# Lightning MacQueen

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Eligible for 4- or 8-month co-op placement starting January 2026

## Education

**Bachelor of Technology Co-op (BTech)** | *McMaster University* **2024 – 2029**

*Automotive Engineering Technology*

- Enrolled in Level 3 of a multi-disciplinary program combining mechanical engineering, electrical engineering, mechatronics, materials science, and business management
- Working toward 3 concurrent credentials: an undergraduate degree from McMaster's Faculty of Engineering; and advanced diploma in Mechanical Engineering Technology, and an ACBSP and CIM-accredited Business Management Certificate

## Experience

**Mechanical Design Engineer Co-op** | *Evertz Microsystem Ltd., Burlington* **May - Aug 2025**

- Designed and optimized mechanical components and assemblies using SolidWorks, resulting in a 15% reduction in material costs
- Conducted finite element analysis (FEA) using ANSYS to ensure structural integrity and performance, reducing failure rates and increasing overall durability of components
- Collaborated with cross-functional teams to develop prototypes and improve design efficiency, exemplifying communication skills and proficiency in design workflows
- Utilized CNC machining and 3D printing for rapid prototyping, highlighting manufacturing skills



## Projects

**Customized Drone** | *Personal Project* **Sept 2026 – Feb 2027**

- Designed and built a quadcopter drone from scratch, highlighting ability to self-learn and prototype
- Integrating mechanical, electrical, and software systems using Arduino, Fusion 360, and MATLAB
- Modeled a lightweight drone frame and assembled brushless motors, ESCs, and LiPo power system
- Recruited assistance from peers in mechanical, electrical, and mechatronics engineering, exemplifying project management skills, collaboration and networking abilities in long-term projects

## Extracurricular Activities

**Mechanical Sub-Team Member** | *McMaster University Mars Rover Team* **Sept 2024 – April 2025**

- Utilized SolidWorks for 3D modeling and ANSYS for FEA, improving durability of rover arm
- Designed and fabricated mechanically optimized components, reducing rover weight by 5 kilograms
- Performed field testing and troubleshooting, leading to decrease in motor and robotic arm failures
- Collaborated with electrical and software sub-teams to integrate mechanical systems, enhancing overall rover functionality

## Additional Skills

**Software:** Autodesk Inventor, Simulink, Python, C/C++
**Certifications:** G-class driver's license