


Elliot Nash



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ECE student and software developer interested in systems, embedded work, and full-stack engineering

Education

 **Oregon State University**
HONORS BACHELORS OF SCIENCE IN COMPUTER AND ELECTRICAL ENGINEERING
MINOR IN MATHEMATICS
MINOR IN COMPUTER SCIENCE

Corvallis, Oregon
2024 - Present
Expected graduation 2027

- Courses: Computer Architecture and Assembly | Operating Systems | Data Structures | Electronic Circuit Design
- GPA: 4.0/4.0

Computer Architecture Operating Systems Mathematics

Professional Experience

 **Portland State University**
FULL-STACK DEVELOPMENT

Portland, Oregon
Summers 2022 - Present

- Developed and maintained “Trail Eyes,” an open-source hazard-tracking app for Forest Park (Portland)
- Implemented maintainable Flutter app architecture using Riverpod for state management and code generation (Freezed/json_serializable/build_runner) for consistent models
- Managed geospatial data using Postgres + PostGIS to support trail/location data and spatial queries for reporting workflows
- Designed a type-safe full-stack contract using oRPC with REST OpenAPI generation to keep client/server interfaces synchronized
- Developed an internal admin dashboard web-app (React + TanStack Start) to enable staff to review, triage, and manage submitted reports

Flutter ReactJS TypeScript PostgreSQL GIS Docker

Projects & Associations

BlueBubbles – iMessage Reverse Engineering
OPEN SOURCE CONTRIBUTOR

Remote
2021 - Present

- Reverse engineered Apple iMessage private APIs to expand BlueBubbles’ messaging capabilities
- Implemented multi-user support in the private API helper
- Built a custom Node.js parser for Apple’s TypedStream format and published it as a reusable library
- Decoded and parsed iMessage’s rich message formatting (styled text/attributes)

Open Source Reverse Engineering Objective-C TypeScript

PiOpener – Open Source Garage Door Opener
EMBEDDED SYSTEMS PROJECT

Remote
2025

- Built a network-connected garage door opener/controller for Chamberlain openers
- Designed an opto-isolated trigger circuit to safely trigger the opener via the Raspberry Pi’s GPIO pins
- Integrated existing Chamberlain limit switches enabling reliable open/closed detection
- Developed a Rust daemon with a state estimation and safety interlocks

Open Source Rust Embedded IoT

Duet – Userspace Linux Display Drivers for Asus Zenbook Duo
LINUX DRIVER PROJECT

Remote
2024-Present

- Developed a Linux daemon (duetd) and tooling to enable Zenbook Duo-specific hardware/UX features under tiling window managers
- Implemented dual-screen layout management to automatically apply/restore multi-display configurations
- Integrated sensor/orientation detection via iio-sensor-proxy and inotify

Open Source C Linux Drivers IPC

Skills

Languages Rust | C | Java | TypeScript | Dart | Python | SQL
Frameworks Flutter | ReactJS | Hono | Drizzle | GTK4
Tech Stack Linux | Docker | Git