

CURRICULUM VITAE

PERSONAL INFORMATION

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GitHub	https://github.com/lysandre995

WORK EXPERIENCE

2024-04 - Present

Position held: Application Engineer

Main activities and responsibilities:

- Design and development of software applications and integration layers for automated systems, including architecture definition, communication protocols, and data models
- Contribution to the evolution of the company's application framework (.NET/WPF), focusing on modular architecture, extensibility, and web technology integration
- R&D activities: evaluation of databases (including InfluxDB for time-series), CI/CD pipelines, and containerization practices
- Management and evolution of GitLab infrastructure, including Package/Container Registry and advanced Git workflows with submodules

- Internal reference for Linux environments, web technologies, and AI-assisted development workflows

Key achievement: Architect and internal technical reference for software applications, R&D, and development infrastructure evolution

Name and address of employer: Microtecna Engineering, Novazzano, Switzerland

Type of business or sector: Swiss engineering company specializing in high-tech industrial solutions, robotics, and automated systems

Technologies used: .NET, WPF, Git, GitLab CI/CD, Docker, InfluxDB, Linux, gRPC, MQTT, Redis

2023-10 - 2024-04

Position held: Software Architect

Main activities and responsibilities:

- Led the complete redesign and rewrite of a distributed system for electricity consumption/production data collection and processing
- Coordinated development team and defined end-to-end system architecture
- Designed meter acquisition layer using Modbus protocol and IoT router configuration (MikroTik RouterOS, WireGuard VPN)
- Architected on-premise cloud infrastructure with VMs and Docker Swarm
- Developed data visualization platform using Angular and NestJS
- Implemented automated billing data generation and OCPP server for EV charging stations

Key achievement: Full system architecture redesign for Swiss energy communities, from meter acquisition to billing automation

Name and address of employer: YouPower AG, Mezzovico, Switzerland

Type of business or sector: Swiss energy technology company focused on smart metering and energy community solutions

Technologies used: Angular, NestJS, TypeScript, Docker Swarm, MongoDB, Redis, Modbus, RouterOS, WireGuard, OCPP

2022-02 - 2023-09

Position held: Full Stack Developer

Main activities and responsibilities:

- Contributed to Leapp, an open-source application for secure cloud access management in DevOps environments
- Designed and implemented AWS-based solutions using TypeScript, including e-commerce-to-ERP integration flows
- Developed microservices-oriented document processing system (Spring Boot) for Italian electronic invoicing standards

Key achievement: Open-source contribution to Leapp and cloud-native integration solutions for enterprise clients

Name and address of employer: Forge Srl, Varese, Italy

Type of business or sector: Italian software house specializing in cloud-native solutions and enterprise integrations

Technologies used: TypeScript, AWS, Spring Boot, Java, Node.js

2021-05 - 2022-01

Position held: Software Developer

Main activities and responsibilities:

- Contributed to design and evolution of automation systems for automated warehouses
- Integrated and optimized mission management system for a leading Italian food producer/distributor
- Conducted operational research for technology stack modernization

Key achievement: Mission management system optimization for industrial logistics

Name and address of employer: Arsinform Srl, Milan, Italy

Type of business or sector: Italian company specializing in industrial automation and warehouse management software

Technologies used: Oracle, PL/SQL

EDUCATION AND TRAINING

2020 - In progress

Title of qualification awarded: B.Sc. Computer Engineering

Principal subjects/occupational skills covered: Computer Engineering, Software Development, System Architecture

Name and type of organization providing education and training: Politecnico di Milano, Milan, Italy

2014 - 2020

Title of qualification awarded: Medicine and Surgery (partial)

Principal subjects/occupational skills covered: Redirected career path; developed analytical and problem-solving foundations

Name and type of organization providing education and training: University of Milan, Milan, Italy

2009 - 2014

Title of qualification awarded: Classical Studies Diploma (Maturità Classica)

Principal subjects/occupational skills covered: Humanistic foundation with Latin and Ancient Greek studies

Name and type of organization providing education and training: Liceo Classico Alessandro Volta, Como, Italy

Educational background: Interdisciplinary background spanning classical humanities, medicine, and computer engineering.

PERSONAL SKILLS AND COMPETENCES

Mother tongue

Italian

Other languages

Language	Level
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English	C1 (Professional)
French	A2 (Elementary)
Latin	Reading (Classical studies)
Ancient Greek	Reading (Classical studies)

Technical skills and competences

Software Architecture & System Design: Design of modular, evolvable, and maintainable systems. Definition of boundaries, responsibilities, data models, and long-term architectural strategies.

Key skills: System Design, Modular Architecture, Technical Strategy, Domain Modeling

Complex System Integration: Integration of heterogeneous systems spanning automation, IoT, cloud services, and enterprise platforms. Expertise in communication protocols, data flows, and orchestration patterns.

Key skills: System Integration, Protocol Design, Data Orchestration, Heterogeneous Systems

Distributed Systems & Cloud-Native Architectures: Design and implementation of distributed systems, microservices-based solutions, containerized environments, and hybrid cloud/on-prem infrastructures.

Key skills: Microservices, Containerization, Cloud-Native, Hybrid Infrastructure

DevOps & Engineering Practices: Advanced Git workflows, CI/CD pipeline design, containerization with Docker, and development infrastructure management. Emphasis on standardization and automation.

Key skills: CI/CD, GitOps, Containerization, Infrastructure as Code

Applied Research & Technology Evaluation: Evaluation and adoption of emerging technologies including time-series databases, integration patterns, and AI-assisted workflows. Translation of research into concrete engineering improvements.

Key skills: R&D, Technology Evaluation, Innovation, Continuous Improvement

Computer skills and competences

Programming Languages: C#, TypeScript, JavaScript, Lua, Java, Python, Rust, SQL

Frameworks: .NET, NestJS, Node.js, Spring Boot, Angular, WPF

Infrastructure: Docker, Docker Swarm, Docker Compose, GitLab CI/CD, GitHub Actions, AWS

Databases: PostgreSQL, MySQL, SQLite, MongoDB, Redis, InfluxDB

Architecture: System Architecture, Microservices Design, Domain-Driven Design, Event-Driven Architecture, API Design

ADDITIONAL INFORMATION

Certifications

- **AWS Solutions Architect – Associate (Training Course)** (beSharp Srl, 2022-11)

Open Source Contributions

- **Leapp** (Noovolari): Feature development and contributions during Forge tenure
<https://github.com/Noovolari/leapp>

Professional Projects

- **Alphamon** (Game Framework): RPG game framework in Lua/Love2D featuring dependency injection architecture, multiplayer networking, and a complete battle system. Designed as an extensible starter kit for game developers. *Technologies:* Lua, Love2D
- **Industrial Integration Middleware** (Integration Framework): Framework/application template for multi-protocol integration in industrial environments. Supports OPC UA, Redis, REST, gRPC, and other protocols for heterogeneous system communication. *Technologies:* .NET, OPC UA, Redis, gRPC, REST
- **AML (Alessandro's Music Language)** (Creative Tool): Custom music notation system for chiptune and game music composition, with synthesis capabilities using ChucK. *Technologies:* ChucK, Custom DSL

Interests and Activities

Creative:

- Music: Singing and playing in a rock band; chiptune composition; music notation systems
- Theater: Acting and performance
- Game Development: Indie game development in Lua/Love2D

Physical:

- Sailing
- Soccer Coaching: Youth team coaching

I authorize the processing of personal data in accordance with Legislative Decree 101/2018 and GDPR (EU Regulation 2016/679)