Yousef Moussa

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EDUCATION

UNIVERSITY OF ALBERTA
BSc in Computer Eng Co-op
Sept. 2022 - Present | Edmonton, AB
Expected grad May 2027
Honour Roll
Cum. GPA: 3.9/4.0

COURSEWORK

Intermediate Programming
Engineering Analysis & Design
Engineering Mechanics
Electrical Circuits • Digital Logic Design

AWARDS

• 3rd Place in Albertaloop's Mechatronic Showdown
• Gold in APEGA's Science Olympics
• Faculty of Engineering Iron Standard Entrance Scholarship
• Hussein A. Super Math Award

SKILLS

PROGRAMMING
C • C++ • Python • VHDL
OpenSSH • Virtual Machines

SOFTWARE
Altium • EasyEDA • TinkerCAD
GitLab/GitHub/Git • Arduino IDE
MS Office • LTspice • Webflow
Vivado • WaveForms • SketchUp

PROFESSIONAL SKILLS
Time Management
Balancing a 6-course load, Dean's Research Awards, Robotic Clubs, Part-Time Work, and personal projects.

Communication
Excellent and Respectful verbal and written communication skills

Teamwork
Experienced working in team environments of varying sizes

Leadership
Proven leadership in Robotics and E-Commerce projects, with proficiency in public speaking

Languages
Fluent in English, and spoken Arabic

EXPERIENCE

DEAN RESEARCH AWARDS | Rehabilitation Robotics Lab
Sept 2023 – Present |Edmonton, AB
• Researched the history and implementation behind various methods of wheelchair cushion pressure mapping.
• Designed PCBs using Altium and EasyEDA software and soldered components for pressure and magnetic sensor circuits, coded in python on Raspberry-PI.

REHABILITATION ROBOTICS LAB | Engineering Intern
May 2023 - August 2023 | Edmonton, AB
• Used C++ to code, and designed a PCB for an Arduino-controlled force meter used in shoulder rehabilitation at the University Hospital.
• Designed PCBs and soldered components for obtaining and amplifying acoustic and electrical muscle signals with a gain of 10.
• Researched, documented, and designed PCBs using various software and components.

EXTRACURRICULAR

AUTONOMOUS ROBOTIC VEHICLE PROJECT | University Team
Sept 2023 – Present | Edmonton, AB
• ARVP is a student-run club that develops technologies in the field of robotics. ARVP currently focuses on underwater robotics and attends the international RoboSub competition annually.
• I designed engraved circuit boards using Altium and co-designed an actuation board for controlling the robots torpedo's and mechanical systems.

HACKATHON | Team Member
Nov 2023 | Edmonton, AB
• In a period of 24 hours my team of 5 developed a program to provide students with their recommended field of study and university based on their interests and needs.
• I implemented the location choice function which uses user input preferences to identify and recommend universities in Canada based on their preferred location and program.
• I coded a recursive main control program that combines functions for location, cost and university program selection, learning from user input.

HIGH SCHOOL SCIENCE OLYMPICS TEAM | Team Lead
Dec 2020 – Jun 2022 | Edmonton, AB
• Led my high school science olympic team to achieve gold and silver in the province-wide competition organized by APEGA.
• Gained experience in leadership and team management from managing the development of an Arduino-controlled automated delivery robot.

PROJECTS

• Designed circuits utilizing Raspberry-Pi for Temperature, Pressure and Magnetic sensing and coded them in python.
• Designing an autonomous, Raspberry-Pi multi-speaker synchronized home audio system.
• Developed a program for Huffman style file compression and decompression.
• Designed and constructed a scale-model amusement park ride with a custom brush-less motor circuit.