

ALLEN ABOYTES

aaboytes@ucsc.edu ◊ (559)-667-2434 ◊ San Jose, CA
github.com/PandaZ3D ◊ users.soe.ucsc.edu/~aaboytes ◊ linkedin.com/in/allenaboytes

EDUCATION

| | |
|---|------------------------------------|
| Ph.D., Computer Engineering <i>University of California, Santa Cruz</i> | Present <i>Santa Cruz, CA</i> |
| M.S., Computer Engineering <i>University of California, Santa Cruz</i> | June 2023 <i>Santa Cruz, CA</i> |
| B.S., Computer Engineering <i>University of California, Santa Cruz</i> | June 2019 <i>Santa Cruz, CA</i> |

RESEARCH INTERESTS

Operating Systems, Heterogeneous Systems, Disaggregated Systems, Security, Computer Architecture

TECHNICAL STRENGTHS

| | |
|----------------------|---|
| Proficient | Rust, C, Python, Bash Scripting |
| Familiar With | C++, Kernel Development, x86/ARM Assembly |

EXPERIENCE

| | |
|--|---|
| Storage Systems Researcher <i>Center for Research in Systems and Storage</i> | January 2022 - Present <i>Santa Cruz, CA</i> |
|--|---|

- Working with a team of students and faculty to build a new OS, Twizzler, for future memory hierarchies.
- Twizzler is open source and available at: <https://github.com/twizzler-operating-system/twizzler>
- Ported the kernel (written in Rust) to ARMv8-A systems and currently working on user space support.

PROJECTS

| | |
|--|--|
| Comparing ChaCha20 and AES <i>Network Security Course Individual Project</i> | January 2021 - March 2021 <i>Santa Cruz, CA</i> |
|--|--|

- Implemented AES (FIPS 197) ChaCha20 in C. Vectorized ChaCha20 uses x86-64 SSE/AVX.
- Measured performance of optimized code (SIMD), and compared ChaCha20 to AES.

| | |
|---|--|
| Secure Messaging Application <i>Cryptography Course Group Project</i> | March 2020 - April 2020 <i>Santa Cruz, CA</i> |
|---|--|

- Implemented SHA-3 512 and SHA-3 256 secure hash algorithms in C.
- Project also implements RSA, Simon block cipher, and Diffie-Hellman in Python.

RELEVANT COURSES/KNOWLEDGE OF

Operating Systems, Algorithms, Data Structures, Distributed Systems, Computer Architecture, Linear Algebra, Differential Equations, Vector Calculus, Applied Discrete Mathematics

MISC

- U.S. citizen able to get a security clearance.
- Courses: Cryptography, Computer Networking, Database Management Systems, AI, Mechatronics