Justin I. Hwang

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Objective

Computer Engineering major with concentrations in Computer Architecture and Robotics & Autonomous Systems. Strengths include software verification, circuit design, and teaching. Looking for a digital design, formal verification, software engineering, or firmware engineering **Internship/Co-Op starting Spring or Summer 2025**.

Education

Georgia Institute of Technology | Atlanta, GA *August 2023– Present*
Bachelor of Science in Computer Engineering, GPA 4.00 Expected Graduation, May 2027
Minor in Korean Expected Completion, Dec 2024

Skills

Programming: Java (Gradle, Reflections, JavaFX, Javadocs), C++, LaTeX, Python, Flutter
Platforms: MacOS, Linux, Windows 10
Hardware: STM-32, Raspberry Pi, Arduino
Software: PlatformIO, VSCode, IntelliJ, Eclipse, Emacs, GitHub, Autodesk EAGLE, Fusion 360, Git, GitHub, GitLab, Arduino IDE
Professional Organizations: Hytech Racing (FSAE Electric), GT College of Computing, Georgia Tech Chamber Choir
Languages: English (native), Korean (learning)

Experience

Hytech Racing | Low Voltage and Firmware Lead | Atlanta, GA *June 2024 - Present*
Formula SAE Electric Team

- Responsible for designing, manufacturing, programming, and testing low-voltage electronics for our 2025 race car.
- Using Altium Designer to design the Vehicle Control Board. Receives, filters, and handles 10 sensor inputs through 8 connectors.
- Using C++ (PlatformIO) to code boards to communicate over Ethernet, CAN, and UART. Contributed to unit-testing framework.
- Developed SoC (state of charge) estimation code to initialize and integrate the state of charge based on current draw.
- Wrote firmware to communicate with VectorNAV IMU through its binary interface, format the bytes, and write to CAN.

Teaching Assistant | Object Oriented Programming | Atlanta, GA *December 2023 - Present*

- Recruited by professor (out of 1,000+ students) for writing extensive JUnit-style software verification files on the class forum.
- Published 18 files, as a student, totaling 4,000+ downloads.
- Overhauled all recitation slides for Fall 2024 to include black-box abstraction and follow consistent teaching principles
- Leading weekly recitations, holding office hours 2x/week, grading homework assignments and exams.

Covrick LLC | Senior Inventory Analyst | San Jose, CA *May 2021 – July 2023*
E-commerce seller on Amazon and EBay.

- Created 250 shipments, totaling $90,000 in revenue. Trained 5 new employees. Wrote a portion of the employee handbook.

Projects

Minecraft Plugins / Redstone Computers *2019 - Present*

- Programmed Java plugins for Minecraft servers using Spigot/Bukkit API, including ID verification, server security, and games.
- Built Minecraft representations of digital systems, including logic gates, combinational circuits, and 7-segment displays.

Relevant Coursework

In progress: Programming for Hardware & Software Systems, Circuit Analysis, Digital Design Lab, Differential Equations
Completed: Digital Systems Design, Data Structures & Algorithms, Physics Electricity & Magnetism, Discrete Math

Leadership or Activities

Formula SAE Electric | Hytech Racing | Low Voltage and Firmware Lead *2024-Present*
Robotics | FRC Team 670 | Software Lead *2022-2023*
Soccer | Varsity Captain | All-League Player *2022-2023*