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Giacomo Guidotto

Software Engineer

About

Software Engineer building end-to-end systems for large IoT platforms (30+ services, 3M+ real/virtual devices, 400+ users). I work across micro-frontends (React/Next.js) and Go microservices on Kubernetes, with event-driven integrations (Kafka/MQTT) and Python data pipelines that feed ML for predictive energy control. I'm known for pushing pragmatic improvements: introduced Next.js in an incubator setting, drastically sped up local/CI feedback by rolling out Biome, and ramped up on Go to ship production PRs in under a week. Outside work, I build open-source tools: a modular Physics-Informed Neural Networks framework (PyTorch Lightning), a Nix-based reproducible dev environment, a production-ready Next.js starter for real-time apps.

Experience

Software Developer, Danfoss, Venice, Italy *(part-time)* Sep 2022 – Present

- Designed and developed web applications, microservices, and data pipelines for an IoT platform.
- Promoted from Junior role in 2 years, leading to increased responsibility and impact.
- Tech: TypeScript, React, Go, Python, SQL, Git, CI/CD, Kubernetes, GitHub, Azure.

Scientific Researcher, Ca' Foscari University of Venice, Venice, Italy *(part-time)* Oct 2025 – Present

- Leading development of a Python library for building Physics-Informed Neural Networks.
- Reduced training time by 30% via innovative stopping criteria.
- Tech: Python, PyTorch, uv, Git, CI/CD, Docker, GitHub.

Education

Ca' Foscari University of Venice, *BSc in Computer Science*, Venice, Italy *(while working)* Sep 2022 – Jul 2025

- Foundations in algorithms, data structures, software development, and AI. **GPA: 29.0/30**
- Research thesis on Physics-Informed Neural Networks in epidemiological modeling.
- Key courses: Algorithms, Computer Architecture, Operating Systems, Networking, OOP, Intro to AI.

University of Gothenburg, *Erasmus Exchange Program*, Gothenburg, Sweden *(while working)* Sep 2024 – Jan 2025

- Relevant courses: Introduction to Data Science and AI, Functional Programming.

Achievements

- Selected among top 15% of STEM mentees (2,000+ applicants), LeadTheFuture, 2025.
- Selected for summer school on cutting-edge CS research, BOOST '25, 2025.
- Cambridge Advanced English (C2), Grade: 203, 2025.

Projects

PINN: Modular Python library for solving mathematical problems using Physics-Informed Neural Networks. Focuses on exceptional DX with automated setup scripts.

Workspace: Declarative, XDG-compliant development environment using Nix for reproducible, sandboxed setups.

Skills

Languages: Italian (Native), English (C2)
Interests: Live to 100+ years, jumping from airplanes, producing films

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