

# Jonathan Oh

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## EDUCATION

### Carnegie Mellon University

Bachelor of Science in Computer Science and Information Systems

Pittsburgh, PA

August 2023 – May 2027

- **GPA:** 3.86/4.00
- **Relevant Coursework:** Foundations of Software Engineering, Computer Systems, Imperative Programming in C, Data Structures and Algorithms, Database Design and Development, Functional Programming, Linear Algebra
- **Leadership:** Campus Lead for Cursor (AI Code Editor), Lead of Backend Technologies for ScottyLabs

## EXPERIENCE

### Wells Fargo

Software Engineer Intern

New York, NY

June 2025 – August 2025

- Rebuilt a legacy system into a Django application integrated with Cisco Identity Services Engine, securing network access for 42,000+ devices and reducing data overhead from 3,000 GB to 1 GB, significantly lowering data costs
- Architected a scalable REST API endpoint in Python, handling over 2,000 queries per day and enabling internal network services to fetch comprehensive device metadata for a given MAC address
- Automated generation of API documentation using Sphinx and Google-style docstrings, covering over 450 APIs, reducing onboarding time for new developers, and ensuring consistent, up-to-date references
- Engineered a Python automation tool using Selenium and BeautifulSoup to scrape and mass-update over 400 Confluence pages across multiple teams, saving over 25 hours in time editing documentation

### Carnegie Mellon University School of Computer Science

Teaching Assistant, 17-313 Foundations of Software Engineering

Pittsburgh, PA

May 2025 – Present

- Led and mentored over 100 students across 5 projects on Docker deployments, GitHub Actions, CI/CD pipelines, and SonarQube static analysis, teaching students to reinforce industry-grade software engineering practices
- Ran weekly recitations for 20 students, hosted biweekly office hours, and graded pull requests and deployments

### Johnson and Johnson MedTech

Software Engineer Intern

Cincinnati, OH

June 2023 – August 2023

- Developed 12 kinematic motion scripts in Python for a surgical robotic arm, enabling precise surgical movements
- Engineered data type validation logic for a surgical instrument visualization dashboard, eliminating type errors
- Refactored existing datatype conversion algorithms using Pandas, reducing runtime from 15.42s to 3.12s
- Received the Inspire Award for outstanding teamwork and contributions to the Surgical Robotics team

### The Ohio State University College of Engineering

Teaching Assistant, CSE 2123 Data Structures and Algorithms

Columbus, OH

August 2022 – May 2023

- Instructed 240 students in algorithm analysis & data structures such as hashing, binary trees, and linked lists
- Led weekly labs, held biweekly office hours, and graded programming projects with detailed and thorough feedback

## PROJECTS

### FreeCodeCamp.org | *Open-Source Contributor*

April 2025 – Present

- Authored & merged 4 high-impact PRs, improving lessons by introducing context-based strictness, implementing regex validations, and enforcing immutability, boosting platform reliability for over 355,000 monthly learners
- Refined learner documentation by rewriting instructions, strengthening comprehension across the curriculum

### PoleSwapper | *React.js, JavaScript, Django, PostgreSQL, AWS S3, Clerk*

March 2025

- Launched the first online marketplace for pole vaulters, enabling 100+ equipment trades within the first month
- Integrated Supabase powered by PostgreSQL and AWS S3 for efficient listing and image storage
- Implemented Django unit tests for RESTful APIs connected to a GitHub Action CI/CD Pipeline

### SteerSafe | *Swift, Apple CoreMotion and CoreLocation, Firebase, TomTom*

October 2024

- Built an iOS app with Swift featuring gamified habit-building, promoting distraction-free driving
- Utilized CoreLocation and TomTom APIs for live speed tracking and alerts with 95.8% accuracy
- Leveraged Firebase for user authentication and real-time data storage for driving statistics and rewards

## TECHNICAL SKILLS

**Languages:** Python, C, C++, Java, SQL, TypeScript, JavaScript, Rust, SML, R, Swift, HTML, CSS

**Libraries/Frameworks:** AWS, React.js, Node.js, Next.js, Express.js, Django, MongoDB, Tailwind CSS

**Other Skills:** Data Analytics, Software Development Life Cycle, Agile, Scrum, JIRA, Microsoft Office, Git/GitHub