Martin Allen

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EXPERIENCE

August Health, Senior Software Engineer — *Jan 2022 - Present*
- Instituted application metrics and monitoring using prometheus and grafana to identify and resolve critical performance bugs.
- Developed various API features and enhancements based on customer requirements, such as report generation and resident data collection and storage.

Tweag, Software Engineer (Consulting) — *July 2021 - Jan 2022*
- Made core contributions to the Djed stablecoin application deployed to Cardano, including designing exhaustive state machine tests and property-based tests before the launch.
- Authored the Nix derivations for building, packaging, and deploying the Djed smart contracts..

FOAM, Senior Engineer, Founding Member, NYC — *Sept 2017 - Jan 2021*
- Architected and implemented backend services, including REST APIs, notification systems, and stream processing pipelines for indexing and caching Ethereum data.
- Led a team of engineers to successfully deliver several projects, including web applications and internal R&D
- Implemented numerical analysis and filtering pipelines for FOAM's localization protocol, transforming raw measurements from FOAM's custom hardware into precise localization data.
- Developed Ethereum scaling solutions, including Cosmos integrations for the FOAM stack.

BlockApps, Senior Platform Engineer, NYC — *Jan 2017 - Sept 2017*
- Developed and maintained BlockApps' Strato platform, a proprietary Ethereum client and platform with RDBMS connectors, REST APIs, and innovative EVM enhancements.
- Designed and implemented novel Ethereum solutions for private enterprises, specifically in the areas of supply chain management and identity and access management systems.
- Designed and taught training courses on Solidity smart contract development and Ethereum internals.

VFILES, Full Stack Engineer, NYC — *Jan 2016 - Jan 2017*
- Developed and enhanced the REST API and notification systems using Postgres and Elasticsearch databases.
- Delivered user facing features on a large frontend application using HTML, CSS, and AngularJS

EDUCATION

PhD candidate, Mathematics, Central European University, Budapest, Hungary — *2014 - 2016*
- Thesis: *Zeta functions of Normal Surface Singularities*

MSc, Mathematics, University of Paris-Saclay, Orsay, France — *2012 - 2014*
- Thesis: *The Riemann Hypothesis for Hypersurfaces over Finite Fields*

BSc, Mathematics, University of Washington, Seattle, Washington — *2006 - 2010*

OPEN SOURCE PROJECTS

purescript-web3: The PureScript client library for the web3 API.

calc: A compiler written in Rust for generating Zero Knowledge proofs for a simple programming language.

chanterelle: A build/deployment system for Ethereum smart contracts written in PureScript.

kepler: Haskell language ABCI server and SDK for developing Tendermint/Cosmos blockchain applications.

hs-web3: The Haskell client library + kitchen sink for the Ethereum and Polkadot web3 APIs.

LANGUAGES:

Haskell, PureScript, Rust, Scala, Python, Nix, Dhall

TECHNOLOGIES:

Linux, Nix, Postgres, Elasticsearch, Redis, ZeroMQ, Ethereum, Cosmos/Tendermint, Docker, Kubernetes