Christophe-Marie Duquesne

Data Technology Leader

Data Technology Leader with an Operations Research background.

Corporate Experience

2019-Now   *Domain Technology Officer Marketing for Flixbus* (Munich, Germany).

Technology Leader of the Flixbus Marketing Organization: 3 Data Science teams, 2 Analytics teams, 1 Salesforce/PHP team (37 persons across 2 locations). Guiding the rearchitecture of the company data to comply with GDPR by design while generating more value. Applying years of experience in Data Science, Data Engineering and Software Development to empower the business in making smarter decisions.

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, enabling real-time analytics use-cases, faster page loads, unified metrics and a 6-digit cost reduction for the company (Snowplow, Kafka, S3, Athena, Snowflake, Datadog). Drove the reorganisation of the Mobile development to favor faster delivery, smoother cross-team communication, and foster a mobile-first mindset.

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. Implemented and deployed a high performance cross data center link, aligning multiple parts of the organization in the process (IBM WebSphere MQ, Apache Kafka). Participated in the Data Lake evaluation and maintenance. Contributed to log collection, user authentication and certificate management (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, pioneering Hadoop usage in Amadeus. 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   Contributor to **pulp-or**, a Linear Programming library. Author of **yaposib**, a Python-C++ binding to **coin-Osi**.

Go   Author of **github.com/chmduquesne/rollinghash**, a library of rolling checksums used in the file synchronization program **syncthing**, in the backup software **kopia** and in the data science platform pachyderm.

Java   Author of **talkmyphone**, an android application allowing phone control via gtalk (10.000+ downloads, forked 50 times on googlecode). This work was then handed over to **other maintainers**.

C   Author of **lazylpsolverlibs**, a set of proxy libraries targeting cplex, gurobi and xpress.

Misc   Awarded **full membership** of the coin-or foundation for substantial non-monetary contributions.

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).

French engineering school specialized in Applied Mathematics and Computer Science.

Activities and interests

Paragliding   Pilot since 2015.

Other sports   Ski, Bouldering. Played rugby union for 7 years.

Activities   Former president of the **Grand Cercle**, one of the largest French campus student associations (5.000 members).