

Nelson Jeanrenaud

SOFTWARE ARCHITECT | FULL-STACK .NET DEVELOPER

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Software engineer focused on software architecture, object-oriented design, and full-stack .NET development. Experienced in translating complex industrial requirements into robust, maintainable systems, from analysis and modelling through implementation and delivery.

EXPERIENCE

HEIG-VD – Institute of Industrial Automation | Yverdon-les-Bains, VD Apr 2025 – Present

Software Architect & Full-Stack Developer / R&D Software Specialist

- Own the software architecture and full-stack development of an industrial computer-vision and automation system.
- Translate partner needs and operational constraints into requirements, domain models, UML designs, and maintainable software.
- Develop C#/.NET applications with ASP.NET Core, Blazor, and WPF using object-oriented and clean architecture principles.
- Coordinate technical decisions with industrial partners and AI/automation stakeholders; contribute to planning, testing, and integration.

Swiss Armed Forces Jul–Nov 2024; Mar–Apr 2025

Compulsory military service

Abraxas Informatik AG | Morges, VD Aug 2023 – Oct 2024

Software Developer

- Maintained and extended CARI, a large Java application used by Swiss road traffic offices.
- Translated business needs into functional changes and delivered them in an agile five-person development team.
- Worked effectively in a legacy codebase through debugging, code review, and incremental improvements.

HEIG-VD | Yverdon-les-Bains, VD Aug 2023 – Oct 2024

Teaching Assistant – Object-Oriented Programming & Cloud Computing

- Supported students in Java object-oriented modelling and cloud topics including AWS/GCP, Docker/Kubernetes, NoSQL, Terraform, and Ansible.

EDUCATION

HEIG-VD | Yverdon-les-Bains, VD 2023

B.Sc. Computer Science and Communication Systems – Software Engineering

- Thesis (grade 5.6/6): Machine Learning for Making the Decision to Pit Stop in Formula 1 – data preparation, Random Forests, neural networks, and explainability.

CFPT | Geneva, GE 2020

Federal VET Diploma in Information Technology – Software Development; Professional Maturity

SELECTED PROJECT

Formula 1 Data Analysis 2021 – Present

Python tooling for telemetry and session analysis, automating charts and performance reports for motorsport content.

TECHNICAL SKILLS & LANGUAGES

Core: C#, .NET, ASP.NET Core, Blazor, WPF, Java, Python, SQL

Architecture: Object-oriented design, Clean Architecture, DDD, UML, REST APIs

Cloud & DevOps: Git, Docker, Kubernetes, GCP, AWS, Terraform, Ansible, CI/CD

Data & AI: Pandas, NumPy, scikit-learn, TensorFlow, computer vision

Languages: French (native), English (fluent)