Justin I. Hwang

Sunnyvale, CA 94087 | (650) 996-9097 | justin@goliath.org | jhwang04.github.io | U.S. Citizen

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   *Aug 2023– Present*
Bachelor of Science in Computer Engineering, GPA 4.00   Expected Graduation **May 2027**
Minor in Korean Language   Expected Completion Dec 2024

Experience

HyTech Racing | Low Voltage and Firmware Lead | Atlanta, GA   *Aug 2023 – Present* **(1 year)**
Formula SAE Electric Team
- Design, manufacture, and program PCBs for HyTech's 2025 EV race car using Altium Designer and C++.
- Program C++ (PlatformIO) to communicate over Ethernet, CAN, SPI, and UART.
- Rewrote firmware in PlatformIO with a unit-testing framework to replace the Arduino IDE codebase.
- Overhauled the electrical team training to use guided asynchronous materials to improve member retention.
- Developed SoC estimation code to initialize and integrate state of charge based on analog sensor data.
- Wrote firmware to communicate with VectorNAV IMU through its binary interface and send formatted CAN frames.

Teaching Assistant | Object-Oriented Programming | Atlanta, GA   *Dec 2023 – Present* **(9 mos)**
Georgia Tech College of Computing
- Recruited by professor for writing extensive JUnit-style software verification files on the class forum.
- Overhauled recitation slides for Fall 2024 to include black-box abstraction and follow consistent teaching principles.
- Led weekly recitations, wrote auto-grader tests, held office hours, graded homework assignments and exams.

Covrick LLC | Senior Inventory Analyst | San Jose, CA   *May 2021 – July 2023* **(3 years)**
E-commerce seller on Amazon and EBay.
- Shipped 10,000 items totaling $90,000 in revenue, selecting prices to maximize profit while minimizing time to sell.
- Wrote keyword-optimized Amazon product pages to maximize customer traffic based on market research of similar products.
- Trained 5 new employees. Wrote a portion of the employee handbook.

Projects

Software Verification for Data Structures and Algorithms   *Aug 2023 – May 2024* **(9 mos)**
- Published 18 JUnit-style tester files on the Object-Oriented Programming and Data Structures & Algorithms class forums.
- Achieved 4,000+ downloads across all homework assignments with over 1,200 test cases.
- Used Java Reflections and method annotations to brute-force check data structures and visualize them with ASCII.
- Tested Console IO, File IO, Exception handling, private method/field testing, and loop overrun timeouts with multithreading.

Minecraft Plugins / Redstone Computers   *2019 – Present* **(4 yr)**
- 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.

Coursework

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

Skills

Programming: Java (Reflections, JavaFX, Javadocs, Gradle) | C | C++ | PlatformIO | LaTeX | Python | Flutter
Software: Altium Designer | Autodesk EAGLE | Emacs | IntelliJ | VSCode | Arduino IDE | Git | MacOS | Windows | Linux
Hardware: Arduino | Multimeter | Power Supply | Soldering iron

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Comments (margin):

Commented [ES1]: Wut is this? Is this your actual personal email?

Commented [ES2]: Could sound less robotic. You can look at mine for an example. Ill send at some point… need to update mine

Commented [ES3]: HyTech come on man.

Commented [ES4]: Don't make it sound like a team effort. Make it sound like you did everything

Commented [ES5]: wrote

Commented [ES6]: U get the idea…

Commented [ES7]: Need this line for the TA experience for consistent formatting

Commented [ES8]: Do you have enough content for each of these sentences for them to be their own bullet point? Generally each bullet point is a single strong effort

Commented [ES9]: object-oriented

Commented [ES10]: Nice

Commented [ES11R10]: Not sarcastic

Commented [ES12]: Extra space here

Commented [ES13]: Love it. Aim to replace it eventually though