

Alexandre Gbaguidi Aïsse | CV

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Software Engineer at **Acute3D** | **Bentley Systems**

Experience

- **Bentley Systems – Reality Modeling** Paris, France
○ *Software Engineer* Sep 2018 - to date
Currently working on *ContextCapture™* cloud services: scheduler, multithreading.
○ *End-of-studies internship* Feb 2018 - Aug 2018
Improve *ContextCapture™* point cloud support by implementing: an **algorithm which retrieves all scanners positions** of any static point cloud and a **visibility algorithm** which tells for each point which scanner **best** sees it. Both algorithms are under **ongoing patents**.
- **LRDE (Research and Development Laboratory of EPITA)** Paris, France
○ *Student researcher* Sep 2016 – Jan 2018
Various contributions to Spot¹: Optimization of ω -automata minimization using Boolean satisfiability (SAT) solvers, conversion of common ω -automata classes into co-Büchi automata and checking “persistence” properties on LTL formulas.
- **Ecole polytechnique – HEC** Paris, France
○ *Teaching assistant* Aug 2016
A team of 4 assistants helping students to quickly master all programming notions (Python) being seen in a Big Data course.

Education

- **EPITA** Paris, France
○ *Graduate school of Computer Science, Engineering degree* Sep 2013 – Sep 2018
- **Staffordshire University** Stafford, England
○ *Real-time and embedded systems, Semester abroad* Jan 2015 – Mai 2015

Some programming projects

- Python:** Multiple barcode recognition on a picture (using OpenCV).
Personal blog shumpaga.com (using Django).
- Scala:** 'Tron' AI implementation: reached the 107th place over 4000 players worldwide.
- C++:** Distributed memory allocator with vector clocks for causal ordering of events (using OpenMPI).
Real-time CUDA Raytracer.
A spell checker based on a patricia trie with 3000 qps/core and 512 Mo as constraints.
- C:** POSIX-compliant shell based on the SCL.
Implementation of malloc, realloc, calloc and free with a first fit algorithm.
Basic optical character recognition software with feedforward neural network.

Skills

- Languages:** French (Native), Russian (Native), English (TOEIC 850)
- Programming:** C, C++, Python, MATLAB, C#, Scala, PostgreSQL, Java.
- OS:** Linux / UNIX, Mac Os X, Windows.
- Interests:** Audio recording, mix, master, computer-aided music, travels, event planning.

¹Spot is a C++14 library for LTL, ω -automata manipulation and model checking: spot.lrde.epita.fr.