

TAI-YU CHEN

Los Angeles, CA | taiyuchen33@gmail.com | linkedin.com/in/taiyu-c | utahorange.github.io

EDUCATION

UNIVERSITY OF CALIFORNIA, LOS ANGELES

B.S. Computer Science

Los Angeles, CA

Expected June 2028

Student Organizations: *IEEE, Bruin AI, Association of Computing Machinery Cyber*

Relevant Courses: *Data Structures and Algorithms, Linear Algebra, Discrete Mathematics, Statistics*

CERTIFICATIONS

CompTIA Security Plus

Jun 2023

Cisco Certified Network Associate

Aug 2023

PROJECTS

Windows Lockdown | PowerShell, Batch

March 2023 - June 2024

- Led a team in designing and developing a PowerShell script to automate Windows security configurations, achieving over 90 percent system compliance in competitions. Utilized Git for version control, facilitating collaboration, version tracking, and code quality assurance. Followed recommendations from the DoD's Security Technical Implementation Guides (STIGs).

RESEARCH

RESEARCHER

Virtual

University of Pennsylvania

April 2023 - Dec 2024

- Collaborated with a UPenn postdoc to develop a machine learning model with XGBoost, classifying malicious network traffic with 91% accuracy using the Colorado University Pentesting Dataset. Lead author on paper for arXiv publication.

EXPERIENCE

SATELLITE COMMUNICATION CRYPTOSYSTEM DESIGNER AND DEVELOPER

Los Angeles, CA

MITRE Embedded Capture the Flag

Dec 2024 - Present

- Designing and implementing a cryptographically secure multicast communication system for an embedded environment, simulating satellite-to-decoder data transmission.
- Writing low-level C code to enforce authentication, encryption, and secure key exchange mechanisms in resource-constrained systems to protect against common software and side channel attacks.

NATIONAL CHAMPION TEAM CAPTAIN, NETWORKING AND WINDOWS LEAD

Bethesda, MD

Air Force Association CyberPatriot Competition

Aug 2020 - June 2024

- Placed 1st nationally out of 5000+ teams and 2nd in the Cisco Networking Challenge in a premier cybersecurity competition.
- Led team in securing enterprise networks by implementing protocols (DHCP, NAT, OSPF) and configuring site-to-site VPNs to meet client requirements and DoD STIGs, while maintaining Windows service uptime during active red team engagement.

LEAD CURRICULUM DEVELOPER AND INSTRUCTOR

Fullerton, CA

Troy High School Cyber Defense

Aug 2021 - June 2024

- Developed and taught curriculum (slideshows, Packet Tracer labs, assessments) for Computer Networking classes on topics like DHCP, NAT, and OSPF, serving 300+ students in the nation's largest cybersecurity program.
- Led instructors, delegating weekly and long-term tasks to ensure smooth operations.
- Authored SOP for organization-wide procedures, ensuring consistency for future instructors.

LINUX AND WINDOWS SYSTEM ADMINISTRATOR

Pomona, CA

Cal Poly Pomona SWIFT (Students with an Interest in the Future of Technology) Red vs Blue

Aug 2020 - June 2023

- Placed 1st in active simulated engagement, competing against nationally ranked collegiate teams.
- Mitigated vulnerabilities on Windows Server, CentOS, and Ubuntu using tools like Nmap and Iptables, while maintaining service uptime (MySQL, SSH, SMB, AD/DC, DNS, Apache2) against an active red team.
- Addressed real-time business tasks and communicated professionally with company leadership in a simulated business network.

SKILLS

Programming Languages: *Python, C/C++, Java, Powershell, Bash, Cisco IOS, LaTeX*

Tools/Frameworks: *Git, Vim, VS Code, Linux*