

Ian Kim

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EDUCATION

Northeastern University

Bachelor of Science in Mechanical Engineering

GPA: 3.86/4.0 - Dean's List

Relevant Coursework: Thermodynamics, Mechanics of Materials, Material Science, Fluid Dynamics

Boston, MA

Expected May 2027

Colby College

Bachelor of Science in Physics with Data Science Minor (Transferred after 1 year)

GPA: 4.0/4.0 - Dean's List

Relevant Coursework: Computer Vision, Data Structures and Algorithms

Waterville, ME

Sep 2023 - May 2024

WORK EXPERIENCE

Massa Products Corporation

Electroacoustic Design Engineer

Boston, MA

July 2025 – December 2025

- Designed an omnidirectional hydrophone from concept to manufacturing, including elastomer molding strategy, mechanical mounting brackets, and CNC and 3D-printed assembly and test fixtures.
- Developed COMSOL multiphysics models of ultrasonic transducers to evaluate acoustic output, mechanical stress, and electrical coupling, guiding early-stage design feasibility and iteration.
- Led development of an automated material sorting system by designing and iterating custom test fixtures via 3D-printed prototyping and developing computer-vision software in Python, reducing quality-control processing time by 80%.
- Programmed k-Wave acoustic propagation models in MATLAB to design and optimize an underwater test pond, selecting geometries that maximized controlled reverberation for reliable acoustic testing.

Northeastern University: Soft Tissue Mechanics Lab

Research Assistant

Boston, MA

Sep 2024 – Jun 2025

- Performed modal analysis in Ansys on MRI-based brain meshes to identify dominant vibration modes relevant to impact response.
- Designed and 3D-printed granular material housings to prepare test samples for Split-Hopkinson pressure bar experiments.
- Developed Python-based visualization tools to generate interactive 3D vector fields for analyzing brain reactivity under simulated collision forces.

PROJECTS

1U Cubesat – NU Aerospace

Sep 2024 – Present

- Optimized camera payload bracket design under mass constraints using SolidWorks FEA, validating structural performance.
- Fabricated and assembled flight-hardware components using CNC machining and 3D printing, producing GD&T drawings.
- Supported system-level assembly by machining and assembling structural components for a Helmholtz cage used in magnetorquer testing.

Dual Deployment Rocket

Sep 2024 – Jun 2025

- Designed and built a dual-deployment rocket system, laser-cutting and 3D-printing structural components and soldering onboard avionics.
- Simulated flight dynamics in OpenRocket to optimize stability, apogee altitude, and deployment timing.

ACTIVITIES

Motorsport Team

Freelance Music Production

Memphis, TN

Jan 2019 – Present

- Managed a team of freelance producers and artists overseeing label contracts, payments, and music clearance.
- Produced and mixed major-label releases garnering millions of streams worldwide and winning state level awards.

ADDITIONAL

Software: SolidWorks, COMSOL, Ansys, Mathcad

Programming: MATLAB, Python, Java, C++

Awards: *Base Camp Award (2025)* - Research award with funding support, selected to present at a conference

Halloran Lab Start-up Challenge Winner (2024) - Secured \$1,000 in funding through a competitive ideation and pitch competition