

Irene Liu

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EDUCATION

Carnegie Mellon University | Pittsburgh, PA

Aug. 2023 – May 2027

Major: B.S., Computer Science **GPA:** 4.00/4.00

Illinois Mathematics and Science Academy | Aurora, IL

Aug. 2020 – May 2023

GPA: 4.00/4.00 **SAT:** 1590/1600

Relevant Coursework: Multivariable Calculus, Linear Algebra, Differential Equations, BC Calculus, Computational Science, Machine Learning, Computer Science Inquiry, Physics Calculus-Based Mechanics, Microcontrollers

WORK EXPERIENCE

Northwestern Feinberg School of Medicine | Chicago, IL

June 2021 – Present

Biotech Research Intern

- Led 2 research projects as first author, both of which are submitted for peer-review in high impact journals
- Built a TensorFlow SVM machine learning program with signal processing algorithms and a >73% accuracy, increasing nasal disease diagnosis accessibility, and decreasing diagnosis time and cost by 3 months and \$1k+
- Automated data extraction and documentation of >1000 x-ray fluorescence microscopy scans with Python
- Collaborated with other researchers to perform data analysis and improve lab efficiency
- Inducted into most prestigious otolaryngology conference (Association for Research on Otolaryngology)
- Presented at Annual Biomedical Research Conference for Minority Students, received award of \$200

University of Chicago | Chicago, IL

June 2022 – September 2022

Computer Science Research Intern

- Designed a deep learning face generation program to create 20+ honeypot social media accounts to monitor a reverse facial recognition site (PimEyes)
- Automated data extraction and analysis of PimEyes with a Python program that leveraged VPNs and cache-clearer to circumvent PimEyes restrictions
- Supported ad-hoc projects within security and privacy lab

Encore Batavia | Batavia, IL

June 2021 – August 2021

Software Engineering Intern

- Collaborated with a Geographic Information System (GIS) expert to build a GIS map of Batavia's landmarks
- Designed a central website with HTML/CSS and JavaScript, improving digital outreach by >50%
- Established a google analytics tracking page to monitor website clicks and optimize the site by identifying low-traffic pages
- Communicated with founder and 8 board of directors regarding digital outreach and future work

SKILLS

Python, Java, Web Design (HTML/CSS, JavaScript), SQL, C, C#, Machine Learning, Data Analysis, Mathematics

AWARDS

AIME Qualifier, American Computer Science League 1st Place, National Merit Scholar, National Debate Qualifier