Abdul Rahim Khan

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Highlights of Qualification

· Currently enrolled in **level 3 of a 4-year Mechatronics Engineering** Co-op program at McMaster University. Seeking an **8 or 12-month** Co-op position starting **Fall 2024**.

· Enhanced technical skills in **3D solid modeling (CAD)** and **simulations** in **Autodesk Inventor** through the Engineering Design and Graphics course and multiple projects.

· Skilled in programming and hardware description languages such as **C/C++**, **Python** and **Verilog.**

· Strengthened **critical problem-solving** through the involvement in various engineering projects from the Engineering Course.

· Developed **great teamwork skills** while working alongside other colleagues in a work environment.

Education

Bachelor Of Engineering, Mechatronics Engineering (Co-op) | Sept 2021 – Present | McMaster University, Hamilton, ON

· Achieved a grade point average of **3.8** on a **4.0** scale in the **Winter 2024** term; Dean's Honour for all semesters.

· Awarded the Faculty of Engineering Award of Excellence for achieving an admission average over 95% in high school.

Projects

Soft Processor on FPGA

· Designed a soft processor on the DE1-SoC board (FPGA) with its own allocated memory component (RAM/SDRAM) and compiled C code on it to test its functionality/behavior.

Reaction Time Tester

· Programmed a DE1-SoC board (FPGA) to behave as a reaction time game between two users using sequential and combinational login in Verilog HDL.

Temperature-controlled Fan

· Programmed a STM32F429 microcontroller to detect the temperature from a temperature sensor and control the speed of a 24VDC fan accordingly.

Work Experience

Parts Assistant | S&C Electric Canada   **June 2023 – Aug 2023**

· Assisted in parts' delivery to different assembly departments with reference to engineering drawings.

· Worked on mechanical and electrical sub-assemblies for Vista SD Switchgear Motor Operators and 6801M Automatic Switch Operators.

Assembler | S&C Electric Canada   **June 2022 - Sept 2022**

· Used a dielectric strength tester (Hipot Test) to ensure motors and circuit boards are adequately insulated.

· Worked on motor assemblies and mounting plates for Vista SD Switchgear Motor Operators.

- Installed mechanical gears and bearings in a gear housing assembly and attached to motors using power and hand tools.
- Accurately connected electrical wire crimps to the corresponding wires of the motor while referencing engineering drawings.
- Utilized a helium leak detector to ensure the Vista SD Operator's leakage rate is below a certain threshold and recorded information onto datasheets.

Skills & Abilities

- Proficient in **AutoCAD, Autodesk Inventor, Fusion 360, Maple,** and **MATLAB.**
- Knowledgeable in **C/C++, Python** and **Verilog.**
- Confident in working with **electrical breadboard circuits and debugging.**
- Experienced with **STM32**, **Arduino Boards** and **FPGAs.**
- Experienced in using **Git** and **Linux subsystem.**
- Capable of using **power** and **hand tools.**
- **Mastery** in **Word, Excel, and PowerPoint.**
- **WHMIS** trained

Extracurricular Clubs

Structural Sub-Team Member | McMaster Rocketry Club | Jan 2022 – Apr 2023

- Developed strong teamwork skills when working on different task and challenges such as designing a payload idea to be placed in the Rocket built for Launch Canada.