

Christophe-Marie Duquesne

Technology Officer

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

Corporate Experience

- 2019-Now** *Domain Technology Officer IT Marketing for **Flixbus** (Munich, Germany).*
- Overseeing the technology excellence of the Marketing domain: 3 Data Science teams, 2 Analytics teams, 1 Salesforce/PHP team (37 persons). Facilitated re-organizing mobile development. Driving the Post-Mortem culture. Leading the re-architecting of the company stack to better handle GDPR compliance.
- 2019** *Principal Data Engineer for **Flixbus** (Munich, Germany).*
- Data Engineering for AB-testing. Drove the choice and adoption of a unified tracking tool for web and mobile (cross department project), enabling real-time analytics use-cases, faster page loads, unified metrics and a 6-digit cost reduction for the company. Plumbing and integration (AWS, terraform).
- 2013-2019** *Data Scientist for **Amadeus** (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** (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** (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**, 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 **persistendicts**, a library exposing various databases with Python dict-like interfaces.

- 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**.
- 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**, a library of rolling checksums used in **syncthing**. 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

- 2009-2013** *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**.
- 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, Bouldering. 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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