

# DALTON LUCE

Boston, MA

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## EDUCATION

### Cornell University

*Bachelor of Science in Electrical and Computer Engineering, Minor in CS*

Ithaca, NY

*Expected Winter 2026*

- 4.048 GPA, Dean's List all semesters
  - **Honors:** Tau Beta Pi Engineering Honor Society, IEEE-HKN Honor Society
  - **Leadership:** Autobike Project Team Software Lead, Academic Team Lead for IEEE at Cornell Executive Board, Cornell Outdoor Education 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
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## EXPERIENCE

### Amazon Web Services

Santa Monica, CA

#### Software Development Engineer, Intern

*May–Aug 2025*

- Worked on the Managed Streaming for Apache Kafka (MSK) team, building internal tools that leveraged AWS services such as Lambda, DynamoDB, and IAM
- Designed and implemented an internal Java testing framework to automate key API test cases, saving 16+ developer hours per week and enabling CI/CD by unblocking the deployment pipeline
- Created a frontend tool for inspecting locally executed AWS Step Functions using Svelte, Tailwind, and Vite
- Gained experience with industry-standard tools such as LocalStack, Terraform, CloudFormation, and Insomnia

### 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 algorithms using NumPy to significantly reduce path finding search space
  - Collaborated with team of 10 to create Q-Learning collision avoidance algorithm
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## SOFTWARE PROJECTS

### Astroterm

- Developed a command line application to display real-time planetary and stellar positions
  - Achieved 1.4K+ 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
  - Packaged and distributed for major Linux distributions and package repositories, including Fedora, Nix, and Homebrew, enabling seamless installation across multiple platforms
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## TECHNICAL SKILLS

- **Languages:** Python, C, C++, Java, Verilog, Groovy, OCaml, Ada, JavaScript/TypeScript/HTML/CSS, Bash
- **Tech Stacks:** Node.js, ROS, Svelte, AWS (Lambda, DynamoDB, S3, CloudWatch, IAM, Step Functions, MSK)
- **Developer Tools:** Git, Docker, Jenkins, Grafana, ClearCase, GitHub Actions, GitLab CI/CD