Dalton Luce

Boston, MA LinkedIn GitHub daltonluce.com

Education

Cornell University — Ithaca, NY

Bachelor of Science in Electrical and Computer Engineering, Minor in CS — *Expected Spring 2026*

- 4.028 GPA, Dean's List all semesters
- **Honors:** Tau Beta Pi Engineering Honor Society, IEEE-HKN Honor Society, James E. Rice Jr. First Year Writing Seminar Award Nominee
- **Leadership:** Autobike Project Team Software Lead, Academic Team Lead for IEEE at Cornell Executive Board, Cornell Outdoor Eduction Student Athletic Instructor, Cornell Club Swim Vice President
- **Relevant coursework:** Embedded Systems, Functional Programming, OOP and Data Structures, Digital Logic and Computer Organization, Computer Architecture, Computer Networks, Signals and Systems, Data Science, Differential Equations, Linear Algebra

Experience

Raytheon — Woburn & Marlborough, MA

Software Engineer, Intern — *Jun–Aug 2024*

- Developed Perl tooling with Git and Docker to drive DevSecOps pipeline migration to GitLab, Jira, supporting over 1,000 developers
- Built NTP (Network Time Protocol) monitoring script to detect timing discrepancies across 300+ Linux systems
- Jira admin: Groovy scripting with ScriptRunner and Jira API to implement custom validations and checks across key workflow stages
- Validated C++ code pull requests for naval radar product branch by investigating automated test suite failures and radar simulations
- Utilized Grafana to analyze server downtime and resource allocation trends to inform data-driven improvements in the DevOps pipeline
- Jenkins admin: updated and debugged CI/CD pipelines for infrastructure stability, code validation, deployments, and resource scaling

Software Engineer, Intern — *Jun–Aug 2023*

- Enhanced system diagnostics of X-Band Radar software (1M+ lines of code) by resolving low-level messaging and queuing issues
- Gained proficiency in Ada, ClearCase version control, and Jenkins to correct radar functionality, validate using radar simulations
- Assisted in redeveloping a tool to simulate external messages and test radar capabilities
- Collaborated across teams of system engineers, validation teams, and software developers to align functionality with system requirements
- Participated in code reviews, sprint planning, and backlog refinement

Cornell Autonomous Bicycle Project Team — Ithaca, NY

Software Lead — *May 2024–Present*

- Define technical goals, project architecture, and allocate tasks for team of eight
- Collaborate with cross-functional teams, including hardware and mechanical subteams, to define data formats and integrate software
- Define team Docker and ROS infrastructure, streamlining development and integration with kinematic, optical, and LiDAR sensors
- Automate CI/CD pipelines to test, format, and execute code using GitHub Actions

Navigation Developer — *Oct 2022–May 2024*

- Contributed to repository with 25K+ lines of source code
- Implemented optical flow and computer vision techniques to predict vehicle and pedestrian motion using OpenCV
- Developed bicycle dynamics algorithims using NumPy to significantly reduce path finding search space
- Collaborated with team of 10 to create Q-Learning collision avoidance algorithm

Software Projects

Personal Website and Blog

- Built personal website and coding blog using Svelte, Node.js, TypeScript, OpenGL Shading Language
- Designed and implemented a dynamic, visually engaging gradient background by implementing radial basis functions with WebGL shaders
- Utilized differential equations of physical systems to implement reactive scrolling and mouse animations for icons and visual elements
- Developed an automated system to convert markdown files into fully formatted blog pages, streamlining content creation and ensuring consistency in presentation

Astroterm

- Developed a command line application to display real-time planetary and stellar positions
- Achieved 600+ stars and multiple contributors on GitHub; featured on multiple online articles and blogs
- Designed and implemented C code to parse and display the Yale Bright Star Catalog, enabling real-time celestial data visualization
- Created robust GitHub Actions workflow to automate code formatting, linting, coverage analysis, and release packaging, streamlining development and deployment processes
- Packaged and distributed for major Linux distributions and package repositories, including Fedora, Nix, and Homebrew, enabling seamless installation across multiple platforms

Technical Skills

- **Languages**: Python, C, C++, Java, Verliog, Groovy, OCaml, Ada, JavaScript/TypeScript/HTML/CSS, Bash
- **Tech Stacks**: Node.js, ROS, Svelte
- **Developer Tools**: Git, Docker, Jenkins, Grafana, ClearCase, GitHub Actions, GitLab CI/CD