

Maika Hirata

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Objective

Team-minded and tenacious Computer Engineering student with concentrations in Distributed System & Software Design and Robotics seeking a software development or embedded systems internship for Summer 2025. Experience with writing and debugging software for a variety of different hardware-based projects such as competitive robotics and animatronics.

Education

Georgia Institute of Technology | Atlanta, GA

Bachelor of Science in Computer Engineering, GPA 3.29

August 2024 – Present

Expected Graduation, May 2027

The University of Georgia | Athens, GA

August 2023 – May 2024

Transfer with 78 Credit Hours, GPA 3.92

Skills

Programming: Java, Python, MATLAB, C, MIPS Assembly, JavaScript, CSS, HTML (CIW Site Development Associate)

Hardware: Raspberry Pi, Arduino, Mbed, CTR Electronics

Software: GitHub, WordPress, Visual Studio Code, Quartus Prime, OpenCV, Microsoft Office tools (including Microsoft Excel)

Professional Organizations: Georgia Tech Women in Electrical and Computer Engineering, Japanese Student Association

Languages: Japanese (native), English (fluent), French (beginner)

Projects

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.
- 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 3 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.

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.

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.