ANNA WU

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EDUCATION

Stanford University, Stanford, CA *2024–2028 (expected)*
B.S. Computer Science, minor in Mathematics; GPA 4.03
Relevant coursework: Machine Learning, Design and Analysis of Algorithms, Applied Matrix Theory, Linear Algebra, Multivariable Calculus and Modern Applications, Mathematical Foundations of Computing, Introduction to Probability for Computer Scientists, Computer Organization and Systems, Programming Abstractions, Number Theory for Cryptography

Troy High School, Fullerton, CA *2020–2024*
GPA: 4.91, *valedictorian*
Troy Tech STEM magnet program, computer science pathway diploma; *Troy Tech Pathway Outstanding Achievement awardee*
International Baccalaureate (IB) diploma; *IB Student of the Year*

SKILLS

Languages: Python, Java, C++, C, JavaScript, HTML, CSS, SQL, Batch, Powershell

- Design of robust and secure software architectures and algorithms
- Data analysis using pandas, NumPy, SciPy, scikit-learn
- Data visualization using Tableau, matplotlib, pyvis
- Network analysis using ORA and NetMapper
- Web development (React, Three.js and p5.js)
- Web scraping with Selenium
- Network security using Cisco, Palo Alto Networks and iptables/netfilter configured routers, switches and firewalls
- Vulnerability assessment and hardening of Windows systems
- Active Directory management, LDAP, GPMC security objects, and administration of various servers (SQL, FTP, SMB, DNS, HTTP/HTTPS, SMTP, SSH, DHCP etc.)
- Security benchmark compliance (e.g. CIS, STIGs)
- Network traffic analysis using Wireshark
- Penetration testing
- Version control using GitHub/GitLab

EXPERIENCE

NASA Goddard Space Flight Center *Software Engineer Intern* *2025*
- Built, integrated and networked robust real-time spacecraft telemetry and control (T&C) systems.
- Helped develop the telemetry output application in the core Flight System (cFS) on the CAPSTONE mission.
- Developed Lua parser for configurations for the Integrated Test and Operations System (ITOS) and OpenC3 COSMOS plugin.

Stanford Institute for Human-Centered Artificial Intelligence *Research Assistant* *2025–*
- Evaluating AI agents' ability to autonomously identify and exploit vulnerabilities in production environments and baselining against human offensive security experts to determine marginal risk.

Stanford Applied Cybersecurity *2024–*
Network Security Lead, National Collegiate Cyber Defense Competition (CCDC)
- Designing and deploying secure networking infrastructure to maintain integrity of simulated corporate networks during Red vs. Blue exercises.
- Monitoring live network traffic, responding to security incidents and mitigating risks.

Competitor, Global Collegiate Penetration Testing Competition (CPTC)
- Discovering and exploiting misconfigurations and software vulnerabilities in simulated corporate devices and networks.
- Writing penetration testing reports recommending remediations for identified vulnerabilities.

Ridgeline International *Security Engineer Intern* *2025–*
- Using Kusto Query Language (KQL) and related query languages to analyze SIEM alerts and telemetry data.
- Using Splunk, CrowdStrike Falcon, Orca and New Relic for threat detection and performance monitoring.

Stanford Women in Computer Science *Marketing Lead* *2025–*
- Sole developer and maintainer of club website. Used Three.js to create rendering pipeline for real-time 3D scene animation.
- Designing merchandise and creating original graphics for social media campaigns to strengthen club identity and engagement.

Carnegie Mellon University School of Computer Science *Research Intern* *2023–2024*
- Conducted network analysis of propagation of news on social media using scraped data related to the 2022 US midterm election.
- Presented research results at CMU IDeaS conference and published in the journal *Social Media and Society*.

CyberPatriot *Competitor, Team Captain* *2018–2024*
- Performed user, port, program, and service security auditing to correct scored vulnerabilities and remove malware and backdoors on Windows endpoints. Used Batch/Powershell scripts to automate hardening, intrusion detection and response.
- Managed domain of interdependent Windows and Linux servers and workstations during simulated live security breach.

Troy Cyber Defense *Instructor, Lead Instructor* *2021–2024*
- Developed cybersecurity curricula using virtual machines on VMware and VirtualBox and automated scoring systems.
- Taught advanced Windows operating system security classes to students at the largest US youth cybersecurity outreach program.

AWARDS

- CyberPatriot XIII (2021) and XV (2023) National Champion
- CyberPatriot All-American (4-year national finalist)
- TreeHacks ‘25 Context/Venture Viability Track Prize Winner
- U.S. Presidential Scholar Semifinalist
- CPTC Western Regional 1st Place (2025)
- DEFCON 33 ICS Village CTF 1st Place (2025)
- National Cyber League High School Division 1st Place (2021)