Lianhao Zheng

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EDUCATION

Northwestern University   Evanston, IL
*Concurrent B.A. and M.S. in **Computer Science**, Minor in **Data Science***   *Expected June 2026*
- GPA: **3.81/4.00** | Dean's List **(4/4)** | QuestBridge Scholar | LEDA Career Fellow | NU Bioscientist Grant Award | CodePath Career Preparation Fellow | Meta Above and Beyond Computer Science Fellow
- **Relevant Coursework**: Data Structures & Algorithms, Artificial Intelligence, Design & Analysis of Algorithms, Computer Systems, Generative Methods, Scalable Software Architectures

TECHNICAL SKILLS

Languages: Python, C, C++, JavaScript, Bash, SQL
Software/Tools: React, React-Native, Node.js, Three.js, p5.js, Tailwind CSS, Unix, AWS, Expo, Git
Libraries: Pandas, NumPy, Matplotlib

PROJECTS

Personal Website | *React, Tailwind CSS, Netlify*
- Utilized Three.js and React Three Fiber to develop immersive 3D graphics, Framer Motion for animations, and Tailwind CSS for more visually appealing design
- Integrated responsive design techniques and optimization techniques like Suspense and Preload

Mask Up | *FaceMesh Detection API, JavaScript, Git*
- Developed a Face tracker that utilizes Face mesh detection API to create masks that follows user movements
- Employed P5.js and Vue.js to incorporate animations and interactive graphics, elevating the website's visual appeal and enhancing user experience

PROFESSIONAL EXPERIENCE

Software Engineer   Jan. 2024 – Present
Institute of Electrical and Electronics Engineers   *Evanston, IL*
- Developed a mobile application using React Native and Expo Go to address the problem of students lacking real-time information on campus occupancy levels
- Implemented the frontend of the app, including a campus map with dynamic markers, building profiles, and an status update page
- Built the backend using Flask and MySQL, enabling user signup, login, and storage of crowdedness information with timestamps
- Conducted a pilot study on 100+ users, gathered feedback, and made improvements based on user preferences
- Successfully deployed the application and conducted a comprehensive user study to evaluate effectiveness

Undergraduate Teaching Assistant   Sep. 2023 – Dec. 2023
Northwestern University Department of Computer Science   *Evanston, IL*
- Advised 400+ students in Fundamentals of Computer Programming class for 6-10 hours weekly in office hours
- Worked closely with Professor Connor Bain to give feedback on student code and examinations

Artificial Intelligence Research Assistant   June 2023 – Aug. 2023
Mentor: Keara Lane, PhD (The Lane Lab, Department of Molecular Biosciences)   *Evanston, IL*
- Optimized Deep Learning models to accurately classify over 9000 tiff images of macrophages during Salmonella Typhimurium infections with a 78% accuracy rate
- Designed a Python3(Numpy, Matplotlib, Pandas) and Jython/Fiji-ImageJ based pipeline, leveraged Globus Data Management and High Performance Computing Clusters (HPC) to streamlining bioimage analysis workflows
- Developed Bash Scripts to automate workflows for parallel image processing and analysis on HPC, utilizing Git and GitHub version control to facilitate collaboration on the codebase
- Conducted a comprehensive analysis of the current research landscape for *Applying Deep Learning Algorithms To Track Cells In Time Lapse Microscopy* Project, and presented in the Annual Undergraduate Research Symposium