

Christophe-Marie Duquesne

Software engineer, Doctor in Applied Mathematics
Python, Linux

I am looking for ambitious projects that will challenge me and allow me to grow my skills. My goal is to participate in pushing modern Software Engineering forward, shipping clean, beautiful, reliable code.

Corporate Experience

- Since 2013** *Data Scientist for **Amadeus** | **Travel Intelligence** (Munich, Germany).*
- Hadoop-based Mining on Travel Industry Data (Max 1 Petabyte). Wrote Flask web services, shipped as Debian packages 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** (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).*
- Authored a C++ library for optimizing the revenue of a metal factory. The software was based on a Linear Programming model and outperformed the existing in-house tool.

Open Source Contributions

- Python** Contributor to **pulp-or**, a Linear Programming library. Author of **flasfka**, an http bridge for posting/getting 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.
- Go** 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 **lazympsolverlibs**, 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** Experience with **Arch Linux**, Ada, Bash, Makefile, m4, autotools, cmake... See my **github** account my **blog**.

Education

- 2009-2012** *PhD in Mathematics and Computer Science at **G-SCOP Laboratory** (Grenoble, France).*
- 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.

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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