Gaëtan HARTER
French
Living in Berlin

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Embedded system and software engineer

13 years work experience

I enjoy low level concurrent code, atomic commits, tooling, on hardware testing and support development with nightly builds.

Work experience

2021-Now **Senior Software Engineer - VIRTIO devices virtualization** *OpenSynergy/Qualcomm Berlin*

Architecture, develop, and maintain company virtualised embedded `Linux` 'python' abstraction and 'pytest' plugins. Separating in independent modules, and adding 100% branch coverage to existing and new code. Handling API migration and backward compatibility. Implement support of multiple targets in only one test suite.
Technical lead and implement the 'Yocto' development environment with in tree sources. Support multiple environments with a `make` abstraction.
Release manager and development of release tooling using developer abstraction. Implement and maintain nightly builds, solving unreliability issues.
Merge responsibilities. Review code and tests on Linux based driver virtualisation software.
`Python, pytest, C, Linux, Yocto, make, cmake, git/repo, VIRTIO, JIRA`

2020 **Software quality engineer for safety critical embedded system** *MSA Safety Berlin*

Review code and tests on SIL3 certified software. Emphasize role of code structure and readability. Develop tools and test automation. Mentoring on software design, architecture.
`C, Python, git, Bamboo, SIL 3, VectorCAST`

2017 – 2019 **Rapstore - App store for the open source embedded OS RIOT** *Freie Universität Berlin*
github:`RIOT-OS`

Implement support for external software and boards development, simplify hardware testing. Support firmware update. Build system maintainer. Open source project maintainer.
`C, Python, bash, Real Time OS, git, make, pytest, Jenkins, github`

2011 – 2017 **Embedded development for large scale sensor testbed FIT-IoT-LAB** *Inria Grenoble*
github:`iot-lab`

Design and develop the embedded software and IPv6 network architecture. Experiment control in Python, realtime monitoring on FreeRTOS/stm32f3, Yocto distributions, large-scale deployment over NFS. Implement on target unit and integration testing with 100% branch coverage. Users support and development of users experimentation tools and firmwares.
`C, Python, ARM-CortexM3, RTOS, Yocto, IPv6, Jenkins, continuous integration`

2 years **Teaching/Project: Develop an OS with virtual memory on x86** *Grenoble INP - Ensimag*
Internship **Post assertion core dump solution for a embedded system DO-178B** *THALES*

Education

2008 – 2011 **Master in embedded systems and softwares engineering** *Grenoble INP - Ensimag*
2006 – 2008 **Highly selective classes preparing for competitive exams** *Prépa Kleber*

Technical skills

Languages	Low level concurrent C, Python, Bash, Assembly
Tools	GNU/Linux, Advanced git, Yocto, Jenkins, GNUMake, Terminal fluent, vim
Testing	Unit and integration tests, setup of an on target continuous integration system

Languages

French	Mother tongue
English	Fluent. Working in English since 2011
German	Conversational, used regularly, Level B2 in 2019

Activities

Free Time	Music, cooking, video games, climbing, beer tasting

References available upon request.