

# Kai Geffen

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## Senior Software Engineer

Versatile and determined software engineer with 6 years of client and industry experience. Engaged community member and builder in the Zero-Knowledge space. Brings years of experience in managing, facilitating, and communicating with clients and peers to achieve excellence in software solutions. Passionate math and problem-solver who holds the value and viability of the product in mind at all times.

## Professional Experience

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June 2023 -  
December 2023

### Senior Software Engineer, CTO

*IronMill*

- Lead the team in designing high-level scope for our project, creating diagrams and specifications, breaking it down into actionable tasks, and supporting best-practices are used throughout
- Attended industry-leading conferences and worked with key investors and partners to refine product-market fit
- Researched and advised on the technical aspects of Zero-Knowledge Proofs and where they could deliver the most value to our audience
- Executed end-to-end development in both Python and Typescript for both frontend and backend

Winter 2023 -  
June 2023

### Zero-Knowledge Exploration

*Independent Exploration*

- Researched Zero-Knowledge Proofs and verifiable execution
- Attended ZK Libson, implemented Tip5 hash function in Miden assembly for a hackathon project
- Contributed to RISC Zero's version 0.14.0 release

Summer 2020 -  
Winter 2022

### Software Engineer

*CelestialTCG.com – Boston, MA*

- Designed, built, and host a web-app game using Typescript for client-side code, Python for server-side, and Postgres for user database
- Used Websockets for connecting to the server, OAuth for account management, Git for version-control, DigitalOcean for cloud hosting, and Canvas for frontend visuals
- Hired and managed a 4 person team working to develop the art, user-interface, and sound experience for the game

## Education

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Summer 2017	<b>Master's of Science in Computer Science (Incomplete)</b> University of Massachusetts Amherst (Privacy and Security focus)
Fall 2016	<b>Bachelor of Science in Computer Science</b> University of Massachusetts Amherst (3.77 Major GPA)
Spring 2012	<b>Associate of Science in Mechanical Engineering</b> Greenfield Community College (3.93 Overall GPA)

## Areas of Expertise

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• Typescript	• Zero-Knowledge	• Ruby	• Figma
• Python	• OCaml	• Git	• Docker

## Other Roles and Achievements

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**Tutored math:** Hundreds of hours of experience working with more than 10 clients over a 10 year period. Many clients returned and demonstrated improved results and understanding.

**SomAlive Audio Software:** Collaborated and advised client on successfully designing, executing, and testing a custom audio processing application over a year long contract. Developed user experience, low-level audio processing, and device configuration in Python.

**Internship at Atalasoft:** Extensively tested new features and updates to the company's image processing SDK. Wrote and facilitated the use of a C# program which automatically merged source code comments with the online documentation for the entire SDK.