



# 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 3/5   Mathematica 4/5   C++ 3/5   Python 3/5   PostgreSQL 2/5  
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, handling >2.5k ETH (>\$4M) in primary transaction value and generating >13k ETH (>\$20M) in secondary sales
- 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 <0.5 ETH in deployment costs.
- Developed and released Solidify; An open-source golang + 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

- 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

## Projects

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### 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.

- 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

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### **Computational High-Energy Astroparticle Physics**

October 2017 - January 2022

Leopold-Franzens-Universität Innsbruck, Austria

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### **MSc in Computational Physics**

October 2015 - October 2017

Leopold-Franzens-Universität Innsbruck, Austria

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### **BSc in Physics**

October 2012 - August 2015

Leopold-Franzens-Universität Innsbruck, Austria