

# Sakib Azgar

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## EDUCATION

### Northeastern University, Boston, MA

May 2026

Candidate for BS in Mechanical Engineering | Minors in Mathematics and Aerospace Engineering

- Relevant Coursework: Robotic Sensing & Navigation, Thermal System Analysis & Design, Dynamics, Computational Fluid Dynamics, Measurement & Analysis, Dynamics, Fluid Mechanics, Thermodynamics, Statics, Mechanics of Materials, Material Science, Electrical Engineering, Probability & Statistics, Public Speaking
- Activities: AerospaceNU, NURover, NU Students for the Exploration and Development of Space, NUAGE, ISNU, American Society of Mechanical Engineers (ASME)

GPA: 3.46

## SKILLS

**Machining/Electrical:** 3D Printing (FDM, PolyJet, SLA), Laser Cutting, CNC Milling and Lathe, Soldering, Circuit Wiring, Table Saw, Tube Bending, Tapping, Drilling, Oscilloscope, Microscope, Instron Machine

**Software:** SolidWorks ([CSWA](#)), Fusion 360, AutoCAD, Creo, KiCad, PneuDraw, OpenRocket, Microsoft Office Suite, Audacity, Adobe Premiere Pro, Davinci Resolve, Wix, WordPress

**Programming:** MATLAB, Python, C++, Arduino IDE, Latex, Mathematica

**Technical:** Sheet Metal, 80-20 Framing, Geometric Dimensioning and Tolerance (GD&T), Pneumatic and Electrical Schematics, Finite Element Analysis (FEA), Validations, Design for Manufacturing (DFA), Design Failure Mode Effect Analysis (DFMEA)

**Interests:** Running, Hiking, Kayaking, Bowling, Video Editing, Furniture Assembly, Astronomy, Board Games and Puzzles

## WORK EXPERIENCE

### Snell Engineering Tutoring Center, Boston, MA | First Year & Upperclassmen Tutor – Hybrid

Sept. 2022 - Present

- Trained first year students in advanced software tools: SolidWorks, MATLAB, and Arduino.
- Facilitating one-on-one tutoring, accumulating over 500 hours of tutoring experience, and fostering comprehensive student proficiency, including first-year and upperclassmen mechanical engineering students.

### Nova Biomedical, Waltham, MA | Manufacturing Engineer – Co-op

Jun. 2023 - Dec. 2023

- Designed and refined over 80 specialized acrylic and ABS plastic 3D printed fixtures for diverse departmental needs, optimizing operational efficiency across different manufacturing lines.
- Coordinated a team of engineers to model, optimize, and develop extensive 80-20 panel framing and assembly projects, integrating 35 newly designed parts to ensure precision machining and enhanced design using SolidWorks.
- Performed wiring and soldering for electronic test equipment, drilled and tapped holes for machined parts, performed tensile testing on seals using the Instron machine, and conducted laser engraving and cutting for various fixtures.
- Drafted, edited, and managed over 30 technical documents, including engineering change orders, equipment operation instructions, assembly procedures, drawings, and maintenance instructions.

### Northeastern Connections Computer Lab, Boston, MA | COE Tour Guide & Lab Assistant – Hybrid

Sept. 2021 - Apr. 2023

- Maintain upkeep of computers and other equipment in the College of Engineering Computer Labs.
- Facilitated guidance of prospective Northeastern College of Engineering students through leading campus tours and co-moderating panel discussions.

## PROJECTS

### CIRC and URC Rover 2024 Competitions | Mechanical Arm and Mobility Engineer for NURover

Sept. 2023 - Present

- Collaborated in developing a sand auger, chassis plate assembly, ice drill, and mock lander for rover testing, contributing significantly to SolidWorks design refinements, laser cutting, and assembly processes.
- Contributed to refining adjustments on the arm, chassis, and suspension of the Mars Rover, Whatney, ensuring its optimal performance for the CIRC Canada 2024 and URC Utah 2024 competitions.

### Airframe Rocket | Mechanical Engineer for AerospaceNU

Oct. 2022 - Mar. 2023

- Coordinated with a team of four AerospaceNU students to design, build, and launch a 5-foot dual-deploy rocket reaching an altitude of 3000 feet in St. Albans, Vermont.
- Created rocket parts such as nose cone, ebay, body tube, coupler and fins using SolidWorks procured additional materials through laser cutting and 3D printing.
- Optimized launch using various Easy Mini Sensors and simulated trajectory and speed parameters of rocket via OpenRocket.

### Flexible Quadrotors | Undergraduate Researcher for College of Engineering

Jun. 2022 - Aug. 2022

- Researched and evaluated morphing 6 DOF dynamic high-speed quadrotors in proximity to obstacles.
- Prioritized time and material optimization, simulation and algorithm drafting, and obstacle testing.

### Myowearable Sleeve | Electronics Engineer (Cornerstone of Engineering I-II)

Oct. 2021 - Jan. 2022

- Collaborated with a team of four Northeastern Engineering students on the development of an innovative EMG-based sleeve capable of detecting muscle fatigue in users.
- Designed and optimized device circuitry, including integration of a surface electromyography sensor, Bluetooth module and graphical user interface for real-time feedback on sleeve usage.
- Received publication and presented work at the American Society for Engineering Education June 2022 Conference.