DUFY TEGUIA

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Education

2023 – current **PhD. Thesis in computer science, Université Grenoble Alpes (UGA) | Orange Innovation, France**.
Description : Advanced Techniques for Specialization of Containerized Network Functions

2021 – 2022 **Master in computer science fundamentals (M2), Ecole Normale Supeŕieure de Lyon, France**.
Relevant courses : Compilation and program analysis, Distributed systems, Parallel and distributed algorithms and programs.

2016 – 2021 **Master of engineering in Computer Science, National Advanced School of Engineering of Yaounde, Cameroon**.
Relevant courses : Probability and Statistics, Data Structure and Algorithms, Theory of Compilation, Linear Algebra, C Programming, Cloud computing and virtualization.

Experience

2022 **Research engineer in the *N7 Institut de Recherche Informatique de Toulouse* (INP Toulouse)**, where I work on the paravirtualization of a PIM (Processing-In-Memory) hardware released by UPMEM (startup). This work was done using Firecracker (From Amazon) and Virtio (*03 months*).
Research intern in the *Laboratoire de l'Informatique du Parralélisme* (LIP) of the ENS de Lyon, where I worked on the paravirtualization of a PIM (Processing-In-Memory) hardware released by UPMEM (startup). This work was done using Firecracker (From Amazon) and Virtio (*06 months*).

2021 **Research intern in the *Laboratoire de l'Informatique du Parralélisme* (LIP) of the ENS de Lyon**, where I improved the performances of a distributed hypervisor developed in the LIP, based on QEMU/KVM. This was a part of a more complex project named *Scalevisor* which aimed to build distributed virtual machines. (*07 months*).

2020 **Research intern** with **Alain TCHANA** (full professor at *École Normale Supérieure de Lyon*). The internship consisted of implementing the write-update protocol to optimize updates propagation between the nodes of a distributed hypervisor named **GiantVM**. (*02 months*).

2019 **Intern at Megasoft LLC, Yaounde, Cameroon** in which I implemented a mechanism, which aimed to upload/download huge files to/from the company's server in a secured way. (*02 months*).

Grants

2021 I have been awarded the **Ampere Scholarship** from the *École Normale Supérieure de Lyon* in order to perform the **Computer science fundamentals** master program in that institution.

Skills

Languages **French :** Native, **English :** C1 **(IELTS NOTE : 7.5/9)**

Software engineering Java,Rust, Design patterns, C, C++, Python, unit tests, UML, …

Skills (continued)

Systems and Cloud computing	Linux, Linux kernel, Virtualization, Cloud computing, MicroVMs, Firecracker, QEMU, KVM, Virtio
Misc.	Know how to work in team, has initiative spirit, know how to build hypotheses and verify them, know how to build clear and understandable reports.

Miscellaneous Experience

Awards and Achievements

2022 **Winner of the Unikraft Lyon hackaton**, A hackaton that concerned a unikernel named Unikraft that took place in the ENS de Lyon (here).

2021 **CSV seminar : Cloud, Storage and Virtualisation, ENSTA Bretagne, Brest, France**, a 2 days workshop in which I presented to other French research team, what I was currently working on (Performance of a distributed hypervisor).

2019 **Huawei seeds for the future, Cameroon**, a 2 week program in Huawei's Headquarters in order to know about the Chinese culture and Cloud computing.

Certification

2020 **Google cloud infrastructure fundamentals : core infrastructure**. Awarded by Google on Coursera.

Papers

2022 **Analysis of a modern distributed hypervisor: what we learn from our experiments**, Mohamed Karaoui, Brice Teguia, Bernabe Batchakui, Alain Tchana. The paper was accepted at the SPMA (Systems for Post-Moore Architectures) workshop (here).

Volunteer experience

2020 **Academic orientation conference**, I participated to the organization of an event which aimed to help students to choose the field the will to go through in my school.