Axel U. J. Lode

DeFi, Oracles, Data Specialist

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https://aujl.github.io/Profile-page/index.html

Mindset

- Ownership
- Scientific Rigor
- Data-Driven Decisions

Leadership

- Stakeholder Expectation Management
- Technical Product Management
- Coaching & Mentoring
- Communication

Programming

- Go, C, Rust / Anchor, Fortran
- TypeScript, Solidity
- Python, Bash

Infrastructure

- Linux, Containers, Virtualization
- GCP, Azure, Orchestration
- Ansible, gitOps, IAC
- Observability, Monitoring

Professional Summary
Ex-Quantum Scientist Yock for Data, Blockchain, Infrastructure

- Spiced with two decades of scientific research experience
- Excels in highly available blockchain infrastructure
- Breathes data science, quantitative finance, AI/ML & quantum Physics
- Cherishes integrity and truth secured by (blockchain) technology
- Drives 2000+ on-chain data feeds (zero-day Chainlink and Tier-1 Pyth oracle)

Professional Experience

01/2023 – Present — **Head of Decentralized Finance** — Blocksize Capital GmbH
- Architected highly-availabile hybrid cloud (GCP K8s) & baremetal infrastructure supporting oracle networks like Chainlink & Pyth
- Infrastructure automations (Ansible) for 20+ baremetal servers on 10+ protocols
- Implementaton of observability (Kube-prometheus-stack) and on-call-rotation
- Refinement of data anomaly detection for algorithmic price feed accuracy

03/2022 – 12/2022 — **Lead Quantitative Developer** — Blocksize Capital GmbH
- Data product stakeholder management and requirements engineering
- Refined backend software development and release processes
- Design and development of anomaly filter algorithms, readying the data origination in Pyth's and Chainlink's oracles

09/2021 – 03/2022 — **AI Researcher** — Lehner Investments
- Machine learning for automated investments backed by price and sentiment data
- Design of ETL pipelines and feature engineering for real-time processing of data streams

Speaking Engagements

05/2025	Deloitte FinTech Day
10/2024	Chainlink SmartCon
09/2023	Chainlink SmartCon
07/2023	DeFi Talents Workshop Organizer
11/2022	DeFi Talents Guest Speaker
06/2022	ETH Frankfurt Meetup
05/2022	DeFi Talents Guest Speaker
05/2022	HBI Forum Hamburg

Selected Projects / Hackathons

2025 — **micaEur (Solana Token2022)** — Solana Breakout Hackathon
Scope: MiCA-compliant stablecoin prototype featuring on-chain KYC/AML oracles, freeze/seize controls, and proof-of-reserves.
Code: github.com/BSC-aujl/micaEur

2023 — **RaCoTo (ReFi token)** — Chainlink Hackathon
Scope: Trust-minimized rainforest conservation system using satellite imagery and oracle attestations.
Recognized in: Chainlink Spring 23 Hackathon, Chainlink Constellation Hackathon 23

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Blockchain

- Oracles:
  - ✔ Chainlink, Pyth, Band
  - ✔ API3, Tellor, Supra
  - ✔ Space and Time
- Validators:
  - ✔ Solana, Pyth, Supra, Band, Polygon
- RPCs:
  - ✔ Ethereum, ZK-Sync Era
  - ✔ Solana, Avalanche
  - ✔ Polygon

Academic Metrics

- h-index: 30
- Citations: 2000+
- Publications: 50+
- Projects: 15+

Repositories

- github.com/BSC-aujl
- github.com/aujl
- UNIQORN Project

Awards & Grants

- Austrian Science Fund Grant (€390k)
- HPC Resources Grant (€100k/year 2019 – 2022)
- Springer Thesis Award (2013)
- Dr. S. Bernthsen Prize (2009)

Languages

- German (native)
- English (professional)
- French (basic), Russian (elementary)

Academic Experience

2019 – 2022 **Junior Research Group Leader** University of Freiburg
- Machine learning and statistics approaches for optimally using observations of complex quantum systems
- Managed €100k/year of high-performance computating resources
- Deployed €390k research grant
- Teaching and mentoring M.Sc. and Ph.D. students & their theses

2017 – 2019 **Principal Investigator** University & Technical University of Vienna
- Research applying state of the art applied math and theoretical physics to understand experimental observations
- Deployed €100k/year of high-performance computating resources
- Attracted €390k research grant for investigating machine learning for quantum information readout
- Teaching and mentoring B.Sc. and M.Sc. students & their theses

2013 – 2017 **PostDoc** University of Basel
- Development and applications of novel numerical methods for condensed matter systems
- Collaborations with many internationally recognized experimental and theoretical physicists that used or contributed to the developed software

Education

2009 – 2013 **Ph.D. in Physics** Ruprecht-Karls-Univ. Heidelberg
- Magna cum laude (1.0), recognized with the Springer Thesis Award for outstanding thesis
- Developed and distributed software for deploying high-performance computing for quantum systems
- Computed first-ever numerically exact simulations for interacting quantum particles

2002 – 2009 **Physics Diploma (M.Sc. equiv.)** Ruprecht-Karls-Univ. Heidelberg
- Recognized with the Dr. S. Bernthsen Prize for outstanding thesis
- Application of quantum chemistry methods to model ultracold quantum systems.