

YASSINE BAKHOUC

617-909-0160 | bakhouch.ya@gmail.com | Boston, MA | www.linkedin.com/in/yassine-bakhouch/

EDUCATION

Northeastern University, College of Engineering, Boston, MA

June 2026

Candidate for Bachelor of Science in Mechanical Engineering

GPA 3.76

Honors: University Honors Program, Dean's List

Courses: Aeronautical Propulsion, Computational Fluid Dynamics, Electrical Engineering, Fluid Mechanics, Thermodynamics, Dynamics, Statics, Material Science, Mechanics of Materials, Mechanical Design

Activities: Mars Rover Team | Downhillers | ASME | Intramurals (Softball, Basketball, Soccer)

SKILLS

Applications: SolidWorks, Onshape, ANSYS Fluent, AutoCAD, Excel, Adobe Premiere Pro, QGC, GD&T (Basic)

Programming: MATLAB, C++ (Basic)

Fabrication: SMT soldering, PCB population, harnesses design and creation, rapid prototyping, lathes, chop saws, manual mills, band saws, 3D printing (FDM, SLA), handheld and power tools.

Languages: English, Arabic

WORK EXPERIENCE

MORSE Corp., Cambridge, MA — *Mechanical Engineer Co-op*

July 2025-Present

- Owned and designed a surrogate vehicle asset used as a full-scale testbed for the DARPA Albatross program.
- Integrated complex electronic systems into novel aviation and aerospace applications to enhance fixed-wing, multirotor, octocopter, and paraglider flight performance as well as lidar data collection.
- Enabled and supported local and customer flight tests through the buildup of avionics suites and flight assets, meeting high-volume demands on short turnarounds.
- Redesigned a sub-scale flight asset to reduce weight by 12% and increase serviceability both in the field and lab.
- Assembled complex PCB designs, created electronic cable harnesses for rapid field deployment, and assembled avionics enclosures for flight assets, optimizing internal layout and enabling flight testing through reliable integration and QC processes.
- Performed hardware handling, assembly, integration, and troubleshooting during tight build and test phases.
- Conducted design reviews, authored detailed technical documentation, maintained asset tracking, configuration control, and technical documentation throughout the test lifecycle.

Apeiron Labs Inc., Cambridge, MA — *Mechanical Engineer Co-op*

July 2024-July 2025

- Designed, fabricated, and assembled mechanical and electrical systems for AUVs delivering multiple fully functional systems, while also providing servicing in the field and lab.
- Led offshore testing of vehicles to verify new features, characterize performance, and test reliability.
- Engineered and operated a test apparatus to allow for AUV pump pressure testing at 100m depth in the lab to enhance testing capabilities and reduce the need for testing at sea, which in turn reduced operation costs.
- Conducted extensive oil pump pressure testing to analyze key pump and motor characteristics, ensuring reliable performance at 400-meter depths, and authored detailed documentation to validate findings.
- Collaborated closely with a multidisciplinary team to resolve critical challenges and achieve company goals.

PROJECTS

Mars Rover Team, Northeastern University — *Mechanical Co-Lead*

September 2022-Present

- Redesigned and fabricated a rocker-bogie suspension system by conducting comprehensive material research, enhancing its performance and efficiency by reducing overall bogie weight by 8% and increasing strength by 15%.
- Developed new designs for the suspension system and custom brackets, optimizing structural integrity and reducing chassis rocking and vibration.
- Manufactured and designed mounts for various internal and external components of the rover.
- Designed a novel sheet-metal chassis for a four-wheel suspension system to improve serviceability, maximize strength, reduce weight, and improve cooling through ventilation.
- Co-led a team of 30+ members through onboarding, our research, design, and build phases, and facilitated a welcoming and inclusive environment.