

# Michael McDonald

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## **EDUCATION**

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**Concordia University** – Gina Cody School of Engineering, Montreal, Quebec

Sept 2022 – May 2027

*Bachelor of Engineering, Major in Mechanical Engineering*

Clubs: Baja SAE (Society of Automotive Engineers) Member

## **WORK EXPERIENCE**

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**Ziptrek Ecotours**, Mont-Tremblant

Jun 2023 - Oct 2025

*Guide, Seasonal*

- Operated, monitored, and supported a multi-line zipline system, ensuring compliance with load limits, safety factors, and standardized operating procedures during continuous daily use
- Conducted pre-use equipment checks and participant briefings, translating technical and safety-critical information into clear, user-friendly instructions to ensure correct system use and risk mitigation
- Recognized by peers as employee of the week, reflecting strong teamwork, reliability, and ability to collaborate effectively

**General Laborer / Construction Assistant**, Mont-Tremblant

May 2020 - Oct 2022

*Self-Employed, seasonal*

- Supported residential construction projects through all phases, assisting skilled trades with structural work including landscaping, foundations, framing, trusses, roofing, insulation, and general finishing
- Operated and maintained heavy and motorized equipment, ensuring safe operation and minimizing downtime through proper inspection and maintenance
- Coordinated and executed transportation of construction materials, equipment, and vehicles including a remote lake-access site via barge, requiring careful planning and logistics management

## **PERSONAL PROJECTS**

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**Motorized Shopping Cart**

Oct 2022 - Jan 2026

- Designed and built a fully functional 420cc motorized shopping cart with CVT drivetrain and hydraulic brakes, achieving reliable low-speed torque and controlled stopping performance.

**3D Printed RC Plane**

Feb 2025 - Apr 2025

- Manufactured and assembled a flight-ready RC J-3 Piper Cub by 3D printing the airframe and integrating electrical systems (motor, ESC, servos, receiver), resulting in stable and responsive flight performance

**Designed & 3D Printed Model Home**

Jan 2025 - Feb 2025

- Modeled and 3D printed a detailed scale model of a residential cottage in SolidWorks, producing an accurate physical prototype with high dimensional fidelity

## **ACHIEVEMENTS OUTSIDE OF ACADEMIA**

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**Bicycle Touring**

*Self-organized, team of two*

- Faro, Portugal → Geniva, Switzerland: 3500km over 50 days  
May 2024 - Jul 2024
- Victoria, BC → San Francisco, USA: 2500km over 30 days  
May 2022 - Jun 2022

## **SKILLS**

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**Language Skills**: English (Native), French (Proficient)

**Technical**: SOLIDWORKS (Advanced), C++ (Proficient), Autodesk Fusion 360 (Introductory), MATLAB (Introductory)

**Practical**: MIG Welding, 3D Printing, CNC Milling

**Certifications**: WHIMIS Certification, EHS Training (Environmental Health and Safety), OHS Training (Occupational Health and Safety), First Aid & CPR Level C