Maika Hirata

Atlanta, GA 30308 | +1 (678) 608-5878 | mhirata3@gatech.edu | U.S. Citizen

Education

Georgia Institute of Technology | Atlanta, GA *August 2024 – Present*
Bachelor of Science in Computer Engineering, GPA 3.22 Expected Graduation, December 2026
The University of Georgia | Athens, GA *August 2023 – May 2024*
Transfer with 78 Credit Hours, GPA 3.92

Skills

Programming: Java, Python, C, MIPS Assembly, JavaScript, CSS, HTML (CIW Site Development Associate)
Hardware: Raspberry Pi, Arduino, Mbed, ESP32, CTR Electronics, FPGAs, VHDL, soldering, 3D printing, oscilloscope, logic analyzer
Software: GitHub, WordPress, Visual Studio Code, Quartus Prime, MATLAB and Simulink
Professional Organizations: Georgia Tech Women in Electrical and Computer Engineering, Japanese Student Association
Languages: Japanese (native), English (fluent)

Projects

Buzz Car | Georgia Institute of Technology Junior Design *August 2025 – Present*
Group Leader
Four-member team project to design and build a line-following car while gaining experience with product lifestyle management

- Spearheaded system and subsystem design while ensuring alignment of the project with engineering specifications derived based on customer requirements to provide accurate records to provide stakeholders.
- Established the project's software framework and version control with Git, improving traceability of software and hardware files including schematics, PCB layout, and Gerber files.
- Designed and optimized a PCB to interface a 16x2 LCD with an ESP32 microcontroller through schematic capture, breadboarding, layout, and Gerber generation for fabrication through JLCPCB.

Electronic ARTrium | Georgia Institute of Technology Vertically Integrated Project Team *August 2024 – Present*
Electro-Mechanical Team Member
Interdisciplinary project integrating engineering into an interactive art exhibit involving sensors, sound, video, and mechatronics

- Brainstormed, prototyped, and programmed an Arduino-controlled mechatronic's eyes to look at a player of any height by detecting player height with a camera and adjusting the angle of the eyes accordingly in C.
- Utilized server-to-Arduino Ethernet connection to cue circuit-controlled atmospheric LEDs throughout the exhibit.

Robodawg | The University of Georgia Robotics Club *August 2023 – May 2024*
Computer Vision Team Member
Team-based club project (computer vision, walking, mechanical, and electrical sub teams) to develop a walking robot dog

- Researched, programmed, and troubleshooted software for the robot to detect obstacles, stairs, and people with three other members using OpenCV A.I. body-tracking libraries on a Jetson Nano with a ZED camera.

Relevant Coursework

Digital System Design: Use of Boolean operations and combinational circuit techniques to design and simulate digital logic circuits.
Intro to Object-Oriented Programming: Writing GUI programs with methods such as encapsulation, inheritance, polymorphism.
Programming for Hardware/Software Systems: Designing, testing, and deploying software with complex execution and storage mechanisms based on instruction set architecture.
Computer Communications: Understanding how the Internet works through a basic layered model of networks and their protocols.
Intro to Signal Processing: Discrete-time processing with sampling, filters, and Fourier analysis as well as MATLAB programming.
Digital Hardware Design Lab: Designing, simulating, and testing combinational and sequential circuits in a PC-based CAD tool with schematic capture, logic simulation, and VHDL-based logic synthesis on FPGAs.
Circuit Analysis: Applying basic DC and AC circuit theory to a variety of resistive, capacitive, and inductive circuits.
Arch, Systems, Concurrency & Energy in Computation: Basic organizational principles of the major components of a modern processor – the core, memory hierarchy, and the I/O subsystem, with a focus on tradeoffs in energy and performance.
ECE Design Fundamentals: Applying system-level design, Agile product management, prototyping, and testing. In-progress.
Feedback Control Systems: Analyzing control applications signals and applying the principles of feedback control. In-progress.
Data Structures and Algorithms: Data structures and algorithms in the context of object-oriented programming in Java. In-progress.

Activities

FIRST Robotics Competition Team 1261 Robo Lions | Programming Lead *August 2022 – May 2023*

- Mentored 20+ new members on the website and programming sub teams, on web development and Java respectively.
- Implemented closed-loop control in the form of Proportional-Integral-Derivative (PID), path planning, April Tags, and vision tracking through an iterative process to continuously improve robot performance, leading to winning district event finalist three times and district event champion once.
- Presented the team's engineering design process over the season for the robot in detail to judges at competition, winning four programming-related awards.

Girls Who Code/Code Ridge | Vice President *August 2021 – May 2023*

- Researched local STEM events and contacted guest speakers each week to connect members to opportunities.
- Started up the first general CS club at the school with 25+ members, combining it with Girls Who Code to allow all students to learn how to code while maintaining a clear focus on the empowerment of girls in STEM.

CodeHers Collective | Web Development Content Specialist *May 2020 – August 2021*

- Wrote and taught lessons on GitHub, Java, and web development to 150+ girls nationwide and worldwide over Zoom.
- Designed 2 mascots, to represent the organization on social media and improve organization recognizability.

Technology Student Association *August 2019 – May 2023*

- Designed, built, and programmed a story-based, 4ft tall animatronic running on an Arduino and utilizing pneumatics and servo motors in a team of 3, winning 1st place and 3rd place at the state level and placed in top 10 at the national level.
- Built a website catered to a specific competition theme using HTML, CSS, and JS with a focus on user-friendliness and engagement in a team, placing in top 10 at the state level for 3 years consecutively.