



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 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

- Collaborated with 6+ clients and their teams to define project requirements ensuring a smooth execution

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

- 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

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

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

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

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

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