

ANJALI KOSURI

Mechatronics & Biomedical Engineering Co-op Student, Level III



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kosanj.github.io/personal-portfolio

HIGHLIGHTS OF QUALIFICATIONS

- Highly proficient in Python, C, C++, and Java used both in personal as well as school projects.
- Proficient with HTML, CSS, Javascript, and React.
- Knowledgeable with Selenium, MATLAB, Simulink, Autodesk Inventor, and SQL.
- Demonstrate strong analytical skills and effective communication - both one-on-one interactions and group discussions.
- Place a high value on meeting deadlines, accomplished through effective time management.
- Display a high degree of integrity, dedication, and reliability by consistently meeting both personal and group deadlines.

EDUCATION CGPA: 11.8 out of 12

McMaster University, Hamilton ON, Canada

September 2021 - Current

Bachelor's Degree in Mechatronics and Biomedical Engineering - In year 3 of the 5-year iBioMed program

- Received McMaster University Award of Excellence entrance scholarship for having a 98% entrance average
- Deans' Honour List 2021-2022 & 2022-2023

Relevant Coursework

- Data Structures & Algorithms, Software Development, Embedded Systems I, Analog & Digital Circuits
- Health Solutions Design Projects I & II, Biomedical Signals & Systems, Computational Mechanics: Statics & Dynamics
- Calculus I-IV, Linear Algebra

WORK EXPERIENCE

University Health Network, Toronto General Hospital

May 2022 - Aug 2022

At-The-Elbow, Technical Support Co-op

- At-the-elbow support for hospital staff during the rollout of the medical records software "Epic" from Epic Systems
- Required to aid staff with using the software and file tickets via ServiceNow if software issues were detected
- A fast-paced environment where our work was needed to ensure staff could provide patient care without delays

PROJECTS

Personal Portfolio Website

December 2023 - Current

- Built and maintain a personal portfolio website showcasing skills and project experience using HTML, CSS, and Javascript
- Gained familiarity with libraries including Bootstrap and Tailwind

Safety-Critical Pacemaker System

September 2023 - December 2023

- Team project using Simulink and Python to develop pacemaker modes (AOOR, VOOR, AAIR, VVIR) & and create a user interface.
- By consolidating the provided documentation, I mapped out the implementation for the modes and added hardware hiding.
- Emphasized adhering to software development life cycle protocols, including thorough documentation, and hazard analysis.

McMaster Grades Visual Dashboard App

August 2023

- A Python GUI and Selenium desktop application
- Python was used to develop a user interface with a login screen, and a splash screen, then allows users to select a term to view grades which are displayed in a user-friendly and visually appealing format.

Genetic Programming for Cart-Centering Problem

April 2023

- Project using stacks and binary trees in C++ to generate mathematical expressions to control a cart's movement.
- The code was designed to run over several generations as an implementation of reinforcement learning to find the best mathematical expression for centering the cart most efficiently.

2-in-1 Walker/Wheelchair

March 2022 - April 2022

- Team project where to build a functioning 2-in-1 walker/wheelchair high-fidelity prototype for a real stroke survivor's needs.
- Documentation of requirements based on the patient's feedback was important in the generation of the idea.
- The project was selected to be presented at the **2022 iBioMed Showcase**.

GenuCheck Knee Injury Monitoring System

January 2022 - March 2022

- Team project using Raspberry Pi and Python, to create a knee brace featuring a built-in orientation sensor that measures the angle of knee flexion and outputs a vibration if the physician set limit is exceeded.
- A bar graph that showcases the frequency of knee angle exceedances per day over the past 7 days is generated. The graph updates automatically each time the knee angle exceeds the limit and when a new day commences.