
SUMMARY

Machine Learning Engineer with a solid academic background and hands-on experience in deep learning, time-series anomaly detection, computer vision, and LLM-based agents. Skilled in Python, PyTorch, LangChain, and full-stack development, taking data-driven solutions from prototype to production: data pipelines, model training, RAG assistants, and deployed web and mobile applications. Proactive, research-oriented, and passionate about AI in industrial contexts.

EXPERIENCE**Freelance Software Engineer**

Remote

*The Italian Elixir (THIE) & Training Hub**Sep 2026 – Present*

- **THIE Business Engines:** Designed and built a suite of independent, test-driven TypeScript services for a hospitality business: quoting, booking operations, ads management, reviews and property library.
- **THIE Architecture:** Defined domain boundaries, idempotent commands and optimistic concurrency, with provider-neutral adapters over Google Sheets, Apps Script and Wix.
- **THIE Operator Console:** Delivered an internal console for staff to calculate and revise quotes, developed locally and published only after visual approval.
- **Training Hub:** Built a coaching SaaS for strength coaches and athletes with Flask, PostgreSQL and htmx, shipped as a PWA and Capacitor iOS/Android app with offline logging, Stripe subscriptions, two-factor authentication, GDPR consent and an opt-in AI assistant.

NAIS Engineering Srl

Bologna Italy

*Machine Learning Engineer & Researcher**Oct 2024 – Jun 2026*

- **Data Analysis:** Developed multiple web applications with Dash Plotly to visualize project results and analyses.
- **Data Engineering:** Built multiple aggregated datasets on Formula 1 engines at different levels of depth, with one record sampled every 0.005 seconds (200 Hz).
- **Neural Network Modeling:** Developed and evaluated different anomaly detection models on time-series datasets.
- **SCADA Dashboard Development:** Developed a SCADA dashboard from scratch using Ignition Perspective to automate PLC data collection, enabling downstream ML model development and anomaly detection pipelines.

Ca' Foscari University of Venice

Venice Italy

*Probability and Statistics Tutor**Nov 2023 – Jan 2024*

- **Tutorials:** Delivered 10 classes and assisted 30 students with probability and statistics problems, by hand and in R, including one-on-one support.

PROJECTS

- **Active Learning with Dynamical System:** Developed a novel Active Learning methodology that uses the Graph Transduction Algorithm to select the most difficult samples from a subset and add them to the known set.
- **Molino Bertolo: Website, Shop and AI Assistant:** Built a Next.js 16 and PostgreSQL storefront (235 static pages, admin dashboard, cart) with a ReAct RAG agent over 307 technical sheets and recipes (Pinecone, OpenAI) that recommends products and adds them to the cart.
- **Strudel Assistant:** Built a documentation assistant for the Strudel live-coding language: hybrid BM25 and Pinecone retrieval, a ReAct agent that validates patterns in a Node sandbox, and melody transcription from humming with librosa.
- **Silhouette-Based Space Carving:** Reconstructed the 3D shape of an object by capturing it from multiple angles during rotation and progressively removing empty space based on object silhouettes.

EDUCATION**Ca' Foscari University of Venice**

Venice Italy

*Master of Science in Computer Science - Data management and analysis**Jan 2022 – Jul 2024*

- **Thesis:** Active Learning with Dynamical System.
- **Relevant Courses:** Artificial Intelligence, 3D Geometric Computer Vision, Statistical Inference.

Ca' Foscari University of Venice

Venice Italy

*Bachelor of Science in Computer Science - Data Science**Sep 2019 – Oct 2021*

- **Thesis:** Dash AutoML Benchmark.
- **Relevant Courses:** Algorithms and data structures, Databases, Data Analysis, Predictive Analytics.

SKILLS

- **Programming Languages:** Python, TypeScript, C++, SQL, R.
- **Frameworks & Libraries:** PyTorch, OpenCV, Scikit-learn, Hugging Face, LangChain, LangGraph, Pandas, NumPy, Matplotlib, Seaborn, Dash Plotly, Flask, FastAPI, Next.js.
- **Technologies:** Deep Learning, Machine Learning, Computer Vision, LLM Agents, RAG, PostgreSQL, Pinecone, Git, Linux, Docker, AWS, Ignition.
- **Spoken Languages:** Italian (Native), English (B2+, Upper-Intermediate).