

# Pierrick Bouvier, Software Engineer

37 years, Vancouver, Canada (since April 2024) | French citizen, Canadian PR

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Currently: Senior Software Engineer at [Linaro](#), working on [QEMU](#)

## Skills

**Programming:** C++, C, [D](#), Bash | *Progressing:* Rust, Python

**C++ Libraries:** STL, Boost (Containers, Asio, Test), GoogleTest, Qt

**Knowledge:** Architecture, Algorithms, Parallelism, Performance analysis | IT, Automating, Build, Tests, CI/CD

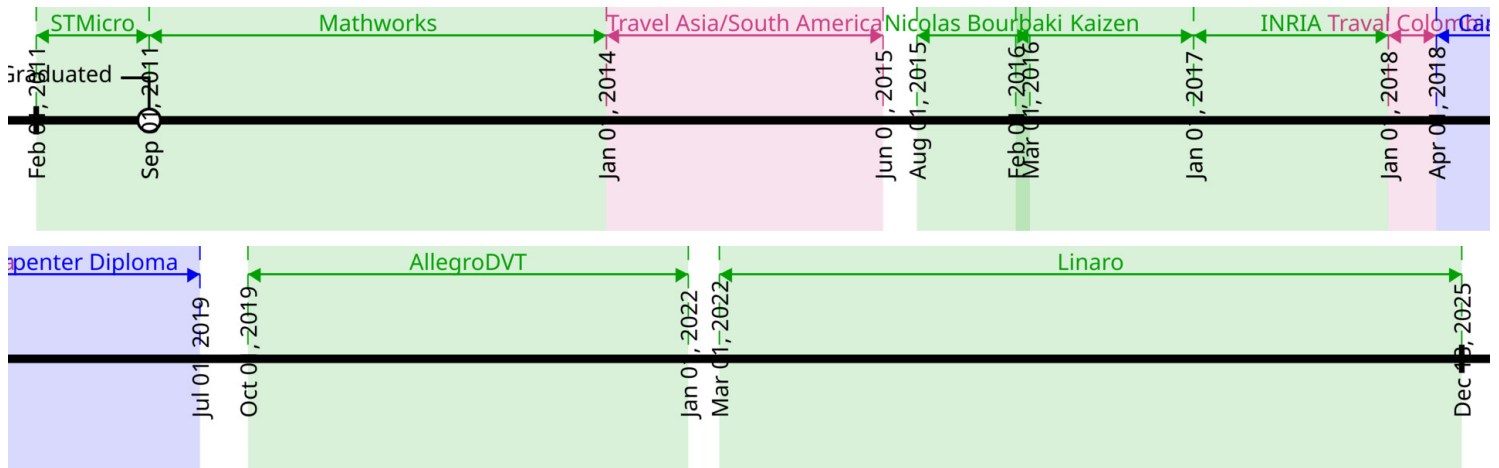
**Tools (dev):** Bash, Vim, Git | GNU toolchain, Clang, Meson, CMake

**Tools (team):** Gitlab, Docker

**Systems:** Linux (Debian) | Windows

**Languages:** English: spoken and written fluently | French: native | Spanish: spoken fluently

## Experience



**Senior Software Engineer at Linaro** full remote (since March 2022)

Since February 2024: [QEMU](#) developer ([patches](#))

C, Bash, Python, Rust | Gitlab, Meson

- Arm support (cpu and SMMU features)
- Enhance instrumentation plugins
- Reviews around code generation/Arm support/plugins

Before: Port open source projects to Windows on Arm ([WoA project](#))

C, C++, Python, Bash | Gitlab

- Contributed to: Dart/Flutter, v8, Node.js, LLVM, QEMU, Ruby, ...
- Setup a downstream CI based on GitLab
- Blog posts

**Software Engineer at AllegroDVT** in Meylan (2+ years)

Conception of [compliance streams](#) to validate implementations of new video standards

D, C++17, Bash, Rust | Docker, Gitlab, Jenkins

- Technical lead for team (6 members)
- Architecture and development of a new video generation engine
- Development on new standards (AVS3, H.266/VVC)
- Internal training on our tools for other teams

- Migrate to git (+ gitlab) and team training
- Implementation of an *efficient* CI (< 10 min) and merge requests based workflow
- Full automation of production chain (CD) in "one click"!

### **Carpenter Diploma**, at Greta in Grenoble (1+ year)

The unique opportunity to learn a manual work, a long time desire I had, and to explore advantages and disadvantages compared to my engineer work. That was an important step in my professional life.

### **Research Engineer at INRIA** in Grenoble in team [CORSE](#) (1 year)

Development of a profiling tool based on binary instrumentation using QEMU (example [here](#) for this [program](#))

C++14, Python | code available on [github](#)

### **Software Engineer at Kaizen Solutions**, for customer **Thales Electron Devices** in Moirans (1 year)

Port an image processing chain on GPU to reduce consumption.

C++14, Cuda 7, OpenCL 1.2, Bash, Boost (Asio), CMake

- Self learning on CUDA/OpenCL and GPGPU programming
- Image processing algorithms
- Implementation of cross compilation (arm, arm64, mips), test and profiling

### **Engineer at Nicolas Bourbaki** in Montbonnot (6 months - bankruptcy)

Lead developer on a communication solution for IoT (LoRa network)

C++14, Bash, Boost (Asio, Log, UnitTest)

Company was declared bankrupt a few months after I joined it, to the surprise of its employees.

### **Compilation Engineer at MathWorks** in Montbonnot (2+ years)

Work on Static code analyzer Polyspace

C, C++11, Standard ML, Bash | Jenkins

- Support for new standards (C++11) | Bugfixing
- Design and implementation of an automatic configuration tool from customer build: polyspace-configure
- Introduction of git in parallel to CVS (official company SCM)
- Implementation of a CI to shorten feedback time (from 1 week to 1 day)

### **Final internship in compilation team at STMicroelectronics** in Grenoble (6 months)

Development of a tool (SEA - Structural ELF Analyzer) to analyze structure of big projects (Linux, LLVM, ...) at binary level.

C99, XML, libelf, libdwarf

## **Education**

**2008 - 2011:** Information System Engineering - **GrenobleINP Ensimag**, Grenoble, France

**2006 - 2008:** Mathematics and Computer Engineering - University Joseph Fourier at Grenoble, France

## **Hobbies**

- Mountain: Climbing, Mountain biking, Backcountry Skiing, Hiking
- Photography
- **Technological watch (software & hardware)**