Edison Chen

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Education

Cornell University, Ithaca, NY   Anticipated Graduation: 5/2027
B.S. in Mechanical Engineering
Relevant Coursework: Thermodynamics, Statics and Mechanics of Solids, Dynamics, Mechanical Design, Data Science, Fluid Dynamics, Biomedical Transport Phenomena, Introduction to Aeronautics, System Dynamics, Mechanical Engineering of Materials, Mechatronics, Heat Transfer

Skills

- **Languages:** English, Mandarin

- **Programming:** Python, Java, MATLAB

- **Software:** DaVinci Resolve, Adobe Premiere Pro, Photoshop, Microsoft Office, AutoCAD, Fusion 360, SolidWorks, ANSYS Fluent, Trello

- **Technical:** Soldering, 3D Printing, Machining, Arduino, Microbeam Cutting

Experience

Donnelly Research Lab, Ithaca, NY   8/2025 – Present
Undergraduate Researcher

- Conducted 3 and 4-point bending and micro beam cutting tests to quantify bone mechanical properties.

- Applied fluorescence imaging to track microcrack initiation and propagation in bone tissue.

- Investigated the effects of Type II diabetes on the mechanical loading of bone.

Bio-Inspired Fluids Lab, Ithaca, NY   8/2024 – 8/2025
Undergraduate Researcher

- Created 3D CAD models and made prototypes to support fluid-structure interaction studies.

- Designed and validated fluid dynamics experiments, improving model accuracy by integrating experimental data.

JASA, New York, NY   6/2024 – 8/2024
Intern

- Supported program initiatives that improved community engagement participation.

- Researched and recommended operational improvements, streamlining internal processes.

Research Projects

Water-Drinking Robot, Bio-Inspired Fluids Lab   8/2024 – 5/2025

- Designed and 3D-printed a robot to replicate fluid uptake.

- Conducted experiments analyzing oscillatory backwash behavior on different viscous fluids.

- Integrated Arduino-controlled motors to regulate robotic actuation.