

# Heneli Kailahi

bold.hat2722@fastmail.com | heneli.dev | linkedin.com/in/hkailahi

## EXPERIENCE

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### Indie Software Engineer

Mar 2022 – Present

*Independent*

*Pleasanton, CA*

- Published Heap State blog and authored several highly-researched essays on non-traditional programming techniques
- Designed platform and content for Algobra – a local-first, distributed coding platform with interactive, exercise-based courses

### Senior Software Engineer

Feb 2021 – Oct 2021

*TVision Insights*

*Pleasanton, CA*

- Led data pipeline project to decouple and automate ingestion of all third-party data (*Haskell, Postgres, Redshift*)
- Standardized both integration testing and local tooling approaches in order to stabilize & streamline development across services and data pipelines (*Haskell, Python*)
- Mentored multiple staff without experience in Haskell, Spark, and AWS into essential contributors to production software

### Backend Software Engineer

July 2018 – Feb 2021

*TVision Insights*

*Boston, MA*

- Developed backend services for orchestrating evolving data pipelines, managing fleet of 1k+ panelist devices, and ingesting device data into our internal metadata workflow engine (*Haskell, AWS*)
- Developed batch-processing algorithms to synthesize media attention metrics from audio content recognition, CV models, ad metadata, and other data sources (*Python, Spark*)
- Implemented libraries for typesafe redis actions, transactional caching, SFTP, and Google OIDC/OAuth (*Haskell*)
- Organized bi-weekly engineering book club and meetup for local companies using functional programming
- Presented tech talks on Spark, type-level programming, recursive datatypes, mechanizing abstraction, and more

### Software Engineer

May 2018 – July 2018

*Confer Health (Out of Business 7/18)*

*Boston, MA*

### Java Software Intern

Summer '12, '13, '14, '16

*eMeter, a Siemens Business*

*Foster City, CA*

### Android Software Intern

Summer '15

*j2 Global*

*Santa Barbara, CA*

## PROJECTS

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**Algobra** | *Nix, Pulumi, Haskell, Electric SQL*

Mar 2022 – Present

algobra.app

- Prototyped offline submissions via Electric SQL's CRDT-based replication of local SQLite to cloud-hosted Postgres
- Prototyped cacheable, multi-language developer environments for evaluating submissions (*Nix*)
- Prototyped subscription-based source code access through declaratively-managed GitHub organizations (*Pulumi*)

**Heap State** | *TypeScript, React, Next.js, Nix, Vercel*

Jan 2023 – Present

www.heneli.dev | github.com/hkailahi/heneli.dev

- Built a declaratively-managed, server-side rendered blog using MDX, React, and Next.js
- Authored *Fearless Tinkering is Functional*, *Fearless Tinkering with Nix*, *Anti-Instances in Haskell*, and drafted numerous upcoming articles

## TECHNICAL SKILLS

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**Languages:** Haskell, Python, Typescript + Javascript, SQL (Postgres, Redshift), Nix, Bash

**Infrastructure:** NixOS, AWS, Docker, Datadog, Pulumi, Vercel, CircleCI

**Technologies:** React (Next.js, Tanstack Query, Tanstack Router), Apache Spark (pyspark), MyPy, Pandas

## EDUCATION

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**University of California, Santa Barbara**

Santa Barbara, CA

*Bachelor of Arts in Computer Science, Minor in Economics*

*2011 – 2015 (Incomplete)*