



Skills

Advanced

Python
R
C
Bash
MPI
L^AT_EX
GNU / Linux
Git
CI / CD

Intermediate

C++
Java
SQL
OCaml

Language

French (native)
English (advanced)

Education

2017 – 2021 Grenoble (FR)	PhD in Computer Science High Performance Computing: Towards Better Performance Predictions and Experiments. <ul style="list-style-type: none">Developed a new approach for emulating the execution of complex MPI applications at large scale and predict their performance. Used Sim-grid simulator and statistical models. Achieved unprecedented accuracy ($\sim 5\%$ error) at very low cost.Carried experimental campaigns with rock-solid methods. Unveiled highly unexpected phenomena. Implemented a new experiment engine with Python (fabric, requests). Analyzed and visualized experiment results with R (ggplot2, lm, aov, dplyr, tidyr) and Python (pandas, plotnine, statsmodels) using Jupyter notebooks.Implemented systematic performance non-regression testing for Grid'5000 machines with automated measures and statistical analyses. Detected many significant issues unnoticed by both the staff and the users. Micro-benchmarks in C, automation in Python.Implemented a Python package to compute a piecewise linear regression, returning much better fits than the existing alternatives.Wrote several articles, published in top conferences and journals.Presented my work in multiple international gatherings.	Université Grenoble Alpes
2015 – 2017 Grenoble (FR)	M.Sc. & Engineering Degree in Computer Science Specialization in parallel and distributed systems. Obtained a Master of Science, with the highest honor, ranked 2 nd /88.	Ensimag
2013 – 2015 Lyon (FR)	B.Sc. in Theoretical Computer Science Broad and intensive program in computer science. Obtained a Bachelor of Science, with great honor.	ENS Lyon

Experience

2018 – 2020 Grenoble (FR)	Graduate teaching assistant <ul style="list-style-type: none">Gave lectures, tutorials and practical works.Taught all levels from 1st year (L1) to 4th year (M1).Courses: introduction to Python, software development, operating systems, algorithmics, data analysis and visualization (in R).	Université Grenoble Alpes
2017 Chicago (US)	Performance Variability in Supercomputers Three month research internship. <ul style="list-style-type: none">Carried experiments and statistical analyses to characterize computer performance variability, using micro-benchmarks.	Argonne Laboratory
2017 Grenoble (FR)	Efficient Simulation of Large-Scale MPI Applications Six month research internship. <ul style="list-style-type: none">Modified the simulator (C++) and the simulated application (C) to enable large scale simulations.Outcome: simulate executions several orders of magnitude larger.	Inria
2016 Walldorf (DE)	Multicast Communication in SAP HANA Three month R&D internship. <ul style="list-style-type: none">Implemented multicast algorithms in C++ in HANA codebase.Implemented functional and performance tests in Python.	SAP
2015 Grenoble (FR)	Job Isolation in Fat Tree Topologies Three month R&D internship. <ul style="list-style-type: none">Designed algorithms preventing information leaks in clusters.Implemented a proof of concept in Python, worked on its integration in Bull's software stack.	Bull