

# Duncan McRae

Engineering Student

3ph, 133 Sweetland, Ottawa, ON, K1N7V1

613-330-3436

smcra022@uottawa.ca

[www.linkedin.com/in/duncan-mcrae-620979288](https://www.linkedin.com/in/duncan-mcrae-620979288)

## SUMMARY OF QUALIFICATIONS

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- Fourth year student in Physics and Electrical Engineering at the University of Ottawa.
- Adept in multiple CAD software through projects and coursework.
- Experienced in several coding languages including Python, C/C#, HTML, VAB, MATLAB.
- Excellent practical problem-solving skills from experience in construction and agriculture.

## EDUCATION

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### Honours BSc Physics and BAsc Electrical Engineering (CO-OP)

University of Ottawa, Ottawa, ON. / 2021-Present

- CGPA 7.7 / 10
- Deans Honours list 2022, 2023

#### Coursework:

*Physics:*

Waves and Optics, Mechanics,  
Thermodynamics, Quantum Mechanics

*Electrical engineering:*

Electronics, Computer Architecture,  
Electricity and Magnetism, Signals and  
Systems, Communication Systems

## SKILLS

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#### Computer Skills:

- SOLIDWORKS
- Onshape
- Multisim
- Microsoft Office
- Coding languages:  
Python, C, MATLAB, HTML, VBA

#### Technical skills:

- Circuit analysis and design
- Equipment maintenance and repair
- Machinery operation
- Metalworking
- Woodworking
- Welding
- Soldering

#### Soft skills:

- Teamwork and collaboration
- Verbal and written communication
- Problem-solving
- Autonomy

# PROJECTS

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## **Engineers Without Borders**

University of Ottawa, Ottawa, ON. / Jan. - Mar. 2023

- Worked with fellow engineering students to design new systems for Mazi Ltd. in Kenya using SOLIDWORKS.

## **Second Year Engineering Design Project**

University of Ottawa, Ottawa, ON. / Jan. – Apr. 2022

- Worked with team of engineering students to design accessibility part for the Tetra Society of North America.

## **First Year Engineering Design Project**

University of Ottawa, Ottawa, ON. / Sept. – Dec. 2021

- Designed and programmed applications for Zafin using various programming languages and platforms.

# EXPERIENCE

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## **BluMetric Environmental Inc. CO-OP / Carp, ON. / Jan. – Aug. 2025**

- Disassembled and assembled water filtration units.
- Created documentation for assembly of various water filtration units.

## **Farm Hand / Charlottengro Farms Inc. / Williamstown, ON. / 2020 – 2023**

- Operated, maintained, and repaired equipment.
- Installed new equipment when necessary.

## **Farm Hand / Heidi Farms Inc. / Bainsville, ON. / 2016 – 2023**

- Performed multiple roles in milking operations during early and late hours.
- Operated equipment during harvest season.

## **Labourer / Dave Lawson Woodworking Ltd. / Jasper, AB. / Sept. – Dec. 2020**

- Operated construction equipment and power tools.
- Applied construction techniques including reinforced concrete, framing, insulation, and roofing.