

## Skills

### Advanced

Python  
SQL  
R  
C

Bash  
MPI

L<sup>A</sup>T<sub>E</sub>X  
GNU / Linux  
Git

### Intermediate

Spark  
Cython  
C++  
Java  
CI / CD

## Language

French (native)  
English (fluent)

## Education

2022	<b>Deep Learning Specialization</b> (certificate n°32LHWDXKH397) Learned to design and use deep neural networks, including convolutional neural networks and recurrent neural networks. Used Keras library.	<b>Coursera</b>
2022	<b>Machine Learning Specialization</b> (certificate n°TZZ9XL2HWZGW) Learned to use supervised and unsupervised learning algorithms.	<b>Coursera</b>
2017 – 2021 Grenoble (FR)	<b>PhD in Computer Science</b> <ul style="list-style-type: none"><li>• Great focus on scientific rigor and reproducibility.</li><li>• Developed a new approach for emulating the execution of large-scale MPI applications and predict their performance. Used Simgrid simulator and statistical models. Achieved high accuracy (~ 5% error) at low cost.</li><li>• Carried experimental campaigns on hundreds of machines with rock-solid methodology. Implemented an experiment engine in Python (packages: fabric, requests). Analyzed and visualized results in R (packages: ggplot2, dplyr, tidyr) and Python (packages: pandas, plotnine, statsmodels).</li><li>• Implemented performance non-regression testing for hundreds of machines with automated measures and statistical analyzes.</li><li>• Implemented a Python package to compute a piecewise linear regression, returning much better fits than the existing alternatives.</li><li>• Wrote several articles, published in top conferences and journals.</li><li>• Presented my work in multiple international gatherings.</li></ul>	<b>Université Grenoble Alpes</b>
2015 – 2017 Grenoble (FR)	<b>M.Sc. &amp; Engineering Degree in Computer Science</b> Obtained a Master of Science, with the highest honor, ranked 2 <sup>nd</sup> /88.	<b>Ensimag</b>
2013 – 2015 Lyon (FR)	<b>B.Sc. in Theoretical Computer Science</b> Obtained a Bachelor of Science, with great honor.	<b>ENS Lyon</b>

## Experience

2023 – now Grenoble (FR)	<b>Software Engineer</b> <ul style="list-style-type: none"><li>• Developed and maintained data pipelines (Python, SQL and Spark).</li><li>• Developed and maintained machine learning models (XGBoost).</li><li>• Performed AB-tests (setup, monitoring and analysis) to assess the benefit of new fonctionnalités.</li></ul>	<b>Criteo</b>
2021 – 2022 Remote	<b>HPC R&amp;D Engineer</b> Performance prediction of MPI application. <ul style="list-style-type: none"><li>• Simulated MPI applications in different <i>what-if</i> scenarios to help co-design next-generation HPC platforms and fine-tune important benchmarks.</li></ul>	<b>Intel</b>
2018 – 2020 Grenoble (FR)	<b>Graduate teaching assistant</b> <ul style="list-style-type: none"><li>• Gave lectures, tutorials and practicals, from 1<sup>st</sup> year (L1) to 4<sup>th</sup> year (M1).</li><li>• Courses: introduction to Python, software development, operating systems, algorithmics, data analysis and visualization (in R).</li></ul>	<b>Université Grenoble Alpes</b>
2016 – now Side project	<b>Contribution to Roaring Bitmaps</b> Fast and lightweight set of integers. Widely used library. <ul style="list-style-type: none"><li>• Contributed to CRoaring, the C library. Implemented multiple features, reported and fixed several critical bugs.</li><li>• Developed PyRoaring, a Python wrapper, several orders of magnitude faster than the alternatives. Used the Cython programming language.</li></ul>	<b>roaringbitmap.org</b>