



# EMILIEN FRITSCHY

Software Engineer / PHP Developer

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I'm passionate about writing elegant code capable of expressing complex concepts. Documenting is my second nature. Security and quality are always in my mind. Curious about everything, I continuously improve myself and learn new techniques. I'm solution oriented and a creative problem solver. I'm looking for a passionate and creative team where I can express myself and create great software.

## 🔧 TECHNICAL SKILLS

Languages: PHP, JavaScript, C#, CSS, HTML

Technologies: Laravel, VueJS, Linux, MySQL, UML, Git, AWS, PhpStorm, Teamcity, Docker, PHP Stan, PHP MD, rector, OWASP Zap, SQLmap

Methodologies: CI/CD, git flow, agile, scrum, UML, OWASP Top ten

Soft skills: Non violent communication (NVC), active listening, problem-solving, teamwork, patience, attention to details, creativity, leadership

## 🎓 EDUCATION

HES-SO Yverdon-les-Bains (Switzerland)

Graduation - 2014

*Bachelor of Science in Computer Science major in Management Systems*

Relevant Coursework: Languages and communication - business and management - scientific bases - bases of computer science - hardware and software systems - software engineering - complex systems - software development and architecture

Major in Management Systems: Databases, Internet applications and services, software architectures, planning/optimization of management processes, project management.

CPLN, Neuchâtel (Switzerland)

Graduation - 2005

*Federal Certificate of Capacity in computer science*

Relevant Coursework: Programming, hardware, network, IT, multimedia

## ⚙️ CERTIFICATIONS

VZPM, Lausanne (Switzerland)

Validity 2014 - 2019

*Certified Project Management Associate IPMA Level D*

## 🗣️ LANGUAGES

French: Mother language

English: Professional working proficiency

## 📁 EXPERIENCE

be.wan / Waterloo, Belgium

Nov. 2017 – Present

*Software Engineer*

Engaged in all phases of the software development lifecycle which include: technical analysis, workload estimation, data model design, programming, quality testing, deployment and software support. Consult the client to refine, test and debug programs.

- Full lifecycle application development
- Develop, test and implement new software programs
- Maintain legacy codebase and add new functionalities
- Maintain and improve technical documentation
- Design and update databases scheme
- Deploy new features in production
- Test, maintain and recommend software improvements to ensure strong functionality and optimization
- Root cause analysis of system issues
- Resolve complex technical design issues
- Possess up-to-date knowledge of technological developments in the industry
- Recruit, train and encourage juniors developers
- Configure and update Linux servers
- Setup and manage AWS environment

Technical stack: PHP Laravel, Vuejs, C#, DevExpress 2016, MySQL, Linux server and desktop, AWS EC2, PHPStorm, TeamCity, Visual Studio 2012, static analytics (PHPMD, PHPCS, PHPSTAN), PHP Unit

CFI SA / Neuchâtel, Switzerland

Nov. 2015 – Nov. 2017

*Software Engineer*

- Develop, test and implement new software programs
- Design and update databases scheme

Technical stack: PHP, jQuery, C#, VBA, Wordpress, NetBeans IDE

GUCCI Swiss Timepieces SA / Cortaillod, Switzerland

Feb. 2010 – Nov. 2015

*IT Technical Analyst*

- Provide technical support for the IT Service Desk
- Examine all business demands and suggest the right applications and technology
- Take inventory of IT equipment
- Apply software updates and security patches on desktop and laptops devices
- Automate software deployment on user's devices

Technical stack: Windows XP / 7, Windows deployment toolkit, BMC Track-It, Active Directory, Blackberry, iPhone, Dell laptop and desktop, RSA VPN



## EARLY DAYS EXPERIENCES

Multiple companies in Switzerland

2005 – 2009

*IT Technical assistant*

Companies:

- Johnson&Johnson
- Video2000 SA
- CEG Neuchâtel
- Rollomatic SA

Responsibilities:

- Update user's laptop and desktop from Windows 2000 to Windows XP
- Provide support after update
- Provide technical support for the IT Service Desk
- Examine all business demands and suggest the right applications and technology
- Take inventory of IT equipment
- Install new computers
- Troubleshoot customers Internet connection issue on phone
- Remotely fix basic configuration issues (mails, wifi,...)

## PROJECTS

### IRIS® Portal and Audit Tool

Nov. 2017 - Present

be.wan's editing an audit portal and tool for UNIFE (European Rail Supply Industry Association). The audit system is named IRIS® (International Railway Industry Standard) This is a global system for the evaluation of rail sector companies. It is build on PHP for the Portal and C# for the audit tool.

The project started around 2006. be.wan took over in 2013 and did major updates. Since November 2017, I'm the main developer and maintainer of this platform. It usually evolves by fixing bugs or new features requested by UNIFE.

### be.wan's Audit Tool Web for UNIFE

Jan. 2022 - Present

In 2019, UNIFE started a project to rewrite the audit tool into a Web version.

- Setting up AWS environment with the help of a senior dev
- Fork and adapt be.wan's own Laravel/ VueJS based framework
- Design multi-audit architecture based on tenants
- Design data model with ERD Diagrams
- Design and implement communication between the Portal and the new Audit Tool
- Implement Audit Tool's (C#) functionalities
- Work hand to hand with the functional analyst

### Technological Update for IRIS® Portal

May. 2018 – Jan. 2019

IRIS® Portal is a legacy codebase started around 2006. It ran with PHP 5.3 and was technologically outdated. This update took around 200h of work to complete.

- Technical analysis: Third party library inventory, external connections, cron jobs,...
- Release in two phases: From php 5.3 to php 5.6 then to php 7.3
- Ubuntu Server update
- MySQL database engine update: (update hard coded queries in the code)
- Configure a deployment server (Teamcity)
- Upgrade PHP code with Rector to match the new PHP version
- Starting to use static code analysis (PHP Stan, PHP MD)

### Pentest for IRIS® Portal

Jun. 2019 - Oct. 2019

In 2019, UNIFE ordered a security analysis of IRIS® Portal. This hasn't been done before. It was my idea to push them to do a security assessment. The assessment itself was done by a third company. We implemented the recommended fixes based on their report. I liked a lot to learn about security and implement security fixes.

- Fix security issues (SQL Injection, XSS, Bad header, sensitive data disclosure, broken access control).
- Update frontend library (jQuery).
- Enforce HTTPS protocol on the entire site.
- Learning about OWASP Top ten security risk.