Mica Wen

Boston, MA | SF Bay Area, CA | Austin, TX | 510-241-5755 | wen.mic@northeastern.edu | linkedin.com/in/mica-wen/

EDUCATION

Northeastern University | Boston, MA **Expected May 2028**
Bachelor of Science in Mechanical Engineering; Minor in Robotics and Mathematics
Coursework: Differential Equations, Statics, Dynamics, Material Science, Mechanics of Materials, Thermodynamics, Fluid Mechanics, Measurement & Analysis with Thermal Science Application
Initiatives: Northeastern Electric Racing, American Society of Mechanical Engineers (ASME), Society of Women Engineers (SWE)

The King's Academy | Sunnyvale, CA | High School Diploma **Graduated May 2024**
Initiatives: FIRST Robotics (#15385)- Inspire Award (2024), Innovate Award (2021), Rock Climbing, Epee Fencing

SKILLS

Mechanical Design & Manufacturing: AutoCAD, Fusion 360, SolidWorks, CNC Machining, SLA and PLA 3D Printing, MIG/TIG Welding, Laser & Waterjet Cutting, Manual Lathe/Mill
Embedded Hardware & Systems: Arduino, Raspberry Pi, Jetson Nano, Linux (Ubuntu)
Robotics & Programming: ROS, ROS 2, Gazebo, SLAM (COLMAP), Computer Vision, Python (PCAP Certified), C++, MATLAB

ENGINEERING EXPERIENCE

Motor Cooling Student Engineer | Northeastern Electric Racing **Sept 2025 – Present**
- Test and validate liquid cooling systems for electric motors, including pumps, radiators, and coolant paths, through heating/cooling experiments under varying thermal loads to improve reliability.
- Measure radiator heat dissipation and apply heat transfer principles to interpret results and support design decisions.
- Redesign and optimize a swirl pot in SolidWorks for better coolant flow and air separation, prepare it for SLA 3D printing, and integrate cooling components within packaging and manufacturability constraints.

Undergraduate Researcher | College of Engineering, Northeastern University **Aug 2025 – Present**
Advisor: Prof. Rifat Sipahi
- Test a vision-based drone localization pipeline using Jetson Nano and stereo cameras to simulate aerial image capture.
- Evaluate 3D terrain reconstruction (COLMAP) by comparing reconstructed scenes with stereo imagery for drone simulation.
- Perform camera calibration and accuracy benchmarking using the OptiTrack motion capture system as ground truth.

Red Vest Program | Northeastern First Year Engineering Learning & Innovation Center **Sep 2025 – Present**
- Mentor first-year students in Python, debugging, and problem-solving, promoting collaboration and knowledge-sharing.
- Guide Makerspace projects through design, prototyping, and tool use.

Hardware Team | FIRST Robotics FTC | The King's Academy **Sept 2020 - May 2024**
- Designed and fabricated robot chassis and drivetrain systems, improving structure and integrating mechanical subsystems using CAD-designed hardware and 3D-printed components.
- Installed control and power systems and conducted iterative testing to optimize performance for competition.

Summer Robotics Camp Counselor | The King's Academy **Jun - Aug 2023**
- Designed and standardized a LEGO Mindstorms robotic chassis for student modifications, guided ages 9–16 through the engineering design process, programming, and mechanical skills in a mini competition.

VOLUNTEERING

Walker Mobility Redesign (Co-Lead) | The King's Academy, Sunnyvale, California **Jan 2023 – Jun 2023**
- Co-led the walker redesign by conducting requirements gathering, feasibility analysis, and CAD prototyping in Fusion 360.

Exhibit Facilitator | San Jose Tech Museum, San Jose, CA **Jan 2023 – Dec 2023**
- Guided visitors through interactive exhibits to enhance understanding of science and technology. Provided visitor support, managed inquiries, and assisted with event activities, setup, and operations.

CERTIFICATIONS

Code Foundation for ROS – December 2025
Certified Associate in Python Programming (PCAP) – August 2024
Autodesk Certified User Fusion 360 – August 2023