

# CURRICULUM VITAE

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## PERSONAL INFORMATION

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GitHub	<a href="https://github.com/lysandre995">https://github.com/lysandre995</a>

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## WORK EXPERIENCE

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### 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:** Microtecnica 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

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## **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

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## **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

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**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

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## EDUCATION AND TRAINING

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### 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.

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## PERSONAL SKILLS AND COMPETENCES

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### 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

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## ADDITIONAL INFORMATION

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### 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 ChuckK. *Technologies:* ChuckK, 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

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