# Wenye Xiong

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## **RESEARCH INTEREST**

Multimodal Machine Learning, Computer Vision, AI for Healthcare & Life Science. Generative AI, Bioinformatics.

## **EDUCATION**

### ShanghaiTech University

B.E. in Computer Science and Technology

- Overall GPA: 3.78/4.0 (rank 16/173 in CS major, 24/266 in school)
- Major GPA: 4.0/4.0
- Relevant Coursework: Introduction to Information Science and Technology(A+), Introduction to Programming(A), Algorithms and Data Structures(A), Introduction to Machine Learning(in progress), Artificial Intelligence in Medical Imaging(in progress), Computational Science and Engineering(in progress), Computer Architecture (in progress), Protein Design(A+), Game Theory(A)

## **AWARDS & HONORS**

• MERIT STUDENT (Top 2% in school), Shanghai Tech University, 2023-2024

Virtual Reality and Visual Computing Center (VRVC), ShanghaiTech

- AI HONOR CLASS (Honors Degrees), Shanghai Tech University, 2024-2027 (expected)
- GOLD MEDAL, International Genetically Engineered Machine Competition (iGEM), 2024
- 2023 OUTSTANDING MENTOR ASSISTANT, ShanghaiTech University, 2023

## EXPERIENCE

Undergraduate Research Assistant, Supervisor: Dr. Minzhang Li

- Exploring the application of Deep Learning and latest Diffusion Model in Protein Structure Prediction
- o Contributed to the development of ShanghaiTech Fold, a diffusion-based model for all-atom biomolecular assembly
- Perception, Learning and UnderStanding (PLUS) Lab, ShanghaiTech Undergraduate Research Assistant, Supervisor: Prof. Xuming He
- Exploring the cutting-edge methods of Layout and Scene Graph based Diffusion Model, and applying it to the task of Medical Image Generation.
- Implementing the Scene Graph Diffusion Model with newest Training-free Method.

### PACIFY project for iGEM 2024 [wiki]

#### Team Member

- Performed homology modeling to obtain the structure of  $\beta 10 E5 \beta 11 K5$ , and used AlphaFold 2 to predict the structure of  $\beta 1 - \beta 9$
- Operated protein preparation and molecular dynamics simulation
- Developed devices based on PID algorithm to address the issue of itchiness without doing harm to the skin

#### MakeSense, ShanghaiTech First SensUs Team

Co-Founder & Leader of Data Analysis Team

- Developing a wearable device based on biosensors to continuously monitor acute kidney injury (AKI) biomarkers.
- Investing in an enzyme-based creatinine sensor and QCM (Quartz Crystal Microbalance) platform.
- Leading the data analysis team to develop a machine learning model to predict the AKI risk.

#### Shanghai, CHN September 2023 - June 2027 (expected)

Jan. 2025 - present

June 2024 - Oct. 2024

Dec. 2023 - Oct. 2024

Aug. 2024 - present

## **TECHNICAL STRENGTHS**

Programming Languages Framework & Toolchain Misc Matlab, Python, C&C++ PyTorch, Git, Docker, Linux, Rosetta LAT<sub>E</sub>X, Markdown, IELTS 7.5(6.5)

## **COURSE PROJECTS**

- NTU Machine Learning 2022 Spring by Prof. Hung-yi Lee [code]
- De Novo Protein Design of Odorant Binding Proteins for VOCs Recognition [code]