Eamon Tracey

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ABOUT ME: Hard-working, motivated, and ambitious computer engineering student, seeking to apply my skills and find solutions to difficult problems as a full-time software engineer.

EDUCATION

University of Notre Dame Notre Dame, IN | Aug 2021 – May 2025
Major: B.S., Computer Engineering | Minor: Engineering Corporate Practice
GPA: 3.99 | Major GPA: 4.0 | 6x Dean's List (all semesters)
Coursework: *Operating Systems, Data Structures, Compilers, Cryptography, Artificial Intelligence, Linear Algebra*

London Global Gateway (Study Abroad) London, UK | Jun 2022 – Aug 2022

INTERNSHIPS

Reliable Robotics – *Software Engineer Intern* Mountain View, CA | May 2024 - Present
- Writing safety-critical C++ to build device drivers and new aircraft-to-ground telemetry pipeline to communicate air traffic from an autonomous Cessna airplane, improving detect-and-avoid capabilities
- Expanded simulation infrastructure to simulate ground-based air surveillance radar and gRPC server
- Supported flight analysis by creating Python tools to time-sync and quantitatively compare aircraft data

Red Hat – *Software Engineer Intern* New York, NY | May 2023 – Aug 2023
- Authored over 4,000 lines of high-quality, well-documented code, merged in 12 pull requests to 5 repositories upstream of Ansible Automation Hub, exceeding performance expectations
- Implemented Ansible role import process, including parsing and static code analysis, and connected to Django REST API so users can upload, share, and download roles at galaxy.ansible.com
- Wrote unit and integration tests scheduled in GitHub Actions and Jenkins CI pipelines
- Participated in a behavioral interview panel for three candidates for a senior software engineer position

Columbia University – *Computational Astrophysics Research Intern* New York, NY | Jun 2020 – Jul 2020
- Utilized NumPy, pandas, and scikit machine learning to classify gravitational waves with >90% accuracy

EXPERIENCE

Notre Dame Rocketry Team – *Apogee Control System Design Lead* Notre Dame, IN | Aug 2022 - Present
- Led the design, construction, and integration of an actively controlled rocket air brake system to reach a target altitude of 5200 feet, achieving 0.02% error and 1st place overall (of 49) in university competition
- Wrote software- and hardware-in-the-loop simulations and fail-safe flight software including device drivers, state detection, Kalman filtration, and PID control algorithm to actuate drag flaps

Personal Projects – *Open-source Developer*
- iPatch: macOS GUI tool to inject dynamic libraries into iOS executables (C, Swift) (200+ GitHub stars)
- B-Minor: Compiler for a C-like programming language that generates x86 assembly instructions (C)
- Cubik: Software library (Swift) and CLI application (C) to model and solve the 3x3 Rubik's cube
- ifunnyapi: API wrapper around reverse-engineered social media API, published to PyPI (Python)
- Jailbreak tweaks: Published over one dozen iOS jailbreak tweaks, accruing over 40,000 user downloads
- All my projects are open-source and available on GitHub: github.com/eamontracey

Languages / Tools: Python, C, C++, Swift, bash, git, Docker, Ansible, Linux (proficient). Java, Go, Rust (familiar).

OTHER EMPLOYMENT

University of Notre Dame – *Teaching Assistant* Notre Dame, IN | Aug 2023 – Present
- Help students grasp Systems Programming, Operating Systems, and Discrete Mathematics concepts

Zaland Pizza Parlor – *Manager* Notre Dame, IN | Sep 2022 – Sep 2023
- Managed 20 pizza chefs, keeping campus restaurant operating 4 hours per night, 7 nights per week