Yohan Guyomard

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EDUCATION

Massachusetts Institute of Technology (MIT)   Boston, MA
Candidate for Bachelor of Engineering   May 2025
Major in Computer Science & Electrical Engineering; Minor in Mechanical Engineering
Cumulative GPA: 4.8/5.0
Relevant Coursework: Algorithms & Data Structures; Embedded Systems; Deep Learning
   Mechanical Engineering Tools; Web Lab; Autonomous Machines; Software Construction; Digital Instrument Design;
   Linear Algebra & Optimization; Computation Structures; Mechanics & Materials; Multivariable Calculus

WORK EXPERIENCE

Google   Mountain View, CA
Software Engineering Intern   August 2023
- Integrated support for debugging Android applications in Visual Studio; Interfaced with the LLDB debugger, .NET framework and C#
- Researched Microsoft APIs which lacked documentation using decompilation, source stepping and cross-referencing projects with permissive licenses; documented my findings in a comprehensive 20+ pages document for future maintainers
- Completed every reach milestones, including support for a debugger GUI, local/remote source file mapping and device emulation

Google   Kirkland, WA
Software Engineering Intern   August 2022
- Adapted to proprietary frameworks and internal tooling in one week; contributed to a large codebase
- Implemented the UI, backend, and unit tests for Chrome Web Store's search autocomplete feature
- Took on a secondary, full-stack feature within CWS; equivalent to two internship projects

UNIVERSITY PROJECTS

Digital Musical Instrument   May 2023
- Designed an instrument that transfers the user's whistling to the timbre of horns and woodwinds
- Developed a neural network based on Google's DDSP model; utilized signal processing techniques including Fast Fourier Transform, Hann windowing, Bandpass filters; developed visual intuition for these using a custom spectrogram
- 3D printed an enclosure for the ESP32, sensors and neopixels to achieve the desired performance aesthetic

Fleet of Autonomous Robots   May 2023
- Manufactured and programmed four robots to concurrently complete challenges on 2.007's game board (novel approach for this course); employed odometry, line tracking and known characteristics of the board to accomplish this semi-autonomously
- Leveraged the Raspberry Pi Pico, nRF24L01 radio transceiver; chassis designed in CAD and waterjet; circuit is efficient and easy to replicate across four robots, consisting of an H-Bridge, voltage regulator and sensors

PERSONAL PROJECTS

Quadcopter Drone from Scratch   April 2022
- Researched the physics and control-theory behind drones; learned CAD and 3D printed several iterations of the drone frame
- Created a circuit for modulating the speed of four brushed DC motors connected to an RP2040 which runs a custom flight controller written in C; prototyped on a breadboard, then soldered to a perfboard

ADDITIONAL

Technical Skills: C/C++, Rust (4 years); Python (3 years); Java, Kotlin, C# (5 years); Full-stack web (5 years); SQL (2 years)
Languages: Fluent in French, English
Tools: Adobe Photoshop; After Effects; Final Cut Pro; Blender; JetBrain IDEs; Visual Studio Code; Git; Unity; Fusion360
Interests: Piano; Embedded Programming; Electronics; Filmmaking; 3D modeling; Web Development