Max Halford

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EDUCATION

PhD in Mathematics and Computer Science – Université Paul Sabatier — *2018–2021*

— Machine learning applied to database query optimization
— Unsupervised machine learning
— Teaching assistant in information theory and database classes

MSc. Mathematics – Université Paul Sabatier — *2014–2017*

— Data analysis
— Data management
— Big data
— Machine learning
— Business intelligence
— Software engineering

Mathematics Associate Degree – Toulouse School of Economics — *2012–2014*

— Real analysis
— Linear algebra
— Microeconomics
— Data structures and algorithms
— Quantitative finance

WORK EXPERIENCE (3 PREVIOUS POSITIONS)

HelloFresh – Berlin — *02/2017–07/2017*

— Machine learning applied to churn and customer lifetime metrics
— Collaborative filtering for recommending recipes to customers on a weekly basis
— Customer fraud detection
— Instigation and maintenance of custom built data pipelines

Privateaser – Paris — *04/2016–09/2016*

— Full stack web development (Flask, ES6, LESS, SQL) to support a marketplace
— Helped transfer towards an onion/micro-service architecture
— Sprint/features/AGILE development workflow
— Contributed to building a data management and analysis pipeline

INSA Mathematics Department (GMM) – Toulouse — *04/2015–07/2015*

— Probabilistic modeling of population growth and change in structure across time with continuous Markov Chains
— Tuning of a genetic algorithm to estimate model parameters
— Software development and testing in `Python`

Open source software

I develop and maintain various open source projects related to machine learning. Most notably I actively an evolutionary computation library called eaopt and a factor analysis library called prince. I also have a personal data science toolkit called xam.

Kaggle competitions

I regularly participate in Kaggle competitions. I've had a fair amount of success and I find it to be a great way to sharpen my skills. I've also participated in various university-level data science competitions.

Consulting

I occasionally do consulting work related to data science. Mostly I write machine learning exercises and taught data science concepts. I also give advice on data pipelines and statistical modeling. In general I enjoy teaching, whether it be as a TA for my PhD or in a consultant position.

SKILLS

Programming	Very experienced in `Python`, `JavaScript` and `Go`.
Databases	Strong knowledge of relational databases, experience with key-value and document stores.
Data analysis	Numerous case studies done during university projects, internships, and competitions
Machine learning	Solid theoretical knowledge of the mathematical concepts and hands-on experience.
Web	Good knowledge of "modern" JavaScript (React, Vue.js, Webpack, etc.)
Code quality	Healthy habits regarding coding conventions, documentation and testing.
Writing	Keen interest in making documentation and writing blog posts.
Team working	Well-versed in AGILE principles and experienced in pair/mob programming
Languages	Fluent in English and French. Proficient in Spanish.

INTERESTS

— Modern art
— Running
— Cooking
— Reading
— Coding
— Travelling

TALKS

« *Challenge Big Data 2017* »	*26/01/2017*
« *meta/morphoses* », **forum des archivistes (Troyes)**	*30/03/2016*
« *Toulouse Data Science* »	*22/03/2016*

DISTINCTIONS

Winner of « *DataConnexions* », a national open data competition	*2016*
Regional mathematics prize winner at middleschool and highschool	*2009, 2011, 2012*