Ethan Cao

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EDUCATION & CERTIFICATIONS

University of California - Santa Cruz, *B.S. Computer Science*   **Expected Graduation June 2027**

GPA: 3.93/4.0 GPA, Dean's Honors List

Relevant Courses: Data Structures and Algorithms, Algorithmic Foundations of Cryptography, Analysis of Algorithms, Computer Architecture, Computer Systems and C Programming, Computer Systems and Assembly Language, Programming Abstractions: Python, Discrete Mathematics, Python Programming, C++ Programming

CompTIA Network+, Security+

PROFESIONAL EXPERIENCE

Farm-ng (Bonsai Robotics)   **June 2025 – August 2025**

Software Engineer Intern   *San Jose, California*

- Designed and deployed a secure user management system, integrated into over 150 production robots
- Implemented multi-factor authentication using OAuth2, passwords, and hardware-bound cryptographic keys
- Developed encrypted gRPC/Protobuf protocols to secure robot–Fleet Manager communications
- Built a full-stack interface (React/TypeScript + FastAPI) enabling authenticated field operations on robotic devices
- Provided field support for robot deployment and troubleshooting, gaining hands-on experience with physical security layers
- Architected device-specific authentication eliminating API key exposure and enforcing audited, device-scoped access across the fleet
- Built automated device provisioning with hardware fingerprinting and secure key generation to streamline fleet-wide deployment and key rotation

IT Consultant Services (Ichor Systems)   **February 2023 – Present**

System and Security Specialist   *San Jose, California*

- Configured Linux firewalls, TCP Wrappers, and remote access controls to monitor and block suspicious network activity.
- Managed server infrastructure for stability, uptime, and performance across multiple environments.
- Performed system hardening by removing unnecessary packages and disabling unused services.
- Enforced access controls and audited system logs to maintain compliance and protect sensitive resources.
- Applied OS-level patches and updates regularly to mitigate known vulnerabilities.
- Supported data center operations with real-time monitoring and incident response.

UCSC Information Technology Services   **February 2024 – Present**

Learning Technologies Consultant   *Santa Cruz, California*

- Provided front-line IT support to an average of 4–5 lab and library users daily, resolving software issues and printer troubleshooting in real-time.
- Managed inventory tracking using Google Sheets to maintain print supplies and minimize equipment downtime.
- Diagnosed and escalated hardware and software issues through internal ticketing systems to ensure timely resolution.

TECHNICAL SKILLS

Security & Networking	gRPC / Protobuf	Azure Cloud Computing
Log Analysis	C / C++	Cryptographic Keys
FastAPI	OAuth2 Authentication	CI/CD
Access Control	SQL	Linux
Endpoint Detection & Response	SIEM	Python
Vulnerability Scanning	Docker	Windows, Office 365