

Noe David Camacho

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EDUCATION

University of California, Berkeley, *B.S. Electrical Engineering and Computer Science*

Aug 2020 - May 2024

Organizations: Extended Reality, Hispanic Engineers Society, Game Design + Development

PROFESSIONAL EXPERIENCE

Amazon Web Services, *Systems Design Engineer Intern*

May 2023 – Aug 2023

- Achieved a 400% increase in hardware qualification by leading an automation pipeline for SEA85's firmware process.
- Enabled testing critical fixes at scale and extended substrate monitoring capabilities by incorporating vetting.
- Provided self-operated ticket cutting for platform holders to fix FW updates using CloudWatch Logs and Lambda.
- Automated a cost-efficient and scalable construction of AWS resources to deploy a qualification pipeline for an adaptable amount of platforms with AWS CDK.

Berkeley ACE Lab, *Student Researcher*

Aug 2021 – Aug 2022

- Integrated randomized question generators and auto-grading tools in PrairieLearn to incorporate proficiency based learning in a 150+ student course at UC Berkeley.
- Designed prototype method of preserving *Snap!* student code by appending XML metadata to PNG files.
- Directed UC Berkeley's team of Spanish translators to make the Beauty and Joy of Computing's 8 unit curriculum accessible to Spanish engineers.

Google, *CSSI Apprentice*

2020

- Collaborated, programmed, and presented 4 projects to Google employees and community leaders.
- Completed professional development workshops and p5.JS coursework provided by Google Engineers

PROJECTS

Chip-8 Interpreter

- Recreated fully functional emulator for CHIP-8 virtual machine by replicating all registers, memory management, monochrome graphics display, and 35 standard Chip-8 instructions through studying its technical reference.
- Engineered original save-state feature by preserving registers, memory contents, and more

NumC

- Rebuilt a simplified version of Numpy in C to conduct matrix calculations.
- Optimized performance through **parallel programming** with **Intel Intrinsics** to optimize operations by 700%.

Local Recreation of Git

- Reproduced Git with all of its major commands including status checking, branch checkouts, and merge conflicts in **Java** by managing serialized files with a variety of data structures.

Seed Dependent Maze Game

- Built small playable sprite-based Collect-A-Thon with over 9 quadrillion levels, power-ups, randomized labyrinth generation, and saving feature in **Java** utilizing persistence and level seeds to maintain consistent output.

TECHNICAL SKILLS

Python | Java | C / C++ | Typescript | RISC-V | Git | Docker | AWS |

COURSES

CS152 - Computer Architecture and Engineering, *University of California, Berkeley*

CS168 - Introduction to the Internet: Architecture and Protocols, *University of California, Berkeley*

CS170 - Efficient Algorithms and Intractable Problems, *University of California, Berkeley*

CS184 - Computer Graphics and Imaging, *University of California, Berkeley*

CS188 - Introduction to Artificial Intelligence, *University of California, Berkeley*