

Owen Shepherd

About Me & Contact



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Experience

June 2022 - present

Tiko Energy Solutions - Consultant SE



Implemented core components of our Virtual Power Plant, as well as our next generation of smart home controllers.

» [Haskell](#), » [Nix](#),

May 2021 - June 2022

Symmetry Investments - Consultant SE



Language implementer. Wrote a tail call elimination optimization pass, which removed recursion limits.

» [Dlang](#)

May 2020 - April 2021

HubSpot - Senior Software Engineer

Implemented DSLs to describes and execute data aggregation, transformation, diffing, and syncing.

» [Haskell](#), » [Nix](#), » [k8s](#), » [docker](#),
» [scylla](#), » [redis](#)

May 2018 - December 2019

HubSpot - Fullstack Software Engineer

Led greenfield projects used by millions of people.

» [React.js](#), » [Redux](#), » [Ramda](#),
» [Java](#), » [MySQL](#)

December 2019 - April 2020

Obsidian Systems LLC - Consultant SE



Developed Haskell web frameworks with functional reactive programming, typechecked from database to frontend.

» [Haskell](#), » [Nix](#), » [Scala](#), » [Akka](#)

Open Source Contributions

- » [Sped up tree-sitter-haskell 45x](#).
- » [Generalize compensated summation](#) algorithms to work over the RealFloat typeclass.
- » [Response Bucketing](#) Added the ability for language server requests to be executed atomically

See [all my public PRs](#)

Popular(ish) blog posts

- » [{n} times faster than C](#). This made it to the front page of [Y Hacker News](#) for a day or so ([link](#)).
- » [Speeding up tree-sitter-haskell 50x](#). This was featured on Haskell Weekly [issue 380](#), and got quite a lot of attention [on lobste.rs](#).

Skills

| Beginner | Expert |

» [Haskell](#) | [C](#),
» [Nix](#),
» [Rust](#)

» [Reflex-FRP](#), » [Git](#)

Education



Trinity College Dublin

Bachelor's in Computer Science.



MGS 2024

One week intensive course on Type Theory, Category Theory, and Proof Theory. Attended purely for fun.

Projects

The Piq Programming Language



Piq is a statically-typed, type-inferred, compiled programming language, written in C99.

» [C](#)

SimFin financial data client



Haskell client for the SimFin financial data API. Includes accurate haskell types for all free and paid endpoints.

» [Haskell](#)

The Phage Programming Language



A functional, homoiconic, expressive, metaprogrammable programming language.

» [Haskell](#)

Try Lambda



Lambda calculus step-by-step simplifier REPL.

» [Bison](#), » [C](#), » [JS](#)

Select.Pink



A game where you use CSS selectors to make progress.

» [HTML](#), » [CSS](#), » [JS](#)

Conway's Game of Life GBA



An implementation of Conway's Game of Life for Gameboy Advance, implemented in C on bare-metal.

» [C](#)

See more projects on [Github](#) or [My Website](#)