

Bart Olsthoorn

Ph.D. in Physics · Product Engineer at Flower

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Profile

Full-stack software engineer with a physics Ph.D., building product end-to-end: data pipelines on Databricks, backend APIs, and the web interfaces on top. Building a lot with agents and agentic loops in production. Equally comfortable shipping across the stack, leading a small team, or training a model.

Experience

- 2023 – now **Flower**
Stockholm · Python, Go, AWS, Databricks
- Feb 2026 – now Product Owner / Product Engineer · Distributed Assets
Building our systems with agentic loops; owning roadmap and prioritisation for the team.
- Dec 2024 – Feb 2026 Software Engineer · Distributed Assets
Built Flower Bridge end-to-end — the integration platform for distributed energy assets (residential and C&I batteries, solar, EVs, heat pumps): Databricks data pipelines, backend APIs, and web interfaces.
- Jan 2024 – Dec 2024 Engineering Manager (interim) · Asset Management
Technical recruiting and team leadership during a growth phase.
- Feb 2023 – Jan 2024 Software Engineer · Asset Management
Built a platform supporting the Nordic electrical grid with grid-scale solar and battery systems.
- 2012 – 2017 **Freelance Software Engineer**
Stockholm, Sweden and Leiden, The Netherlands
Shipped production software across a range of stacks and domains: early generative AI with PyTorch / GANs at *Similar.ai*; Ruby and Elixir work on search, recommendations, and deduplication at *Universal Avenue* (now *Velory*); scalable Rails SaaS at *InnerBalloons* (acquired by *Yext*) and web-data systems at *Pointer Brand Protection*.

Education

- 2018 – 2023 **Ph.D., Physics · KTH Royal Institute of Technology**
Thesis: *Homology and machine learning for materials informatics*. 11 peer-reviewed publications.
- 2015 – 2018 **M.Sc., Computational Physics · Stockholm University**

Selected publications

- 2023 **Persistent homology of quantum entanglement**
Physical Review B · Editors' Suggestion · [link](#)

2019

Band gap prediction for large organic crystal structures with machine learning

Advanced Quantum Technologies · [link](#)

Full list on [Google Scholar](#).

Open source

500+ stars across repositories on github.com/bartolsthoorn. Highlights: [NVDSP](#) — iOS / macOS audio DSP library (417★); [NQS-numpy](#) — neural-network quantum states in NumPy (35★); [gohighs](#) — Go bindings for the HiGHS optimizer.

Skills & languages

Core	Python, Go, full-stack web (APIs & interfaces), AWS, Databricks, PostgreSQL, distributed systems, product engineering
AI / ML	Agents and agentic loops in production; PyTorch; Pandas / NumPy / scikit-learn; model training & evaluation
Past	Ruby / Rails, Elixir, Swift / Objective-C
Research	Machine learning for materials, topological data analysis, quantum systems
Languages	English, Dutch (native), Swedish (working)