

# Nicholas J. Fettig

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## EDUCATION

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### Swarthmore College | Swarthmore, PA

**B.S. in Engineering and B.A. in Computer Science** | GPA: 3.91/4.0

May 2026

**Relevant Coursework:** Data Structures & Algorithms, Computer Systems, Compilers, Computer Vision, Mobile Robotics, Stochastic & Numerical Methods, Partial Differential Equations, Probability, Real Analysis

## TECHNICAL SKILLS

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**Languages:** Advanced in NodeJS, Typescript, Python, MatLab, HTML/CSS, C, C++; Proficient in OCaml, SQL, Java, Golang

**Technologies / Environments:** Lit.js, React.js, Next.js, Prisma, Docker, Kubernetes, AWS, Git/Github, Linux Admin., LaTeX

## WORK EXPERIENCE

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### Reliable Robotics | Mountain View, CA

May - August 2025

*Software Engineering Intern*

- Designed, developed, and tested mission-critical display systems for remote operation of automated aircraft
- Lead development of "Big Board," a large display in the Mission Control Center used by remote airplane pilots
- Integrated tracking for 8 Reliable Robotics aircraft using ADSB data, developed in Lit.js and deployed with AWS EC2

### Carnegie Mellon University | Pittsburgh, PA (Hybrid)

May 2024 - Present

*Computer Science Undergraduate Researcher*

- Research deployment challenges for Reinforcement Learning-based Traffic Signal Control (TSC)
- Organized 200+ works in the RL-based TSC field and sorted into a novel challenge classification taxonomy

### Swarthmore College | Swarthmore, PA

August 2023 - Present

*Teaching Assistant*

- Run weekly study sessions for Intermediate Python and C courses for CS & Engineering Departments
- 100% satisfaction rate from advisor for CS courses and Lead TA for Intro. to Computer Engineering

### Graphicient (startup) | North Bethesda, MD

May - August 2023

*Software Engineering Intern*

- Refactored the ComplyVue dashboard to track CCRI network-security compliance for Graphicient's largest client, Three Wire Systems, introducing notion of a "Cyber Score" and increasing cybersecurity-assessment accuracy by 25%
- Integrated 4 DoD-secured cybersecurity services, such as Tenable, assigning fidelity scores to large amounts of data
- Developed NextJS web-app running ExpressJS microservices with secure endpoints, all scaled using Kubernetes

## PROJECTS & COMMUNITY LEADERSHIP

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### Swarthmore College Computer Society | Typescript, NextJS, Docker, Linux Admin.

January 2022 - Present

*Vice President*

- Currently leading development of Mailing Lists project, migrating from GNU Mailman's boilerplate frontend, Postorius, to our own customizable interface
- Lead the development of Cygnet, Swarthmore's student directory service, offering increased customizability to users
- Maintenance of club-owned servers running Proxmox, various Linux VMs, dockerized club-made services

### Montgomery County Covid-19 Vaccination Website (MoCoVax) | HTML/CSS, NodeJS

April 2021

- Developed and deployed a website with 120,000+ visits to monitor available vaccine appointments