

Thomas Quig

(847) 533-0599 | thomasquig.dev@gmail.com | **GitHub:** Thomas-Quig | **Site:** quig.dev

EDUCATION

University of Illinois

Urbana-Champaign, IL

Bachelors of Science in Computer Science

Expected FA 2021

GPA: 3.5/4.0 (3.57 Technical)

Relevant courses: Computer Security (CS461), Security 2 (CS463), Advanced Security (CS563), Communications Networking (CS438), Wireless Networking (CS439), Systems Programming (CS241), Virtual Reality (CS498-VR), Algorithms (CS374), Data Structures (CS225), Architecture (CS233), Independent Research (CS397, ECE297)

EXPERIENCE

Plante Moran - International Business Consultancy

Urbana-Champaign, IL

Consultant Intern - Network Security Assessment

May 2021 – Aug 2021

- Perform various network security assessment services including external and internal penetration testing, application security analysis, cloud platform security assessments, and webapp security testing
- Developed several internal and external software tools, including Id3p, and a report automation tool that saves Network Security team members hours of report construction every week

Mobius Research Group - Prof. Robin Kravets

Urbana-Champaign, IL

Researcher - Wireless Network Security

Dec 2020 – Present

- Researching masking Wi-Fi discovery and communication via MAC address shuffling
- Responsibilities include, access point library analysis development and testing

RTM Engineering - Engineering Consultancy

Schaumburg, IL

Intern - Information Security and IT

Jun 2020 – Jun 2021

- Completed a full penetration test on the RTM national network, successfully documented 25+ critical vulnerabilities to network integrity. Improved RTM Cybersecurity policy at a company-wide level
- Supported RTM employees to swiftly resolve any IT issues worked on RTM devices and servers
- Developed an Active Directory License scanning program in python, saving RTM \$7,500 a year

Trail of Bits - Computer Security and Cryptography Firm

New York, NY

Intern - Full Stack

Dec 2019 – Jan 2020

- Worked remote for Trail of Bits over the 2019 Holiday season. Successfully integrated Ethereum smart contract upgradeability safety checks into Trail of Bits Ethereum security web app Crytic
- Worked with full-stack, including a Python-based backend, ReactJS website & SQLAlchemy DB

Illini Tech Services - Official University IT

Urbana-Champaign, IL

On-Site Consultant

Sep 2019 – Present

- Support faculty, staff, and students by appointment to find personalized technology solutions
- Tasks include virus removal, OS installation, and departmental system administration

ACTIVITIES

ACM SIGPwny - UIUC Computer Security club

Urbana-Champaign, IL

President (2021-Present), Officer (2019-2020), Member (2018-2019)

Sep 2018 – Present

- President of the University of Illinois computer security interest group. Responsibilities include facilitation of weekly meetings, managing club funds, internal ESXi server, club promotion, and developing challenges.
- Organized and successfully executed several large-scale (100+ participants) recruitment events in the fall of 2019 and 2020, teaching students various security fundamentals in a CTF-style event. High retention rate

SIGPwny Independent Projects - Underclassman Security Research

Urbana-Champaign, IL

Research Director

Jan 2021 – Present

- Head research advisor and organizer for eight underclassmen participating in professor Andrew Miller's section of ECE 297 managed by the executives of SIGPwny
- Responsibilities include maintaining research progress for the underclassmen, hold regular organizational meetings, and ensure end-of-semester deliverables (paper and research/product)

Project Manager

Apr 2020 – Aug 2021

- Managed a \$12,000 budget, led a team of 30 students and alumni. Develop challenges and maintain event infrastructure via AWS / Google Cloud. Total 2021 turnout of 1900 attendees, divided among 1000 teams

PROJECTS**naev** ([naev.page](#)) — *Package Manager Feature Set Abstraction* Jan 2021 – Present

- Developed a feature set abstraction for modern day package managers to enable secure nonlinear versioning
- Completed testing into the practicality of mass implementation of naev, compiled results into research paper

Ilss ([Ilss.page](#)) — *Wireless MAC Address Shuffling Application and Paper* Sep 2020 – Present

- Designed a Moving Target Defense (MTD) tool designed to work in wireless ad-hoc environments
- Performed research on the viability of mass implementation of Ilss, and reported on results in research paper
- Continuing an expansion of Ilss with Professor Robin Kravets as part of the Mobius Research Group

Id3p — *Idap Domain Dump Enumeration and Parsing Tool* Jun 2021 – Present

- While at Plante Moran, developed Idap parsing tool for rapid user enumeration during security assessments
- Expanded implementation to support Idapdomaindump.py, dumpsec, and several other domain tools

TableTop WorldBuilder — *VR Map Making Tool* Sep 2019 – Spring 2020

- Led a team of 5 to create a fully functioning C# based VR game world design tool
- Users create worlds within a grid and then explore the worlds they created

CS Sail — *Computer Architecture in Digital Environments, Intro to Security* Apr 2019 - Present

- Taught a seminar at the UIUC CS-Sail high school event about the real-life applications of logic circuits found within various video games (2019 - 60 attendees, 2021 virtual - 50 attendees)
- Taught a seminar featuring introductory Computer Security information including fundamentals of the adversarial mindset, categories of security, careers, etc (2021 virtual - 30 attendees).

SKILLS**Leadership:** Project management, team management, public speaking, mentoring, teaching**Languages:** C, Python, Java, Javascript, Bash, C++, C#, R, mips, x86, HTML, css, Verilog, Haskell**Platforms:** Docker, Linux, Windows (AD security/IT), macOS, iOS, Unity3D, Ghidra, ESXi, AWS, GCP

AWARDS

- **6th** / 100+ teams: Cyphercon 4 - computer security conference's tournament (2019)
 - Found and disclosed a race condition vulnerability in Cyphercon Internal CTF server and responsibly disclosed it to Conference staff. Presented in front of conference
 - Skills Used: web hacking, social engineering, cryptography
- **1st** / 150+ participants: SIGPwny annual internal CTF (2018)
 - Skills Used: web hacking, reverse engineering, computer forensics, OSINT, cryptography
- **Dean's List:** Spring 2021