

Schell Carl Scivally

☎ +64 021 420 471 efsubenovex at gmail dot com

I'm passionate about functional programming, real time graphics and sound synthesis.

As an engineer I'm a generalist with a few deep interests in GPU programming, user interfaces and programming languages.

In my free time I like to build things and play games with my kids. In the past I've made music with my friends and played shows, toured the US with a band, drove forklifts in a chemical plant and bailed hay in three states.

This resume lives permanently at <https://zyghost.com/resume.html>.

🏠 Current Location

I am a US citizen splitting my life between South Pasadena, California 🇺🇸, and Nelson, New Zealand 🇳🇵.

🔗 Links

- [GitHub](https://github.com/schell) - <https://github.com/schell>
- [LinkedIn](https://linkedin.com/in/schellscivally) - <https://linkedin.com/in/schellscivally>

Open Source Work

- I maintain many open source libraries as my current day job, working on the Zcash cryptocurrency protocol at [ZODL](#).
- I am a two-time [NLNet grantee](#), working on a cross-platform GPU-driven renderer ecosystem that runs on WebGPU.
 - [2024 Renderling](#)
 - [2025 Renderling Ecosystem](#).
- Authored [wgsl-rs](#), a proc-macro that transpiles Rust to WGSL so shaders can be unit-tested on the CPU and run isomorphically on the GPU, with automatic `wgpu` runtime linkage.
- Authored [renderling](#), a 3d physically-based renderer with easy resource management.

- Authored [crabslab](#), a slab allocator for working with GPUs in Rust.
- I'm a [maintainer of Rust-GPU](#), which is a Rust compiler that generates SPIR-V shaders.
- I [added support for atomic operations to wgpu's transpiler SPIR-V frontend](#).
- I contributed [RenderLayers](#) to the popular [Bevy game engine](#).
- I authored [typograffiti](#), a text renderer written in Haskell.
 - I am the initial author but have since moved on to [renderling](#).
 - I handed off maintainership of [typograffiti](#) to Adrian Cochrane ([alcinnz](#) on github) who himself is a NLNet grantee.

Day Job Experience

 **ZODL Inc. (formerly Electric Coin Company) Jul 2025 - Present**

Core Engineer

<https://zodl.com/>

Working on the Zcash protocol and core libraries.

Rust

 **Narrative.so Feb 2021 - Jul 2025 (4 years 5 months)**

Senior Rust Software Engineer

<https://narrative.so/>

Reduced the time to deliver new AI models from R&D to production by 50%.

Integrated batch processing of ONNX models into AI inference systems in Rust.

Optimized a cross-platform consumer application that performs AI inference on the edge, including

- performance profiling and optimization
- shipping new AI models and features
- refactored build systems to use Rust `xtask`

Authored a realtime image editing application in Rust using `wgpu` , `WGSL` and `WASM` .

Rust, Python, Lua, C, C++, JavaScript, Typescript

Formation.ai Oct 2016 - Feb 2021 (4 years 5 months)

Senior Software Engineer

<https://formation.ai/> (acquired by Boston Consulting Group in 2022)

Full stack engineering in Haskell using `reflex` . Rust, Go, AWS.

- single-handedly authored, deployed, and maintained a cloud-based template language interpreter in Rust that ran 24 million+ Starbucks req/day for 6 months - bug free!
- built a fullstack application in Haskell to author Starbucks' Star Program offers.

Formation.ai was acquired by BCG and was formerly Takt.com.

Haskell, Javascript, Rust

Syndeca.com Apr 2010 - Oct 2016 (6 years 7 months)

Senior Developer

<https://syndeca.com/>

Full stack engineering in Objective-C, Flash, Javascript and Haskell.

- single-handedly authored, deployed and maintained SDK and applications for clients including:
 - Nordstrom
 - Home Depot
 - Lowes
 - Bass Pro
 - Sears
- internal productivity tools in Haskell

Objective-C, JavaScript, Haskell

Freelancing 2005 - 2012

Flash game development, interactive displays, website design and implementation.

Clients include:

- Viddy.com 2009 (acquired by Motionbox in 2013)
 - authored Viddy's HD streaming video player
- Opsworks, Inc.
 - authored the Larchmont Charter School auction and payment system
- Synapse Group, Inc. (digital agency)
 - completed many projects for Fortune-500 clients like:
 - IBM
 - 3M
 - Sears
 - Lowes
 - Nordstrom
- Sonoma State University

NASA Education and Public Outreach Sep 2003 - Apr 2008 (4 years 9 months)

https://en.wikipedia.org/wiki/NASA_Education_and_Public_Outreach_Group

Flash game development.

- Designed and authored the "Solar Supernova" Space Mysteries game
- Authored, deployed and maintained many of the program's various websites

Honors and Awards

Cultural Award - We're Daring

Narrative.so Feb 2025

For excellent work planning and orchestrating the delivery of new AI models into production.

We act decisively to make brave and bold choices.



Cultural Award - Embrace Creative Freedom

Narrative.so Nov 2023

For shipping consistently and quickly, with an eye for creative solutions.

We walk in artists' shoes and embrace creative freedom. We're curious, passionate and hunt for the deeper meaning.



Cultural Award - Seek Truth

Narrative.so Aug 2021

For work on integrating TVM tuning into AI model pipelines and revamping build systems.

We seek out our strengths and weaknesses and accept them – at all times being authentically true to ourselves, and each other.

Mcquillen Summer Research Award

Sonoma State University Jun 2005

Selected to refurbish a thin film sputter coating machine and work on various high vacuum projects in the physics department.