

Marion FABRE

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Experience

Quandela, QA Software Engineer

Massy (91), FRANCE
Sept 2024 – present

- Creation of the QA position and department within Quandela:
 - Self-training in Quality Assurance (QA) practices
 - Gathering internal QA needs
 - Benchmarking testing frameworks
- Development and maintenance of a test driver and test portfolio for [Quandela's Cloud Solution](#) (outsourced project):
 - Developing a test driver with Cucumber framework (Behave - Python), GUI and REST API testing (Selenium, Requests...)
 - Creating a test portfolio by writing test scenarios using Gherkin syntax
 - Deployment of release candidate app version to test (docker)
 - Generating test reports using Allure Reporting Tool
 - Writing test reports / Managing Jira tickets
 - Involvement in specification process
 - Overseeing subcontractors work

Quandela, Software Scientific Engineer

Massy (91), FRANCE
June 2023 – Jan 2025

- Development of [Perceval](#), a Python framework simulating quantum photonic circuits and its core library Exqalibur (C++):
 - Agile method
 - Designing framework architecture
 - Identification of the Theory / App Engineers departments needs and gathering knowledge from them
 - Implementing new features (Python / C++)
 - Implementation of Unit tests and CI/CD pipeline
 - Documentation

NanoXplore, Software Scientific Engineer

Sèvres (92), FRANCE
Feb 2021 – Apr 2023

- Development of a software suite for FPGA (Linux, C++, Python):
 - Team work (+30 people) with AGILE method
 - Implementation of STA functions (Static Timing Analysis) and their API in Python
 - Refactoring of FPGA Timing Constraints and implementation of theirs API and, GUI (QT)
 - QA follow up on all implementations
- Development of a timing simulation tool used within the company (Linux, Python):
 - Identification of Hardware department needs and gathering knowledge from them
 - Software Self-Implementation
 - Use of scientific libraries (scipy, sklearn, multiprocessing, pandas) for multi-thread data production with quadratic regression and clustering. Data visualisation (seaborn, matplotlib).
 - Responsible for unifying python coding rules and practices within the company.

Cala, Embedded Software Engineer

Courbevoie (92), FRANCE

Jan 2020 – Dec 2020

- Embedded software development and deployment for [a cooking automaton](#) (Linux, Python, C++, C):
 - Designing and implementing an algorithm to parallelize the automaton's tasks regarding available resources (Python / C)
 - Development of the robot arm library (C++ wrap in Python)
 - Communication with microprocessors (CAN bus, Python / C)
 - Creation of a REST API with automaton's control endpoint (Python)
 - Request to remote server (Python <-> graphQL)
 - Tests, Repeatability, Documentation

SNCF Réseaux, Embedded Software Engineer

Saint-Denis (93), FRANCE

Sept 2016 – Dec 2019

- Development of new measurement chains for the [IRIS320 train](#):
 - Identification of maintenance needs, writing specifications.
 - Full development of measurement chains: hardware (sensors and acquisition cards choice, analog filters, signal conditionnement) and software (C#) (signal acquisition, numerical filters, image processing, algorithm, database insertion).
 - Tests, production launch, maintenance, improvement and documentation of measurement chains.
 - Data analysis (repeatability) and development of data consultation softwares.

Valeo, Embedded Software Engineer Intern

Créteil (94), FRANCE

Feb 2016 – Aug 2016

- Creation of a bench prototype to update laboratory test equipments:
 - Identification of needs, technology benchmark
 - Creation of a bench prototype (Raspberry Pi 3, PCB conception, scripting in python/C and HMI in C#)
 - Writing of documentation and financial report

Education

MEng ENSEA, Computer Science and Electronics

Cergy (95), France

Sept 2012 – Aug 2016

- Courses: Embedded systems, C++, Algorithmic and programming, Game theory and telecommunication

Lycée Jean-Perrin, Mechanic

Marseille (13), France

Sept 2010 – June 2012

- University-level preparation for the nation-wide competitive entrance exams to the French "Grandes Écoles"

Programming Skills

Programming Languages: Python, C++, C, C#**OS:** Linux, Windows, MacOS**Git:** Github, Gitlab**Tests:** Unit test, CI/CD Pipeline, Pytest, Unittest, Cucumber, Gherkin**Programming concepts:** Design pattern, Parallelization, Image processing (OpenCV, MIL), OCR, ASR (Optical / Speech recognition)**Development board:** Raspberry Pi, Arduino ...

Software Tools

- Office pack
- IDE (VS/VSCode, PiCharm)
- CAO / 3D printing
- Computer aided drawing tools (Photoshop, Gimp ...)
- PCB routing (OrCAD, Eagle, Pspice)
- Formal calculus (Maple, Matlab/Simulink, Mathematica)


Languages

French: native

English: fluent

Spanish: intermediate

Community Involvement

- 2019 - today: Science career advocate in high schools (especially for girls)
- 2022 - today: Volunteer staff for a [craft beer festival](#) 

Interests

Home automation, Sciences, Zythology, Travel, Video Games, Photography