

RENZE (JEREMY) LI

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EDUCATION

Cornell Univeristy

B.S. Bioomedical Engineering

Ithaca, NY

Aug 2026 - May 2029

University of Illinois Urbana–Champaign

B.S. Computer Science and Bioengineering (CS+BioE)

Urbana, IL

Aug 2025 - May 2026

James Scholar Honors Program | Cancer Scholar

GPA: 4.0

PROJECTS & EXPERIENCE

Nie Lab & Biosensors Lab, University of Illinois Urbana-Champaign

Urbana, IL

Undergraduate Research and Team Lead, under Prof. Shuming Nie and Prof. Viktor Gruev

Sep 2025 - Present

- Developed an XR imaging system for image-guided tumor surgery using Meta Quest 3
- Built core XR imaging functionality in Unity, enabling XR visualization of tumor location for surgical imaging contexts via time-domain multiplexing
- Completed the majority of early-stage development independently; onboarded and trained a graduate student and established shared GitHub-based development infrastructure
- Collaborated on near-infrared (NIR) phantom design and fabrication, using SLA 3D printing to support system testing; contributed a data visualization figure to an in-progress review paper

Ten Fourteenth (Demo: 10fourteenth.com)

Urbana, IL

Founder & Independent Researcher, advised by Prof. Bruce Bunnell

Jan 2026 - Present

- Built Ten Fourteenth, a microbiome-aware precision prescribing prototype for interpretable medication risk prediction.
- Developed a Python inference engine for drug-microbiome interaction scoring and exposure/risk reporting.
- Integrated biomedical datasets into a decision-support API with confidence tracking and structured outputs.

AcadeLink (Live: acadelink.org)

Urbana, IL

Founder & Full-Stack Developer

Sep 2025 - Present

- Conceived and built an AI-powered platform helping undergraduates identify research labs aligned with their background, attracting 1000+ users to date.
- Designed and implemented a full-stack system; scraped, cleaned, and standardized 2,000+ faculty profiles across 4 colleges and 28 departments.

Medicine Delivery Soft Robot (Manuscript: [CureBotix](https://curebotix.com))

Dobbs Ferry, NY

Independent Researcher

Sep 2023 - Jan 2025

- Designed and manufactured a soft robotic system for targeted drug delivery in the esophagus, completing 4–6 major structural iterations to miniaturize (3–5 cm) using silicone-rubber fabrication, CAD, 3D printing, and Arduino control
- Built a simulated esophagus testing environment and trained an AI-based visual detection model (YOLOv5) on 100 labeled images to evaluate delivery accuracy; authored a 20-page technical paper and presented at regional, state, and international science fairs

Med-X Research Institute at Shanghai Jiaotong University

Shanghai, China

Independent Researcher, advised by Prof. Yifei Yao

Jul 2024 - Aug 2024

- Independently proposed and executed a faculty-guided research project on gastrointestinal wound recovery; conducted literature review and designed and built a two-layer bio-adhesive bandage prototype for intestinal repair
- Performed in vitro experiments (adhesion strength, lateral friction, acid/base resistance).

SKILLS

- Programming: Python, Java, C++, JavaScript
- Data / ML: NumPy, Machine Learning, Computer Vision (YOLOv5)
- Software & Prototyping: Next.js, React, Supabase, Unity
- Biomedical Research: Literature review, Bacterial culture & streak plating, PCR, Gel electrophoresis
- Hardware & Fabrication: CAD (Fusion 360, AutoCAD), Arduino, 3D Printing, Soldering