Eric Shen

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EDUCATION

Cornell University   Expected Graduation May 2029
B.A. in Math and Computer Science   *Ithaca, NY*
GPA: 3.7/4.0
Relevant Coursework: Functional Programming, Discrete Math, Data Structures & Algorithms, Linear Algebra

EXPERIENCE

Cornell Electric Vehicles   Sep 2025 – Present
Telemetry Subteam Member   *Ithaca, NY*
- Contributed to the development of autonomous, hyper-efficient electric vehicles on a 65+ member engineering team
- Owned the migration to a containerized ROS2 stack over Starlink via Tailscale, enabling off-vehicle monitoring at 200Hz
- Built and maintained a dashboard with React + FastAPI, visualizing 10+ sensor streams for live vehicle diagnostics

Cornell Data Strategy   Jan 2026 – Present
Technical Implementation Associate   *Ithaca, NY*
- Built a full-stack operations platform for an energy services contractor, replacing Excel workflows with a centralized pipeline
- Engineered a React Kanban dashboard backed by an async FastAPI + PostgreSQL API integrating external CRM data

Kagi Inc.   Aug 2024 – Jun 2025
Community Specialist   *Remote*
- Redesigned issue triage workflows, analyzing user-reported issues across 10k+ cases, identifying major product weaknesses
- Worked with leadership to refine product objectives for Orion Browser, adopting a new profile management system

Rutgers University   Jun 2024 – Sep 2024
Researcher under Dr. Desmond Lun   *New Brunswick, NJ*
- Modeled apicultural population dynamics using probabilistic simulations to predict colony growth and honey production
- Built an interactive data visualization tool using Python + Chart.js to visualize model sensitivity and colony forecasts

Raycast (YC W20)   Apr 2021 – Present
Community Developer   *Remote*
- Shipped 3 Raycast extensions in TypeScript + React (70k+ downloads); contributed to 12+ extensions (1.5M+ downloads)
- Architected a local file management abstraction adopted into Raycast core, improving extensibility and automation support

PROJECTS

C Compiler in OCaml — `mfl`
- Developed a C compiler, targeting LLVM IR, with a hand-written lexer, recursive descent parser, and typechecker

Monte Carlo Raytracer in OCaml — `ocaml-raytracer`
- Created a physically-based renderer from scratch with ray scattering, depth-of-field effect, and ray geometry intersection
- Implemented camera projection, a material system, motion blur, and BVH acceleration structures for efficient rendering

macOS Notes App — `knot`
- Designed a minimal SwiftUI-based interface with custom window management for keyboard-driven note taking
- Implemented autosave, markdown rendering, live preference updates, and a fully customizable appearance

macOS Hotkey Daemon — `smhkd`
- Developed a low-latency macOS hotkey daemon in C++23 with modules, using event tap APIs and a custom DSL

LEADERSHIP & ACTIVITIES

Magnificent Math Club   May 2020 – Present
Co-Founder & Teacher   *Remote*
- Founded and scaled a nonprofit to foster the love of mathematics, serving 400+ elementary and middle school students
- Taught free weekly classes of 25+ students on introductory geometry and algebra during the summer

New Jersey Beekeepers Association   Feb 2021 – Present
Beekeeper   *Basking Ridge, NJ*
- Supervised 3 beehives, housing over 50,000 bees, conducting regular hive inspections and honey extraction
- Conducted educational outreach events on bees and environmental protection at local elementary schools and libraries

AWARDS

5x AIME Qualifier, USACO Gold, AP Scholar with Distinction, Gold President's Volunteer Service Award

SKILLS

Languages: C/C++, Java, Python, Rust, HTML/CSS/JavaScript, TypeScript, OCaml, Swift, Bash
Frameworks & Libraries: React, Next.js, FastAPI, NumPy, Matplotlib
Developer Tools: Git, Linux, Docker, CI/CD, PostgreSQL