

Tai Li

 taili.ca |  business@taili.ca |  li1568@mcmaster.ca |  +1 647-971-0667

Skills

Languages C/C++, Python, HTML, TailwindCSS, CSS, TypeScript, Verilog, HDL
Hardware Arduino, Arm Cortex Processors, Breadboard Prototyping, Altera DE2-115

Education

McMaster University Expected 2027
Bachelor of Engineering (B.eng)

- Engineering Award of Excellence
- Relevant Courses: Computer Architecture, Data Structures and Algorithms, Signals and Systems

Projects

LIDAR Room Scanner (C/Python)

- Enabled generation of 3D indoor visualizations by developing a LiDAR-based system optimized for indoor environments.
- Achieved seamless hardware functionality by integrating a Texas Instruments MSP432E401Y microcontroller, VL53L1X Time-of-Flight sensor, and MOT-28BYJ48 stepper motor.
- Automated scanning and visualization by creating Python scripts for UART communication, data collection, and 3D rendering with PySerial, NumPy, and Open3D.

Image Decompressor (HDL/Verilog)

- Designed an image decompression system capable of decoding .mic18 files efficiently.
- Achieved real-time decoding and display of 320x240 images by building a custom circuit with UART input, SRAM storage, and VGA output on the Altera DE2-115 board.
- Ensured smooth hardware integration by developing Verilog/HDL scripts for the decompression pipeline.

Personal Website (JavaScript/React/TailwindCSS)

taili.ca

- Delivered a clean, responsive design by implementing Tailwind CSS with a mobile-first approach.
- Enhanced interactivity and user engagement by integrating the Intersection Observer API to trigger animations and transitions.

Work Experience

Subway October 2022 - April 2023

- Reduced customer wait times by 20% by prioritizing tasks, streamlining workflows, and improving team communication.
- Improved order accuracy and customer retention by implementing systematic checks and maintaining consistency.
- Maintained productivity and team morale during short-staffed shifts by taking on additional responsibilities and ensuring seamless operations.