Minjung Kwon

minjk121@gmail.com • minjk121.github.io • linkedin.com/in/minjung-kwon • (607) 280-6467

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, Microelectronics

AWARDS & CERTIFICATIONS

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

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

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

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

SKILLS

Programming Languages: C/C++ • Python • Shell Script • Verilog • Perl • MATLAB • Assembly (ARM) • Java

Embedded Systems: Real-Time Operating Systems (RTOS), Embedded Linux, Microcontroller Design, FPGA programming

Tools & Platforms: Git, Vim, Bash, AWS, AutoCAD, SolidWorks, 3D printing, Soldering

Operating Systems: Linux/Unix, macOS, Windows

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

EXPERIENCE

The Korean-American Senior Citizens Society of Greater NY, Flushing, NY, *Part-time Lecturer* **Mar '25 – Current**

- Conduct engaging lectures to teach seniors effective use of smartphones, fostering digital literacy and independence

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

- Guided a 78-person master's level course in kernel-level programming, multi-core design, and real-time systems
- 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 and oversaw core capital purchases with a $2,500 budget per semester
- Organized workshops on 3D printing, soldering, Linux programming; advised projects implementations for students

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

- Reduced testing costs by $30k/quarter by automating regression tests for F-Tile Tool Kit in Perl, Python, and 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**

- Conducted proactive WiFi driver security audits in C++ and created base documentation for security protocols
- Resolved vulnerabilities by building driver binaries for testing across development machines (iPhones, MacBooks)

PROJECTS

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

- Designed a school defense system aimed at minimizing damages during active shooter events, integrating Raspberry Pi, OpenCV, and ESP8266 modules
- Focused on user-activation security, simplicity, and power efficiency to ensure reliability in high-pressure scenarios

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

- Visualized boid flocking behavior dynamically reacting to music frequencies using FPGA (DE1-SoC)
- Optimized RTL to simulate up to 300 boids within hardware constraints, implementing FPGA-HPS communication using Verilog and C with a team of three

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

- Built an interactive mystery game enabling users to identify a suspect based on spatial audio cues with RPi Pico
- Integrated head-related transfer functions (HRTF) and finite state machines (FSM) for game logic control

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

- Created a congestion-monitoring tool to help students locate study spaces in Cornell engineering buildings
- Designed and deployed embedded systems using Python and C, analyzing Wi-Fi metrics and server data to recommend optimal routes

View full portfolio at minjk121.github.io