Kyle Han

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Education

Stony Brook University Aug 2020 - May 2025

B. Eng Electrical Engineering / Accelerated *M.S. Computer Engineering*
Specialization: Nanoelectronics and Photonics / 3.78 Cum. GPA
Organizations: **IEEE at SBU** (Secretary), **Motorsports** (Electrical Subsystem)

Relevant Courses

- Digital Design Using VHDL and PLDs
- Modern Circuit Board Design and Prototyping
- Embedded Microcontroller Systems Design
- Microelectronic Circuits
- Digital Logic Design

Skills and Certifications

- NI Multisim, NI Labview, Cadence OrCad, PSpice
- NI MyRIO, Arduino/AVR Microcontrollers
- Autodesk Inventor, Fusion 360, Solidworks
- VHDL, C/C++, Python, AVR Assembly
- Oscilloscopes, Power Supplies and Multimeters

Experience

TC Electric, New York, New York — *Innovation Intern* May 2023 - Aug 2023

- Designed and built a solution in JavaScript to error check subcontractor information for minimizing construction delays due to MTA rejection.
- Created comprehensive software documentation using GitHub Pages, Jekyll, and Markdown.
- Presented 10 weekly research reports regarding new technologies and innovations in construction.
- Created plan view drawings of CMRS installation in AutoCAD for the intern project, which simulated a contract award to rehabilitate a tunnel with traction power, CMRS, and tunnel lighting.

ITC Midwest, Cedar Rapids, Iowa — *Line Design Intern* May 2022 - Aug 2022

- Analyzed 13 years of outages, assessing galloping and T-2 ACSR conductor efficacy with Python and Excel.
- Automated a unitization report within Excel, generating a cost report based on 4 factors.
- Utilized PLS-CADD to update old Plan & Profiles and create new As-Builts.

Activities

Embedded Microcontroller Systems, SBU — *Teaching Assistant* Aug 2022 - Dec 2022

- Assisted undergraduate students in completing their schematic diagrams with OrCad Capture CIS and translating them into physical circuits on breadboards.
- Crafted and refined the assembly codebase for the AVR128DB48 used to solve labs, ultimately culminating in a temperature/humidity display using the DHT11.
- Facilitated the teaching of material, including register operations, interrupts, and DAC/ADC.

Stony Brook Motorsports, Stony Brook University — *Electrical Subsystem* Aug 2021 - May 2023

- Worked with the throttle assembly to implement a visualization tool for training purposes.
- Designed and manufactured solutions to engineering problems within the Electrical Subsystem.
- Collaborated with other subsystems to manufacture and integrate electrical projects into the main chassis.

Projects

Simon Says — *Autodesk Fusion 360, C, ATTiny261A, AVRDUDE, AVR-GCC*

- Design a PCB in Fusion 360 intended to facilitate hands-on THT soldering training.
- Create auxiliary programming boards utilizing ArduinoISP for seamless code uploading.
- Write C code targeting the ATTiny261A utilizing the onboard ADC for enhanced randomness.
- Lead and organize the IEEE Soldering Workshop, educating and mentoring over 30 students on soldering techniques, resulting in increased soldering proficiency among participants.

Ghost Escape — *C++, Git*

- Directed a team of 4 to develop a terminal based RPG using Object-Oriented C++ and Git.
- Developed a dynamic quest system with save/load functionality, allowing players to engage in the main storyline, explore optional side quests, and encounter random events with varied outcomes.