Christophe-Marie Duquesne

**Principal Data Engineer**  
  
Software Engineer specialized in Operations Research and Data Science. In love with data driven decision making. French, living in Munich.

## Corporate Experience

Since 2019

*Principal Data Engineer for* [*Flixbus*](https://flixbus.com) (Munich, Germany).

Data Engineering for AB-testing. Driving the choice and adoption of a company-wide unified tracking tool for web and mobile (cross department project). Plumbing and integration (AWS, terraform).

2013-2019

*Data Scientist for* [*Amadeus*](https://amadeus.com) (Munich, Germany).

Hadoop-based Mining on Travel Industry Data (Petabyte scale). Wrote web services (Flask, Sqlite), shipped as Debian packages, continuously integrated with Jenkins. Participated in various devops tasks: log collection, user authentication, transfer between data centers (IBM WebSphere MQ, Apache Kafka, Logstash, Cloudera, Kerberos).

2009-2013

*PhD in Operations Research with* [*Amadeus*](https://amadeus.com) (Sophia Antipolis, France).

Researched how to best assign aircraft on an airline network. Authored a C++ solver and a Python suite of 20+ command line tools (Cplex, Gurobi). Benchmark performed against real life data (mined with Hadoop). Worked as a teaching assistant at the university, improving my communication and public speaking skills.

2008 (3 months)

*Internship at* [*Rio Tinto Alcan*](https://www.riotintoalcan.com/) (Clermont Ferrand, France).

Authored a C++ library for optimizing the revenue of a metal factory (Cplex). The software was based on a Linear Programming model and consistently outperformed the existing in-house tool.

## Open Source Contributions

Python

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

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).

Lua

Author of [lighttpd-external-auth](https://github.com/chmduquesne/lighttpd-external-auth), a lighttpd magnet script allowing access control via mechanisms such as OpenId.

Go

Author of [github.com/chmduquesne/rollinghash](https://github.com/chmduquesne/rollinghash), a library of rolling checksums used in [syncthing](https://syncthing.net/). 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).

Misc

Experience with Arch Linux, Ada, Bash, Makefile, m4, autotools, cmake... See my [github](https://github.com/chmduquesne) account and my [blog](https://blog.chmd.fr).

## Education

2009-2013

*PhD in Mathematics and Computer Science at* [*G-SCOP Laboratory*](https://www.g-scop.grenoble-inp.fr/) (Grenoble, France).

[Integration of Fleet Deployment and of Passenger Service in Airline Schedule Management](https://static.chmd.fr/2012_PhD_Thesis_Christophe-Marie_Duquesne.pdf). Done at Amadeus, in the Operation Research team led by [Semi Gabteni](https://www.linkedin.com/in/semigabteni). Advisors: [Denis Naddef](https://www.g-scop.inpg.fr/~naddefd/), [Olivier Briant](https://www.linkedin.com/in/olivierbriant).

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

Backpacked in Eastern Europe, South East Asia and North America.

Sports

Ski, Paragliding, Hiking. I also played rugby union for 7 years.

Activities

I was the president of the [Grand Cercle](http://grandcercle.org), one of the largest French campus student associations (5.000 members) during university.

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