

Keith Daniel Tan

Las Vegas, NV

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HIRING AUTHORITY: SFS Hiring Authority - Public Law 113-274 Section 302

Security+-certified U.S. Citizen and NSF CyberCorps SFS Scholar with dual focus in cybersecurity and applied AI/ML. Hands-on experience in threat modeling, system hardening, and neural network development for scientific imaging. Co-author on an IEEE-submitted paper on deep learning for tomographic reconstruction.

EDUCATION

University of Nevada, Las Vegas

Graduation Date: Spring 2026

Bachelor of Science in Computer Science, Information Assurance Concentration

GPA: 3.736

PUBLICATIONS

Breckling, S., Swan, M., **Tan, K.D.**, Wingard, D., Baldonado, B., Kim, Y., Jo, J., Scott, E., & Pillow, J. "Single-View Tomographic Reconstruction Using Learned Primal Dual"

Submitted to IEEE Transactions on Computational Imaging, 2026. **arXiv:** <https://arxiv.org/abs/2512.16065>

TECHNICAL SKILLS

Certifications: CompTIA Security+

Cybersecurity/IT Tools: Splunk, Qualys, Wazuh, TheHive, Wireshark, Nmap, Velociraptor, Arkime, Ghidra

ML/AI: PyTorch, TensorFlow/Keras, scikit-learn, NumPy, CNNs, Adam optimizer, MSE/SSIM/PSNR evaluation

Networking: TCP/IP, DNS, VPNs, firewalls, IDS/IPS, VLANs

Systems: Windows, Linux (Ubuntu, Kali, Debian, ParrotOS, RHEL), macOS

Infrastructure/Automation: Docker, Proxmox, VirtualBox, n8n, Metasploit, Hashcat

Languages/Frameworks: C++, Java, Python, JavaScript, PHP, HTML, CSS, C#, Rust | React, Next.js

WORK EXPERIENCE

Mission Support and Test Services, LLC, Associate in Engineering (P/T)

May 2025 - Present

Management and operating contractor for the Nevada National Security Site (NNSS) under NNSA. Started as MSIPP intern summer 2025; converted to Associate in Engineering.

- Configured scientific Python environments and deep learning dependencies (PyTorch, NumPy) on HPC GPU clusters, enabling reproducible large-scale neural network training.
- Refactored legacy neural network code for the learned primal-dual framework, adapting data pipelines and model interfaces for local GPU training.
- Built an evaluation pipeline comparing the trained neural network against classical solvers (Gridrec, Tikhonov, TV-min), demonstrating 87% lower reconstruction error (NMSE) and 0.995 SSIM in synthetic benchmarks.
- Documented all experimental workflows, outputs, and configurations into a repeatable pipeline, ensuring long-term project continuity beyond the internship.

UNLV Cyber Clinic, Cybersecurity Intern

Aug 2024 - May 2025

- Joined the Cyber Clinic as an SFS scholar; rebuilt a stalled internal web platform in one week, delivering a member database and working hour logging system for operational evaluation.
- Conducted vulnerability assessments and security audits for Nevada small businesses, delivering risk reports with remediation priorities and educating stakeholders on attack surfaces and defense-in-depth strategies.
- Presented to 300+ attendees on campus cybersecurity organization building and inter-university collaboration as part of NSF SFS outreach.
- Led Security+ prep sessions with practice assessments to improve certification readiness.

NexOasis, Team Lead & Full Stack Developer Intern

Jan 2024 - Aug 2024

- Built full-stack features for TrustedWill (webcam integration, role-based identity management, access control, session validation); promoted to team lead of 5 interns to coordinate milestone delivery.
- Architected a Proxmox virtualization environment with network isolation and developed a PHP API to automate secure VM provisioning and teardown, laying groundwork for a cryptographic backend.

University of Nevada-Las Vegas, Teaching Assistant

Jan 2024 - Aug 2024

- Mentored 120 students on programming assignments and debugging, improving class pass rates by 25% through targeted feedback.
- Held office hours and review sessions on data structures, algorithms, and debugging strategies, reducing recurring submission errors across sections.

University of Nevada-Las Vegas, Undergraduate Researcher

May 2024 - Aug 2024

- Developed a high-fidelity Unreal Engine 5 simulation environment for autonomous drone navigation and AI-based control research.
- Evaluated PC-controllable drone hardware models and recommended selections based on simulation fidelity requirements, directly informing the team's procurement decisions.
- Integrated physics-based environmental constraints and sensor feedback loops to validate autonomous flight behavior and improve AI control model accuracy.

PROJECTS

Proxmox Cyber Lab - 2025

Segmented virtualization lab for defensive security operations, threat modeling, and continuous monitoring exercises.

- Operated a segmented Proxmox VE lab with isolation and firewall controls for threat modeling.
- Managed multi-tenant Proxmox infrastructure, deploying and validating tools (Wireshark, Fail2Ban, Wireguard, Nginx, n8n) and hosting secure game servers with authentication, isolation, and abuse detection.
- Deployed Windows and Linux VMs in Proxmox for identity management, firewall testing, and monitoring exercises.

AI-enabled Discord Bot - 2025

AI-powered automation platform with secure service integration and real-time telemetry for operational oversight.

- Deployed and maintained a 24/7 AI-integrated bot in a hardened Proxmox container, orchestrating OpenAI API and a locally hosted LLM with strict credential isolation and usage controls.
- Automated server and user onboarding with real-time state synchronization, tracked command usage, and detected re-entry abuse to preserve integrity.
- Implemented rate limiting and anomaly detection to enforce access control and support auditability.

CTF & CYBERSECURITY COMPETITIONS

- [NCAE Cyber Games 2025](#) — 3rd Place, Most Improved Teammate
- [Tracer Fire 12 \(2024\)](#) — Competitor in hands-on cyber defense exercises

HONORS & SCHOLARSHIPS

- [CyberCorps®: Scholarship for Service](#), National Science Foundation
- Dean's Honor List: Spring 2020, Spring 2024, Fall 2024, Spring 2025, Fall 2025
- Rebel Scholarship, University of Nevada, Las Vegas
- Millennium Scholarship, Nevada State Treasurer's Office