowing access control via mechanisms such as openid.
Golang	Author of github.com/chmduquesne/rollinghash/adler32 , a rolling version of the Adler32 hash. Contributor to jackpal/gateway , a library for discovering the address of a LAN gateway used in Tapei-Torrent .
C++	Author of yaposib , a Python binding to coin-Osi . Awarded full membership in the coin-or foundation in return.
C	Author of lazylibsolverlibs , a set of proxy libraries targeting cplex, gurobi and xpress.
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	Ada, Bash, Makefile, m4, autotools, cmake... See my github résumé .
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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