

# Marion FABRE

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## Experience

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### **QA Software Engineer**, Quandela – Massy (91), FRANCE

Sept 2024 – June 2025

- 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

### **Software Scientific Engineer**, Quandela – 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

### **Software Scientific Engineer**, NanoXplore – 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.

**Embedded Software Engineer**, Cala – 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

**Embedded Software Engineer**, SNCF Réseaux – 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, both 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.

**Embedded Software Engineer Intern**, Valeo – 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

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**ENSEA**, MEng in Computer Science and Electronics – Cergy (95), France

Sept 2012 – Aug 2016

- Embedded systems
- C++
- Algorithmic and programming
- Game theory and telecommunication"

**Lycée Jean-Perrin**, in 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

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**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

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- 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

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**French:** native

**English:** fluent

**Spanish:** intermediate

## Community Involvement

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

## Interests

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Home automation

Sciences

Zythology

Travel

Video Games

Handiwork