Edward Kwak

edkwak44@gmail.com | +1 6787276698 | linkedin.com/in/eddieee/

EDUCATION

Georgia Institute of Technology Expected Graduation: December 2025
B.S. Computer Engineering | GPA: 3.8/4.0
Concentrations: Distributed Systems & Software Design, Computing Hardware & Emerging Architectures

EXPERIENCE

Medtronic June 2024 – August 2024
Software Engineer Intern Minneapolis, Minnesota

- Designed and implemented a domain-specific language translation framework using XML, C#, and JavaScript to automate verification testing (VT) for iOS applications that interface with cardiac implantable electronic devices. Decreased the amount of external dependencies of the VT software by more than 50%.
- Implemented unique static identifiers for UI elements in an iOS application to reduce the number of code changes necessary to perform verification testing on UI elements with dynamically changing identifiers during runtime.

Northrop Grumman June 2023 – August 2023
Electrical Engineer Intern Baltimore, Maryland

- Developed a C program that facilitates communication across satellite controller devices through serially transmitted bitstreams. Programmed an FPGA with VHDL to perform verification testing on the controller devices.
- Developed a Python program that reads, analyzes, and performs computations on output data from various RF tests for integrated microwave assemblies. Designed, modified, and tested RF systems using equipment such as network analyzers, oscilloscopes, and function generators.

Georgia State University May 2022 – August2022
Mathematics Research Intern Atlanta, Georgia

- Created models of a binary choice game using Python and Wolfram Mathematica in order to analyze winning/losing patterns.
- Presented research results at the university-wide summer research symposium and was awarded the best group presentation.

PROJECTS

Game of Life

- Created a version of John Conway's Game of Life using C++. Utilized multiprocessing with OpenMP to concurrently process large numbers of computations and used SFML to render visuals.

Audio Monitor Peripheral

- Developed a peripheral using VHDL that interfaces with a computer's audio-to-digital converter for real-time audio processing and filtering. The peripheral processes audio signals and filters for sharp spikes in volume.

SKILLS

Technical: C, C++, Python, Java, Assembly (MIPS, RISC-V), JavaScript, C#, VHDL, Verilog
Tools: Git, Visual Studio, Quartus Prime, KiCAD, AWS, Oscilloscopes, Network Analyzers, Multimeters