

Khaled Megahed

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SUMMARY

MEng in Engineering Science with a mechanical and mining focus, and a BEng from the Department of Mechanical and Aerospace Engineering. Strong foundation in mechanical design, FEA, CAD, hydraulic systems, quality control, FMEA, and tolerance analysis. Interested in supporting equipment installation, mechanical construction, QA/QC, commissioning, and field engineering in mining and remote-site environments.

EDUCATION

Master of Engineering, Engineering Science - with mining-relevant coursework Laurentian University – Sudbury, ON	Aug. 2026
Bachelor's Degree from the department of Mechanical & Aerospace Engineering Carleton University – Ottawa, ON	June 2024

SKILLS

TECHNICAL SKILLS:

Mechanical Design & Analysis: SolidWorks, CATIA, Fusion 360, ANSYS FEA/CFD, GD&T

Construction / QA-QC Support: FMEA, ISO compliance, quality checks, design review

Manufacturing & Fabrication: CNC machining, adaptive milling, contour milling, design for manufacturability

Programming & Data: Python, MATLAB, C++, Simulink

Field Strengths: Safety compliance, team coordination, equipment handling, remote/rotational work readiness

WORK EXPERIENCE

Strategic Aviation	Aug. 2024 – Feb. 2025
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Ground Operations Agent

- Worked in a fast-paced, safety-critical operations environment, coordinating with crews to complete equipment handling, loading, and aircraft turnaround tasks on schedule.
- Followed strict safety procedures while operating around heavy equipment, aircraft, ground power units, and active ramp operations.
- Communicated with multiple teams to resolve operational issues and maintain safe, efficient workflow.

PROJECT EXPERIENCE

Mechanical Linkage Design & Manufacturing Optimization	Jan. 2024 – Apr. 2024
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Self-Led

- Designed and optimized a mechanical linkage using CAD, FEA, and design-for-manufacturability principles to improve strength, weight, and fabrication efficiency.
- Developed CNC machining toolpaths and manufacturing documentation using adaptive milling and contour milling strategies for precision part production.
- Applied tolerance selection, quality checks, and ISO-based review practices to support reliable mechanical component fabrication.

Hydraulic Actuation System Design

Sep. 2023 – Apr. 2024

Team Member

- Designed and analyzed a hydraulic actuation system with focus on reliability, performance, manufacturability, and cost-effective production.
- Supported mechanical system integration by evaluating component layout, fabrication feasibility, and operational requirements.
- Collaborated with a multidisciplinary team to complete design reviews, technical documentation, and engineering trade studies.