

Louis Zhao

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EDUCATION

- Columbia University in the City of New York** New York, NY
 - Master of Science in Biomedical Engineering, Specialization: Neuro Engineering* *Expected Dec 2024*
 - Bachelor of Science in Computer Science; GPA: 3.74* *Sep 2021 – May 2023*
 - Relevant Coursework: Artificial Intelligence, Computer Vision, Natural Language Processing, Databases, User Interface Design, Human-Centered Design and Innovation, and Web App Development*
- Brandeis University** Waltham, MA
 - Bachelor of Arts in Computer Science* *Aug 2018 – May 2021*

EXPERIENCE

- Mortimer B. Zuckerman Mind Brain and Behavior Institute at Columbia University** New York, NY
 - Research Assistant, supervised by Professor Tom Maniatis and Dr. Erin Flaherty* *Sep 2023 – Present*
 - Biomedical Research in Wet and Dry Lab Environments:** Engage in the research of neuro diseases such as autism within a wet lab context while applying Python for the purpose of experiment data analysis.
- Research Computing Services Lab at Columbia University** New York, NY
 - Research Assistant, supervised by Professor Junfeng Yang and Dr. Yaniv David* *Jan 2023 – May 2023*
 - Computational Research and Open Source Contributions:** Enhanced the existing Python codebase that helps open source communities on Github to regularly upgrade external packages, implementing graph visualizations and delivering comprehensive reports to 3 open-source projects.
 - Data Analysis and Automation:** Automated and optimized data processing and analysis using Python to extract valuable insights and generate human-readable tables from system output, reducing the manual effort by 90%.
- Changing Room** New York, NY
 - Software Engineering Intern* *May 2022 – Aug 2022*
 - Chrome Extension:** Enhanced Chrome Extension by deploying user-friendly technologies such as Svelte framework, JavaScript, and Python. Implemented 5+ new features to facilitate user experience, such as displaying overall ratings and recommendations when visiting unsupported brand websites. Achieved a 40% faster loading time for improved performance.
 - Web Development:** Enhanced the website using Python, JavaScript, and PostgreSQL. Accomplished 10+ new features, fixed over 20 bugs, and reduced computing time by 30%. Improved documentation and comments to make the code easier to understand and maintain.
 - Agile Development:** Structured ongoing improvement by delivering new features based on user requests. Implemented an average of 2 new features per week, ensuring products met evolving needs and preferences of its users. Adapted to changing requirements and worked within an iterative development approach.
- echo3D** New York, NY
 - Software Engineering Intern* *May 2022 – Aug 2022*
 - Web Development:** Developed a web-based augmented reality (AR) game using JavaScript and Python, achieving a 30% faster rendering speed and 70% reduction in data storage
 - iOS Development:** Built an iOS AR application using Unity and C#. Leveraged echo3D API to enable researchers to interactively explore neuroscience models such as brain and spinal cord, driving an increase in educational applications relevant to pharmaceutical and biotechnological research needs.

LEADERSHIP & PROJECTS

- Columbia Engineering Graduate Student Council:** Department Representative of Biomedical Engineering and Member of the Budget Committee.
- Paws and Tails:** Led a team of 3 to develop a web platform connecting pet breeders with potential customers. Achieved 1000+ user activities and 5 minutes average engagement time in the first three month.

SKILLS

- Programming Languages:** Python, Java, SQL, HTML/CSS/Javascript (Web Development), Ruby, C
- Technical Skills:** Wet Lab Research, Dry Lab Data Analysis, Database Management, Project Management, Microsoft Office