

Minjung Kwon

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EDUCATION

Cornell University, College of Engineering, Ithaca, NY

Master of Engineering in Electrical and Computer Engineering (Early M.Eng. Program) GPA: 3.553 **Graduation: Dec '23**

Bachelor of Science in Electrical and Computer Engineering, Minor in Computer Science GPA: 3.385 **Graduation: May '23**

Courses: Embedded Operating Systems, Operating Systems, Computer Architecture, Networks, Microcontrollers, Electronics, AI

SKILLS

Programming Languages: C/C++, Python, Shell Script, Java

Technical: Git, Vim, Bash, AWS

Operating Systems: Linux/Unix, Mac, Windows

Foreign Languages: Korean (Native), English (Bilingual)

EXPERIENCE

Cornell University, Ithaca, NY, *Embedded OS Graduate Teaching Assistant* **Aug '22 – Dec '23**

- Assisted a 78-person master's level course in Kernel-level programming and multi-core design in Python and C
- Debugged SW/HW errors and provided guidance on sensor integration and software optimization for student projects

Cornell University, Ithaca, NY, *Cornell Maker Club Treasurer* **Feb '22 – Dec '23**

- Managed a 740-member club, overseeing core capital purchases with a budget of \$2,500 per semester
- Organized workshops on 3D printing, soldering, Linux programming and advised on projects for master's students

Intel, San Jose, CA, *System Validation Graduate Intern* **Jun '23 – Oct '23**

- Achieved cost savings (\$30k/quarter) in testing by automating regression tests for F-Tile Tool Kit in Perl, Python, C
- Simulated and debugged software implementations on hardware boards, assisting teams with troubleshooting issues

Apple, Cupertino, CA, *Core WiFi SWE Intern* **May '22 – Aug '22**

- Contributed to proactive WiFi driver security by conducting security audits in C++ and creating base documentation
- Addressed the vulnerabilities by building driver binaries for testing on development machines (iPhone, MacBook)

Break Through AI Program, Manhattan, NY, *Participant* **May '21 – May '22**

- Gained experience in AI/ML and data science using Python (Pandas, Numpy, Altair, Sklearn, Tensorflow, Keras)
- Collaborated with company advisors to build and present an AI/ML project (TODDLE) for the Fall 2021 showcase

PROJECTS (more information & projects on website)

Run, Hide, Activate | Defense System Project, *Cornell University (ECE M.Eng.)* **Feb '23 – Dec '23**

- Designed a school defense system aimed at reducing damages within the first 10 minutes of an active shooter event
- Engineered visual/auditory distraction boxes that detect a shooter using Raspberry Pi, OpenCV, and ESP8266 remote
- Prioritized user activation security and simplicity while optimizing system speed, power usage, and randomness

Dancing Boids | FPGA Simulation Project, *Cornell University* **Apr '23 – May '23**

- Visualized the boid flocking simulation that react dynamically to music frequencies with FPGA (DE1-SoC)
- Optimized resource use in RTL, achieving simulation of up to 300 boids with hardware constraints with a team of three
- Established FPGA-HPS communication via PIO ports, logic blocks and Verilog & C to maximize processing efficiency

Spatial Audio Murder Mystery | Interactive Audio Game, *Cornell University* **Oct '22 – Dec '22**

- Built an interactive mystery game allowing users to identify a murderer based on spatial audio cues with RPi Pico
- Integrated head-related transfer functions to simulate a directional and designed FSM for control logic
- Enhanced audio clarity by analyzing the output signals and adjusting the serial input speed, collaborating with a team

Campus Congestion | Real-Time Monitoring System (Published), *Cornell University* **Apr '22 – May '22**

- Developed a congestion-monitoring system to help students find study spaces in Cornell engineering buildings
- Designed RPi embedded systems using Python & C, analyzing Cornell server data and Wi-Fi metrics
- Extended system functionality with a route recommendation feature using a finite state machine on a public website

AWARDS & CERTIFICATIONS

KISA Information Security Certification Test (Theoretical Pass), *Korea Internet & Security Agency* **Oct 25, 2024**

Fall 2023 ECE MEng Poster Session Winner (Electronic Devices & Materials), *Cornell* **Dec 5, 2023**

WISP Black Hat USA Scholarship (Briefing Pass), *Women in Security and Privacy* **Aug 9, 2023**

EFW Women in Security Black Hat Scholarship (Briefing Pass), *Executive Women's Forum* **Aug 4, 2021**

Burckmyer / LaTour Scholarship, *Cornell University* **2021 – 23**

ACTIVITIES

WE LEAD Society of Women Engineers WiCyS Women in Security and Privacy Cornell Archery Club