Christophe-Marie Duquesne

Operations Research Analyst

After a PhD in Operations Research, I went to Data Science for the Travel Industry. I believe in intelligent data driven decisions. I am French, living in Munich.

Corporate Experience

Since 2013   *Data Scientist for Amadeus | Travel Intelligence* (Munich, Germany).

Wrote backends for manipulating Travel Industry Data: Hadoop-based transformations (Up to 1 Petabyte), Flask web services (shipped as Debian packages and continuously integrated with Jenkins) and 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   Author of **yaposib**, a Python-C++ binding to **coin-Osi**. Awarded **full membership** in the coin-or foundation in return. 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.

C   Author of **lazylpsolverlibs**, 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**.

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**.

| **Misc** | Experience with **Arch Linux**, Ada, Bash, Makefile, m4, autotools, cmake... See my **github** account and 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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