

# Florian Vichot

experienced software developer

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An accomplished software developer, I have more than ten years of experience, comprising professional and personal projects. Fluent in multiple languages - including C, C++ and Python - I strive foremost to be versatile, and to be able to efficiently solve a broad range of problems. While drawn primarily to the roles of SRE, devOps, backend or infrastructure engineer, I welcome all opportunities that would allow me to work on challenging problems as part of a talented team. Projects with an open-source model or tackling social issues are especially attractive.

## EXPERIENCE

### Software & Network Engineer — [Wifirst](#) — Paris, France — April 2016 to present

- › Developing new functionalities and tools in Python for a custom network router, to provide traffic shaping, access control and monitoring for our customers.
- › Supervision of a fleet of 9,000 routers, managed through Ansible.
- › Testing and selecting new hardware for the router.
- › Porting the services and OS used on our custom router to a new architecture based on a Broadcom SoC.
- › Adding new functionalities and fixing bugs in in-house software, such as our monitoring dashboard and configuration management database.
- › [Speaker](#) at PyCon France 2017

Python Asyncio Django Bash Git Ansible iptables SNMP QoS VLAN WiFi Network Embedded Linux

### Expert Engineer — [Inria](#), [Asclepios Lab](#) — Sophia-Antipolis, France — March 2012 to April 2015

- › Lead developer on [medInria](#), an open-source medical image visualisation, processing and manipulation software, to add cardiac related functionalities.
- › Contributed to improving the reliability of medInria, and its code quality by instituting code-reviews and a pull-request based workflow. Migrated the project to GitHub, reorganised, cleaned and simplified the source code, re-architected and updated the build/test system.
- › Evolved medInria's architecture to handle new functionalities, and transformed it into a framework for other projects using a plugin system.
- › Attended conferences (MICCAI), workshops (CTK), and contributed to scientific articles.

C++ Python Bash Git CMake Jenkins Open-Source Qt VTK ITK Mac Windows Linux

### Telecoms & Network Engineer — [Telecoms Without Borders](#) — Pau, France — Sept. 2010 to Oct. 2011, April 2015

- › Deployed on various international missions in response to humanitarian emergencies: floods, influx of refugees, cyclone, conflict or famine, for a total of 5 months on mission. Established telephone operations for populations, installed network and satellite equipment for NGOs and the UN. Provided trainings.
- › Contributed to the TSFBox, a network router facilitating monitoring and optimization of internet connections provided during missions.

Perl Python Bash iptables System administration Networks Satellites Linux

### Developer — [Diateam](#) — Brest, France — June 2008 to April 2010, July/August 2007

- › Lead developer on the [Hynesim](#) (Hybrid Network Simulator) and contributor to the [IpMorph](#) (TCP/IP stack fingerprint spoofing) open-source projects. Speaker on IpMorph during Hack.lu 2009.
- › Developer on [Diabox](#), an in-situ sensor box, used primarily for weather data.
- › Developer on [Naiad](#) (Enhanced Satellite Archive Dataminer), an application to visualise and process satellite data for the IFREMER institute. Prototyped various image filters on GPU using OpenCL.

C C++ Python Open-Source Qt Multi-Thread Container Virtualisation OpenCL Mac Windows Linux

### Internship — [Cognitive Robotics Lab \(ENSTA\)](#) — Paris, France — Sept. 2007 to Jan. 2008

- › Implemented visual homing and localization algorithms using "bags of visual words" in [Urbi](#), as part of a topological navigation framework.
- › Ported the Urbi environment to a P3-DX robot.
- › This work was included in a [scientific publication](#).

C C++ Urbi SVN Machine-Learning Linux Robotics

## PERSONAL PROJECTS

### Robotics Club — [ENIB](#) — Brest, France — 2004 to 2010

- > Club secretary: sponsors engagement, communication, project management.
- > Lead developer on the robot's software (simulator, sensor acquisition, path planning, motor control)

C C++ Qt OpenGL SVN Linux Embedded Robotics

### Server management — 2011 to 2015

- > Administrator of a server shared with a group of friends: configuration, hardening (no breach in five years).

Linux Debian SSH iptables Apache PHP OwnCloud OpenVPN IMAP SMTP LVM LUKS KVM LXC

## SKILLS

### Languages

Excellent

C C++ Python2/3 Bash

Good

Go JavaScript Java Octave

Basic

OCaml Rust Prolog

### Tools and concepts

Excellent

Qt Git Django CMake  
Multi-threading Robotics

Good

OpenGL OpenCL SQL  
Algorithms Optimisation

### Networks & Servers

Excellent

Internet protocols  
Server admin Security

Good

SSL AWS Satellite systems

### Platforms

Excellent

Linux Mac OS X Windows

Basic

Android OpenBSD

## LANGUAGES

- > **French:** Fluent (French citizen)
- > **English:** Fluent (studied for three years in the UK, TOEFL iBT: 119/120, PTE: 90/90)
- > **Spanish:** Intermediate (six months in South America)

## EDUCATION

- > [ENIB](#), National Engineering School of Brest, France from 2003 to 2008 (Master's Degree in Engineering).
- > Artificial Intelligence online course, University of Stanford, 2012.
- > Machine Learning online course, Stanford University, 2015 ([Coursera](#)).

## PUBLICATIONS

### Cardiac Interventional Guidance using Multimodal Data Processing and Visualisation: medInria as an Interoperability Platform — Midas Journal — 2012

Authors: F. Vichot, H. Cochet, B. Bleuzé, N. Toussaint, P. Jaïs, M. Sermesant

Summary: MedInria is a medical imaging software developed at Inria, which aims to provide clinicians with state-of-the-art algorithms for processing and visualising their images. In this article, we will focus on its use in pre-surgery preparation for cardiac interventions, and the difficulties arising from the lack of standardisation of certain data formats and visualisation conventions.

### IpMorph: fingerprinting spoofing unification — Journal in computer virology 6, no. 4 — 2010

Authors: G. Prigent, F. Vichot, F. Harrouet

Summary: Nowadays, there are a variety of tools for easily identifying the TCP/IP stack's fingerprint of a target machine. IpMorph allows this fingerprint to be concealed, and even mimicks the fingerprint of a chosen TCP/IP stack. This is done through live session tracking and packet rewriting. Its effectiveness against tools such as Nmap, Xprobe2, Ring2, SinFP and p0f is also detailed.