# Toan Pham

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EDUCATION\_

### **Arizona State University**

Aug 2022 - Present

Bachelor's in Computer Science (Dean's List)

**Coursework**: Data Structures and Algorithms, Object-Oriented Programming, Software Engineering, Operating Systems, Computer Architecture, Theoretical Computer Science, Discrete Math, Linear Algebra.

WORK EXPERIENCE

### **Teaching Assistant (Volunteer)** | Arizona State University

Jan 2025 - Present

- Mentored 500+ students in advanced cybersecurity concepts, driving a 30% improvement in assessment scores through targeted instruction on cryptography and reverse engineering.
- Developed Python-based CTF challenge scripts that enhanced students' understanding of low-level system vulnerabilities, boosting practical exploitation skills and completion rates.
- Contributed key challenges to reverse engineering and cryptography modules in the security dojo, increasing student engagement with complex security topics by 25%.

# Community Assistant | Arizona State University

Aug 2023 - Present

- Served as a student leader providing personalized support to over 100 residents daily, fostering community engagement and ensuring exceptional living experiences.
- Developed and implemented a comprehensive weekly performance report web application using React and Firebase, automating data collection for staff-resident interactions and incident tracking, reducing administrative workload by 45%.

# **Technical Fellow (Volunteer)** | CodePath (remote)

Sep 2024 - Dec 2024

- Facilitated technical workshops for 50+ students, teaching web development and modern JS frameworks, driving 40% higher project completion rates.
- Designed and delivered supplemental learning materials that addressed knowledge gaps in React.js and API integration, improving student confidence in technical interviews by 35%.

PROJECTS\_

#### Adaptive Help System (Team Lead) | Help System Repository

- Led 5 developers building a secure role-based help system using Java and MySQL, implementing Jira that optimized productivity by 35% and delivered ahead of schedule.
- Architected a secure authentication system with Jenkins CI/CD pipeline that achieved 99.8% uptime, improved user experience by 27%, and reduced build times by 40% while maintaining consistent code quality.

# Pwn.College Cybersecurity Dojo | Dojo Repository

- Engineered components for cybersecurity training platform using Python, Flask, and Docker, creating progressive CTF challenges accessed by 1000+ students.
- Redesigned user interface with Figma and implemented UI improvements that increased student satisfaction by 35%, while optimizing backend code to reduce challenge load times by 42%

#### **Clash Commander Bot**

- Developed a Discord bot using JavaScript and Node.js that tracks Clash of Clans statistics and streams music, serving 300+ users across 10+ servers.
- Implemented efficient caching strategies and optimized audio streaming, reducing API calls by 65% and buffer times by 30% while handling 1,000+ weekly queries.

TECHNICAL SKILLS

Programming Languages: Python, Java, JavaScript, TypeScript, C/C++, SQL (MySQL), HTML/CSS Frameworks and Tools: React, Next.js, Node.js, Express, Socket.io, Tailwind CSS, Discord.js, Prisma Developer Tools & DevOps: Git, GitHub, Docker, Jenkins, AWS, Firebase, GCP, Vite, VS Code, JetBrains IDEs