YICHAO LI

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Education

University of Michigan, Ann Arbor **Aug 2020 – Present**

Bachelor of Science in Computer Engineering

GPA: 3.51/4.00

- **Certificate of Honor**: Dean's Honors List F20, W21
- **Coursework:**
  - **Circuit**: Introduction to Signals and Systems, Introduction to Logic Design, Digital Integrated Circuits
  - **Programming**: Programming and Introductory Data Structures, Data Structures and Algorithms
  - **Embedded Systems**: Introduction to Computer Organization, Introduction to Embedded Systems, Advanced Embedded Systems

Skills

- Programming Languages: C++, C, Python, Java, Git/GitHub (proficient), HTML, CSS, JavaScript, MySQL, DLang, MATLAB, OpenGL (basic)
- Embedded Systems: Linux, Arduino IDE, Raspberry Pi (proficient), ARM Assembly, FreeRTOS, Verilog, PCB design, Soldering, 3D-printing (basic)
- Circuit Analysis tools: Oscilloscopes, Waveform generators, Digital Multimeter (proficient)

Experience

Multidisciplinary Design Program, Ann Arbor, MI **Jan 2023 – Present**

- Design and assemble a Proximity Warning Alert System for use of construction vehicles for Walbridge Corporation.
- Reduce the cost of the system by 30% by researching and selecting appropriate hardware for the system.
- 3D-print protective casing for hardware components of the system.
- Compile multiple executive summaries reporting literature review, risks and contingency plans, and testing guidelines to Walbridge Corporation at different stages of the project.

Projects

Remote-controlled Server Maintenance Robot, Ann Arbor, MI **September 2023 – Present**

- Develop and implement control algorithms and Wi-Fi communication code in python for a remotely controlled robot that can perform simple server maintenance tasks such as power cycling and pulling out cables.
- Research and apply inverse kinematics to achieve precise control of the robotic arm.

Accessible Microscope for physically impaired people, Ann Arbor, MI **May 2023 – Aug 2023**

- Designed and implemented an add-on device for Olympus microscopes for it to be controlled hands-free using Arduino Uno R3 and two-way foot pedals.
- Wrote code that translates pressing pedals to moving a motorized stage.
- Mounted foot pedals on a wood panel and soldered wire connections between foot pedals and the Arduino.

Virtual Face Renderer, Ann Arbor, MI **March 2023 – April 2023**

- Utilized and modified open-source library Inochi-2D for rendering a virtual avatar.
- Ported Inochi-2D to OpenGL ES 2.0 standard to make it compatible with an STM32 board with Arm Cortex A7 chip.
- Made binding between to make binding between Inochi-2D (written in D) and driver code of the project (written in C) by modifying Inochi-2D-C library.

Activities

Thus Spoke Ann Arbor, Scenery Crew, Ann Arbor, MI **September 2023 – Present**