Richard Liu

Cupertino, CA 95014
(408) 386-2085
me@rliu.dev

Undergraduate student at UIUC with a passion in cybersecurity, in particular in embedded systems, reverse engineering, and emulation.

EXPERIENCE

Battelle Memorial Institute, Columbus, OH — *Cyber Security Intern*

MAY 2023 - DECEMBER 2023

Reverse engineered Broadcom bluetooth firmware on modern iPhones. Gained an in-depth understanding of the bluetooth protocol stack Leveraged hardware capabilities to develop fuzz testing tools to discover vulnerabilities.

Sandia National Labs, Albuquerque, NM — *R&D Undergraduate Intern*

MAY 2023 - DECEMBER 2023

Reverse engineered embedded systems with Ghidra and documented the findings. Performed dynamic analysis through creative use of diagnostic memory primitives and crash vectors. Performed low level binary exploitation.

QEMU — *Google Summer of Code*

JUNE 2022 - SEPTEMBER 2022

Developed a snapshot/restore fuzzer for QEMU. Integrated Libfuzzer test harness and coverage information from within QEMU.

SIGPwny, UIUC — *Club Admin*

AUGUST 2022 - PRESENT

Led our school's cybersecurity club in various competitions, such as eCTF, MITRE's annual embedded security competition, and CSAW, a national CTF for undergraduates.

EDUCATION

University of Illinois at Urbana-Champaign, Champaign, IL — *B.S. in Mathematics & Computer Science*

AUGUST 2021 - MAY 2024

4.0/4.0 GPA

SKILLS

Reverse engineering
Binary exploitation
Ghidra
GDB
Python
C

AWARDS

eCTF: Led UIUC team to second place in nationwide embedded security competition

CSAW: Placed second nationwide in undergraduate division of CTF

Modeling the Future: Paper on impact of climate change on corn production, won second place nationwide

Links

Linkedin: linkedin.com/in/richard-liu-4775571a7

Personal Website: rliu.dev