Clara Wong

github.com/clarawong20 clarawong20.github.io linkedin.com/in/clarawong20 clarawong20@gmail.com

Highlight of Qualifications

- Developed and tested code for LIN communication for automotive vehicles; utilized C; debugged using oscilloscopes, and CANoe.
- Created an automated medicine dispensing machine in less than 24 hours using Raspberry Pi, Arduino, Python, and C++ in a fast-paced, team environment for an award-winning hackathon project.
- Independently developed a food discount app, utilizing React Native, HTML, CSS, JavaScript, and Google and Yelp APIs.
- Utilized Python, Raspberry Pi, and sensors to create an assistive CPR device. Collected and interpreted data from the device to improve user experience and device functionality.
- Collaborated with engineers, surgeons, and professors from SickKids Hospital to create a surgical craniosynostosis simulation model that meets the requirements and needs of medical students and fellows.
- Displayed exemplary leadership and communication skills when leading CAD workshops for the engineering faculty.

Education

McMaster University September 2021-Present
Bachelor of Electrical and Biomedical Engineering *Current GPA: 3.5/4.0*
Relevant Courses: Data Structures and Algorithms, Engineering Design, Circuits and Systems, Calculus III

Skills

Languages: C/C++, Python, JavaScript, MATLAB, Simulink, HTML/CSS, LaTeX
Tools and Frameworks: Git/GitHub, Microcontrollers, Node.js, Eclipse, VS Code, React.js, React Native, SolidWorks, 3D Printing, Microsoft Excel

Work

Software Research Assistant | *C, Microcontrollers, MATLAB, Simulink* May 2023 – Present
McMaster Centre for Software Certification (McSCert), Co-op

- Developed and debugged code for LIN communication in automotive vehicles using NXP microcontrollers
- Programmed in C, worked with oscilloscopes and Vector CANoe to run tests
- Repurposed a 3-phase motor simulation to record rotor information using MATLAB and Simulink

Summer Research Student | *SolidWorks, Autodesk Inventor, 3D Printing* May 2022 – August 2022
The Hospital for Sick Children, Co-op)

- Built surgical craniosynostosis simulation models using CAD and art software, 3D printing, and silicone molding
- Demonstrated problem-solving skills and initiative by completing the project in a self-directed environment
- Accomplished assigned tasks two weeks ahead of the deadline

Store Associate | *Customer Service, Sales, Merchandising* July 2021 – May 2022
Dollarama, Part-time

- Delivered a positive customer experience by resolving customer conflicts/issues, answering inquiries, and providing courteous service
- Boosted sales by 10% by processing transactions accurately and efficiently in a fast-paced environment
- Strategically merchandised items to improve accessibility for all customers

Projects

Food Discount App | *React Native, HTML/CSS, JavaScipt, APIs* July 2023 – Present

- Conceptualized a solution to minimize food wastage in restaurants while helping consumers find the best deals
- Created wireframe sketches and employed version control throughout this ongoing self-directed project
- Leveraged the capabilities of Google and Yelp APIs to enhance project functionality

Pill Drop | *C++, Arduino, Raspberry Pi* January 2023

- Designed an automated medication dispensing machine at the Deltahacks 9 hackathon using Raspberry Pi, Arduino, Python, C++, and I2C communication in a group of 4
- First place winner of the Med X Insight Challenge and currently working with Med X Insight to further develop Pill Drop

Personal Portfolio Website | *React.js, Javascript, HTML, CSS* December 2022 – Present

- Created, maintained, and updated a personal portfolio website independently, featuring my projects and experiences
- Appropriately incorporated tools such as EmailJS and Bootstrap to improve functional and visual experience

CPR Device | *Python, Raspberry Pi* January 2022 – March 2022

- Collaborated in a group of 4 to design a CPR device that measures force and pace of compression
- Wired sensors and other breadboard components to create the device
- Presented and demonstrated our project at a design fair for over 100 people

L.I.F.T. (Lifting Independently for Fitness Training | *Product Development* March 2022 – April 2022

- Demonstrated product development and engineering design knowledge and creative problem-solving skills when pioneering a portable, wearable device that allows a real-life client with Multiple Sclerosis to perform weight-training exercises with ease
- Utilized Autodesk Inventor to create a high-fidelity prototype with multiple iterations

Extracurriculars

McMaster Chem E Car Circuitry Team October 2022 – April 2023

- Utilized Ultrasonic Sensors and Arduino to initiate chemical reactions to run a chemically powered car for the annual AlChE's Chem-E-Car Competition
- Created wireframes and utilized HTML, CSS, and JavaScript for a user-centred redesign of the Chem-E-Car site

MED-T McMaster Outreach Team September 2021 – Present

- Led an Autodesk Inventor workshop for the engineering faculty at McMaster University and the MedSprint Designathon event at the University of Toronto; supported students and created a positive, safe environment for learning
- Created educational infographics on topics in biomedical engineering

Google Developer Software Club (GDSC) September 2021 – Present

- Developed and mentored at the McMaster GDSC start-up incubator program, launched in February 2023
- Displayed organizational skills by planning technology panels for over 150 participants at MacHacks 2