

# Radon Rosborough

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 radon-rosborough

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 <https://intuitiveexplanations.com>

## EDUCATION

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- [Harvey Mudd College](#) Class of 2020, B.S. Computer Science (GPA: 3.996)
  - Coursework: Data Structures, Algorithms, Operating Systems, Compilers, Programming Languages, Computability, Complexity Theory, Software Verification, ML/Info Theory, Discrete Math, (Vector) Calculus, Linear Algebra, Quantum Computing
    - Acted as project lead for three students to [implement improved PMTUD in Linux kernel](#) and [submit Internet-Draft to IETF](#)
    - Acted as project lead for four students to develop [full-stack webapp hosting minimax/neural-network chess AI](#)
    - Implemented memory management, process spawn/fork, trap handling, IPC, FS server, ethernet driver for exokernel OS
  - Extracurriculars: Sophomore Retreat, Prison Education Project, Effective Altruism Club, Badminton Club, tutoring
    - Ran two-day annual team-building retreat for 50 students with two other student facilitators and staff
    - Individual tutoring with ten students; group tutoring and grading (six semesters, nine courses)

## WORK EXPERIENCE

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*Software Engineering Intern* • [Repl.it](#) • San Francisco, CA 05/19 – 08/19

- Designed, implemented, and released as open-source [UPM](#), a universal package management interface for four languages
- Helped [replace Repl.it's entire package management stack](#) with UPM-based solution and deploy to two million MAU
- [Wrote blog post](#) which directly generated engineering job applications for Repl.it

*Software Engineering Intern* • [Quantcast](#) • San Francisco, CA 05/17 – 08/17

- Created full-stack administrator dashboard webapp for viewing usage of internal ad campaign renewal application
  - App used heavily by on-call engineer and ~90% of team, achieving estimated 80% speedup for database maintenance
- Established improved best practices for Node.js and Terraform configuration now used in several other company projects

*Software Engineering Intern* • [ThinkTopic](#) • Boulder, CO 06/15 – 09/15 • 12/15 – 08/16 • 12/16 – 01/17

- Created Clojure libraries for [gradient descent visualization](#), collaborative filtering, and company-wide code quality audits
- Full-stack Clojure(Script)/Reagent/Datomic web development on pricing calculators for two clients

## PERSONAL PROJECTS *Emacs, workflow optimization, and open-source community-building on GitHub*

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- [straight.el](#): Next-generation, purely functional package manager for the Emacs hacker  
(~6,500 LOC, ~500 issues, ~100 pull requests, ~1,300 stars, ~5,000 unique clones/two weeks)
- [Hyperschedule](#): Full-stack webapp for course search and scheduling, focusing on fast schedule adjustment (~1,000 users)
- [Kalyn](#): Self-hosting compiler from custom-designed Haskell/Lisp dialect targeting x86-64 ELF, developed entirely from scratch
- [TerrariaClone](#): Clone of a popular PC game (~11,000 LOC, ~1,400 stars, #2 on front page of HackerNews for a day)
- [Calculus, Intuitive Explanations](#): 67 pages of  $\LaTeX$ , with 35 TikZ figures (adopted by three high school calculus teachers)
- [MazeGen](#): Java library used to design, prototype, and assemble 94-piece, 6x6x6 marble maze on laser cutter (~7,000 LOC)

## SKILLS

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- *Languages*: {advanced} in Emacs Lisp, Python, Go,  $\LaTeX$ ; {working knowledge} in Java, JavaScript (browser/Node.js), Zsh, Clojure, TypeScript; {previous experience} in C, Bash, Haskell, C++, ClojureScript, HTML, CSS, C#, Objective-C
- *Tooling*: {expert} in Emacs, Linux, macOS, Git, Docker; {working knowledge} in Heroku, Make, SSH, UNIX, Zsh, Vim, Vagrant, Netlify, Travis/Circle/Semaphore CI, Tmux; {previous experience} in GDB, SCons, Leiningen, AWS, Terraform
- *Concepts*: workflow optimization, system administration, package management, distributed version control, web development, API design, functional programming, object-oriented programming, machine learning, gradient descent, neural networks

## AWARDS

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- Solution to Putnam problem B3 [published in AMM](#), 2018 • Bloomberg Global CodeCon Finalist, 2017
- Harvey S. Mudd Merit Award, 2016–2020 • National Merit Scholarship, 2016–2020
- [HMC Robert James Prize](#), 2017 • Boulder High School “Honorary Math Department Faculty Member”, 2016