Marion FABRE

Paris, France m.fabre123@gmail.com info-marion-fabre Aimnor

Experiences

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 (out-sourced project)
  - Developing a test driver with Cucumber framework (Behave), 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 Impulse, 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, matplolib).
- 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

MEng **ENSEA**, Computer Science and Electronics — Cergy (95), France — Sept 2012 – Aug 2016

- 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, Unitest, Cucumber, Gherkin

Programming concepts: Design pattern, Parallelization, Image processing (OpenCV, MIL), OCR, ASR (Optical / Speech recognition)

Development board: Raspberry Pi, Arduino ...

Software tools

- IDE (VS/VSCode, PyCharm)
- CAO / 3D printing (Autodesk fusion, Bambu Studio)
- Formal calculus (Matlab/Simulink, WolframAlpha, ...)
- Computer aided drawing tools (Photoshop, Gimp ...)

Languages

French: native

English: fluent

Spanish: intermediate

Community Involvement

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

Interests

Home automation, Handiwork, 3D printing, DIY, Travel, Zythology, Video Games, Board Games