Kevin Zhang

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HIGHLIGHTS OF QUALIFICATIONS

- Currently enrolled in level 3 of a 5-year Integrated Biomedical Engineering & Health Science Co-op Program specialized in Mechatronics Engineering seeking a 4-month or 8-month software engineering internship position.

- Strong communication, organization and time management skills developed through course work

- Excellent teamwork and leadership abilities developed while working on multiple projects

EDUCATION

Bachelor of Engineering, Integrated Biomedical Engineering & Health Science
Expected completion, 2025
McMaster University, Hamilton, ON

Relevant Courses:

- Programming for Mechatronics
- Data Structures & Algorithms for Mechatronics
- Analog & Digital Circuits

- Software Development
- Embedded Systems Design I
- Health Solutions Design project I, II & III

PROJECT

Nonspecific Neck Pain Remote Monitoring System   01 2023 - Present
McMaster University, Hamilton ON

Objective: Designed and developed a remote monitoring system to improve posture and mobility and reduce nonspecific neck pain in patients.

- Collaborated in a team of 4 to design and implement the system using a BNO055 sensor and ESP32 microcontroller to collect and transfer data to a computer
- Developed a graphical user interface using the Python Kivy library to control and receive data from the Arduino using serial communication.

Pacemaker Design Project   09 2022 -12 2022
McMaster University, Hamilton ON

Objective: Created a real-time software solution to monitor and control a pacemaker device.

- Led a team of 5 in designing and implementing a device controller-monitor using Python to control and receive data from the pacemaker using serial communication
- Utilized SQL libraries in Python to store and load user information in a database
- Created a stateflow model using MATLAB Simulink to compile and test the system on an FRDM K64 board.

Get a Grip   11 2020 – 12 2020
McMaster University, Hamilton ON

Objective: Designed and developed a Python program to control a robotic arm grip and organize objects in a simulated environment.

- Collaborated in a team of 2 to design and implement the program using Raspberry Pi to communicate with the grip and control its movements.

EXTRACURRICULARS

Software Engineer   09 2022 - Present
McMaster Medical Engineering Design Team – Prosthetic Team

- Research haptic feedback and discuss ways to incorporate it into the design
- Use Arduino libraries and C++ in objected orientated programming to compute the software design onto the prosthetic
- Run tests to evaluate the software

Website Developer   10 2022 - Present
STEM Fellowship

- Make edits to the existing web pages and create new web pages upon the request of the organization
- Testing the overall functionality of the web pages

Chess Club Leader   09 2019 - 06 2020
Holy Trinity School

- Demonstrated leadership skills through operating and arranging weekly club activities and meetings for members and advisor
- Hosted an in-school chess tournament that had over 50 participants
- Directly involved in recruiting new club members during club fair

SKILLS

Software/Programming:

- Proficient in Python, C++, MATLAB, Microsoft Office Applications
- Skilled in C, SQL, Arduino
- Knowledge of HTML, CSS, serial communication, Raspberry Pi, PyTorch