

Eli Slothower

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Education

Carnegie Mellon University, Bachelor of Science in Computer Science, Minor in Software Engineering

May 2025

Relevant Coursework: Python, Data Structures/Algorithms, Parallel Algorithms, Discrete Mathematics, Distributed Systems, NLP, etc.

Skills

C, Python, Object-Oriented Programming, Functional Programming, Parallel & Concurrent Programming, JavaScript, Vue.js, CI/CD, Agile/Scrum, Git, GitHub, SML, Embedded Systems, AWS, Go, HTML, CSS, Problem Solving, Teamwork, Written and Verbal Communication, Creativity, Time Management

Work Experience

Lockheed Martin Space, Embedded Software Engineer

May 2024 – Aug. 2024

- Solo-developed a classified testing suite in C for the United States Sentinel program, integrating over 10 different embedded systems. This streamlined the upgrade process of a 50+ year-old national security system designed to protect all 50 U.S. states and allied nations from potential global threats
- Mastered complex system interoperations under strict national security regulations, ensuring compliance, safeguarding sensitive nuclear defense projects, and achieving 100% compliance with national security regulations for the project's codebase

Carnegie Mellon University, Teaching Assistant for Dangerous Ideas in Science and Society

Aug. 2023 – Dec. 2023

- Taught students how to articulate personal beliefs effectively and create strong arguments, increasing LSAT scores by 71%. Engaging students in critical discussion about difficult societal topics

MIDL Technology, Full Stack Software Engineer

Jun. 2023 – Aug. 2023

- Engineered a security alert system with ReactFlow and Next.js, enabling 100,000+ event chains that trigger security responses
- Built a secure check-in application for visitor-kiosks, enhancing 1,000+ kiosks used by universities, companies, and other users
- Created new features for the admin dashboard, like enhanced audit logs, object-filtration charts, and more for 100's of admins

Playspaces, Full Stack Software Engineer

Jun. 2022 – Jun. 2023

- Aided in reengineering codebase in C#/Unity and backend in Python, helping earn \$1,250,000 from the IES SBIR grant
 - Solo-engineered app prototype for funding using Vue.JS, helping to secure 12 executive board members
 - Created native iOS/Android wrapper of web application, increasing load times by ~200%
 - Designed/built company website used to promote products, helping acquire numerous government grants
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Projects *(more on elislothower.com)*

- **Malloc (C):** Implemented a custom memory allocator by implementing explicit free lists, segmented free lists, better-fit algorithms, mini-blocks, and more, resulting in a mean utilization of 83.4% and throughput of 7295
 - **EcoSim (Python):** Developed a complex ecosystem simulator capable of randomized terrain generation, species, and mutation, along with metrics, graphs, and more to track the ecosystem's progress
 - **Audentify, a Hackathon project (Python, APIs):** Created a song recognition game that detects songs from the lyrics sang
 - **Power Method, QR Method, Deflation (Julia, LaTeX):** A mathematical research paper on advanced Linear Algebra / Matrices
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Extracurriculars

- **Students Using Data for Social Good:** Generating awareness and creating practical solutions for social justice issues by collaborating with non-profits and government organizations on data-driven projects
- **Habitat for Humanity:** Trip Coordinator, Executive Board Member. Not just building houses, but homes, for those in need
- **Summer Study Abroad in Spain:** Student. One month in Madrid, Spain studying Spanish and learning about the culture
- **Tartan Scholars:** Invited Member. An invite-only organization meant to meet the needs of high-achieving leaders who come from limited-resource and underrepresented backgrounds
- **Piano Class:** Student. Continuing my 11-year journey in the arts by learning how to play piano