



## David Huber, PhD

### Senior Software Engineer

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I'm a computational physicist turned software engineer with strong theoretical and practical skills and a passion for complex problems.

I received a PhD in high-energy astroparticle physics working on relativistic fluid models for HPC infrastructure.

Currently, I'm working in web3, developing custom smart-contract and backend solutions with a passion for on-chain generative art and home espresso making.

## Skills

### I already know

Solidity 5/5

Golang 4/5

Mathematica 4/5

C++ 4/5

Python 3/5

PostgreSQL 3/5

Espresso 5/5

### I want to learn

Rust

Noir

Circom

### I speak

German Native

English Full professional proficiency

Italian Limited professional proficiency

## Work experience

### Senior blockchain engineer

August 2022 - October 2023

#### PROOF

In my position as lead smart-contract engineer, I

- Consulted internally on blockchain related decisions for 15+ projects contributing to their smooth execution
- Developed and maintained a modular smart-contract infrastructure with >25k lines of Solidity to facilitate the company's and 3rd projects
- Implemented [Moonbirds in-chain](#); A low-level optimized, smart-contract rendering suite for the Moonbirds collection using compressed image layers stored on-chain with [Solidify](#); achieving less than 0.5 ETH in deployment costs.
- Developed and released [Solidify](#); An open-source go-lang + solidity library to make storing arbitrary data on EVM blockchains as easy and efficient as possible.
- Contributed to the broader Ethereum ecosystem by co-authoring 2 EIPs:
  - [EIP-6464](#): Extending ERC-721 to allow multiple operator approval on a per-token basis
  - [EIP-7526](#): A mechanism design approach to on-chain NFT royalty enforcement

Technologies: Ethereum, Solidity, Golang, Python, Docker

### Blockchain and Research Engineer

January 2022 - now

#### Freelance

For a more detailed CV see also <https://cv.david-huber.eu/>

- Collaborated with 6+ clients and their teams to define project requirements ensuring a smooth execution
- Designed and delivered secure and efficient smart-contract solutions and related backends
- Collaborated with 2 security auditing firms to identify and rectify vulnerabilities, ensuring the safety of delivered products
- Contributed over 8.5k lines of code (~30%) to the open-source library [Ethier](#)

**Technologies:** Ethereum, Solidity, Golang, Mathematica, Python, Docker

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## University Assistant

September 2017 - December 2021

University of Innsbruck

- Performed research within the scope of my PhD topic, contributing to 30+ research items including 3 articles as first author, published in high-impact, peer-reviewed journals
- Developed and implemented numerical models for relativistic hydrodynamics for high-performance computing infrastructure with code execution on >12k parallel cores
- Received a [PRACE](#) project grant for over 27M CPUh on the [Joliot Curie](#) Rome HPC infrastructure to investigate dynamical phenomena in the LS5039 system
- Developed, implemented and taught 4 undergraduate courses in various areas of physics and programming
- Supervised and mentored 3 Bachelor projects with successful graduation

**Technologies:** C++, C, Python, Mathematica, OpenMPI, Golang

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## Projects

### Mantle Liquid Staking Protocol

May 2023 - October 2023

Upcoming Ethereum liquid staking protocol operated by Mantle DAO aimed to handle \$1B+ in assets in its final form.

- Co-designed the high-level smart-contract and off-chain service architecture underpinning the protocol
- Implemented various parts (~40%) of the smart-contract infrastructure
- Collaborated with auditors to identify and rectify vulnerabilities

**Team size:** 5 person    **My role:** Architect, Smart-Contract Engineer    **Company:** TwoFiftySix Labs

**Category:** Web 3, Liquid Staking

**Technologies:** Solidity, Golang, Docker, Prometheus

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### gm. studio

December 2021 - now

The on-chain generative art platform by artists, for artists.

- Developed the contract infrastructure underpinning the platform with 11+ collections launched, and over \$2M generated in revenue.
- Contributed to the backend services handling the dynamic rendering of generative artworks

**Team size:** 4 person    **My role:** Architect, Smart-contract Engineer, Backend Engineer, Curator    **Company:** gm DAO

**Category:** Web 3, Generative Art Platform

**Technologies:** Solidity, Golang, PostgreSQL, Docker, React.js, Tailwind CSS

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### Strange Attractors

August 2021 - October 2021

An interactive, generative art project that simulates multi-dimensional, chaotic systems using nothing but Ethereum smart contracts. The project features on-chain numerical solution of multidimensional differential equations, image generation and participatory elements without any off-chain dependencies.

For a more detailed CV see also <https://cv.david-huber.eu/>

- Conceptualized and implemented the project, its contracts and UI as sole developer, generating 160ETH in revenue

Team size: 1 person    My role: Full-stack Engineer, Manager    Company: None

Category: Web 3, In-chain Generative Art

Technologies: Solidity, Next.js, TypeScript, SASS

## Education

### Computational High-Energy Astroparticle Physics

October 2017 - January 2022

Leopold-Franzens-Universität Innsbruck, Austria

### MSc in Computational Physics

October 2015 - October 2017

Leopold-Franzens-Universität Innsbruck, Austria

### BSc in Physics

October 2012 - August 2015

Leopold-Franzens-Universität Innsbruck, Austria