

# 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

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

MAY 2023 - PRESENT

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 (ANTICIPATED)

4.0/4.0 GPA

## PROJECTS

### UIUC Apartments — *Apartment hunting website*

Wrote web scraping tools in Python to aggregate local apartment information. Leveraged GCP Cloud Functions and PostgreSQL for the backend.

## 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](https://www.linkedin.com/in/richard-liu-4775571a7)

Personal Website: [rliu.dev](https://rliu.dev)