

Adrian Stone Perez

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EDUCATION

University of California, Berkeley

Class of 2027

B.A. in Computer Science | B.A. in Physics

Relevant Coursework: Computer Security, Data Structures, Intro. to Computer Architecture, Intro. to Quantum Computing I, Discrete Math & Probability Theory, Quantum Mechanics I, Electromagnetism & Optics, Intro. to Thermodynamics, Intro. to Mathematical Physics

SKILLS & INTERESTS

Technical: Python, Java, Go, C, TypeScript, Next.js, React, Django, Docker, Pandas, Matplotlib, Jupyter, SolidWorks

Languages: English, Spanish (native proficiency), Chinese (intermediate proficiency)

Interests: Beach/Indoor Volleyball, Cooking/Grilling, Reading, Soccer

Organizations: Web Development at Berkeley, Optimir Strategy Consulting, Space Technologies and Rocketry (STAR)

EXPERIENCES

PEARL Project (URAP)

Berkeley, CA

Undergraduate Researcher

January 2025 – May 2025

- Built a full-stack Next.js app for remote microscope control, with a live video feed and precision XYZ-axis controls
- Bridged software and hardware, linking the UI to an Arduino and custom 3D-printed parts (SolidWorks) to actuate the microscope

OpenGrant

Berkeley, CA

Software Engineering Intern

June 2024 – July 2024

- Developed an AI interview tool for a legal-tech platform, automating complex paperwork generation for NGOs
- Engineered a dynamic Q&A module with the OpenAI API using train-of-thought prompting to ask intelligent, contextual questions
- Deployed a real-time feedback system using AI to analyze user input and provide live suggestions for improving data quality
- Built and integrated all features within a Django backend, enhancing the accuracy and reliability of AI-generated documents

PROJECTS

Secure Cryptographic File Storage Platform

- Architected a zero-trust file storage system enabling secure, E2EE file sharing and revocation between multiple users and devices
- Guaranteed data confidentiality and integrity against an insecure database by developing a 1500+ line cryptographic protocol in Go
- Applied AES-CTR for encryption, HMACs for integrity, and RSA signatures for authentication to ensure end-to-end security
- Authored 2000+ lines of security tests to simulate multiple threat models, defending against data tampering and unauthorized access

5-Stage RISC-V CPU

- Architected a 5-stage pipelined RISC-V processor in Logisim, managing the full instruction lifecycle from fetch to write-back.
- Designed core hardware components from scratch, including a 32-bit ALU, dual-port register file, and immediate value generator
- Implemented hazard detection with forwarding and stalls to resolve data/control hazards, optimizing instruction throughput

Java Dungeon Crawler Video Game

- Built a 2D dungeon-crawler in Java from scratch, using object-oriented design to manage game state and interactivity
- Authored a BSP procedural generation algorithm to construct unique room-and-hallway layouts for each playthrough
- Implemented key UX mechanics like seeded randomization, game state saving, a full UI menu, and dynamic lighting effects

LEADERSHIP

Theta Tau: Professional Engineering Fraternity

Berkeley, CA

President

2025-2026

- Led a 60+ member engineering organization, directing a 15-person leadership team and managing a \$10,000 annual budget
- Spearheaded planning for a 150+ attendee regional conference, managing a \$4k budget for logistics, programming, and scheduling