

I am a software engineer with a strong background in math, theory, and abstraction. I am comfortable in a range of paradigms, from low-level C networking code to high-level Haskell abstractions. I like to tinker and solve problems creatively, and I take great joy in refactoring and finding just the right conceptual model. I care about effective teamwork and building relationships.

Programming Projects

MAR1D

Recreated the original Super Mario Bros. from a first-person perspective. True to the original, the game takes place in a two dimensional world. You view the world as Mario does: a one dimensional line. Involved rendering, file parsing, and concurrent programming. >5,000 lines of C. mar1d.com

Thinkpad Trackpoint Clusters

Interfaced with X11 and system devices to turn the trackpoint mouse buttons into keyboard modifier keys.

[radvendii/trackpoint-clusters](https://github.com/radvendii/trackpoint-clusters)

Hnefatafl

Lead a group project to program the Scandinavian chess-like game of hnefatafl. Responsibilities included prototyping, managing group dynamics, developing the framework, reviewing code, and programming graphics. ~1,500 lines of OCaml. [radvendii/hnefatafl](https://github.com/radvendii/hnefatafl)

Nix Projects

- Created functions for easy hakyll set-up. [radvendii/hakyll-flakes](https://github.com/radvendii/hakyll-flakes)
- Revamped nix-bundle's AppImages. [matthewbauer/nix-bundle/pull/76](https://github.com/matthewbauer/nix-bundle/pull/76)

Work Experience

Check Point Software Technologies

Full Stack Software Engineer
Aug 2019 — Feb 2021

Programmed the internet! Worked independently and on a small team to implement new routing features, update and maintain legacy code to comply with technical RFCs, and support customers with new and existing features. C, Javascript, and Tcl script.

Freelance Work

Website Development
Spring 2019

Developed perkuptruck.com, and maintained another website. (HTML, CSS, Javascript)

New England Complex Systems Institute

Student Researcher
Summer 2017

Wrote [The Inherent Instability of Disordered Systems](#), a paper extending an information theoretic model of complex systems in order to understand and prove mathematical results about the dynamics of complex systems.

MIT Media Lab

Student Researcher
Summer 2016

Data analysis and modeling of the changing informal organization of a company as the number and difficulty of tasks varies. Programming in Ruby and Gnuplot.

Education

Cornell University

BA in Mathematics; Linguistics Minor
Completed Fall 2018

Selected Courses: PL Theory Operating Systems, Computer Graphics, Logic Model Theory Algebra

Racket School

Summer 2018
Course in the Racket programming language, the paradigm of language-oriented programming, compilers, macros, and DSLs.

NECSI

Complex Systems Winter School
Winter 2012

Courses in complex systems theory, modeling, networks, and data analytics.

Interests

Hyperbolic Geometry • Category Theory • Type Theory
• Intuitionist Logic • Human-PL Interaction • Moral Philosophy • DIY Hacks • Constructed Languages

Miscellaneous

I like to dance (blues and contra), go rock climbing, and bike everywhere. Sometimes I turn off my phone and get lost in the city.