

Licheng Zheng

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Education

Shanghai University

Sep 2021 – Jun 2025(Expected)

B.Eng in Artificial Intelligence

Shanghai, China

- GPA 85.3/100
- Supervised by Shaorong Xie, dean of Computer Engineering and Science.

Internship

Shanghai Huixi Technology Co. Ltd.

Jul 2024 – Now

Data Development Intern of Algorithmic Toolchain Group

Shanghai, China

- Design and develop **Python** workflow tasks of self-operated closed-loop data platform.
- Deploy and finetune prompts of **multimodal LLMs** towards better and automatic data annotation and mining.
- Write **Python-Database** interfaces to add, delete, update and retrieve large amounts of data that stored in **PostgreSQL** and **AWS**.
- Speed up I/O of specific files(JPGs, PKLs, and PCDs) using **C++** and **Pybind11** with an average of **50%** faster.

Shanghai Lightwheel AI Co. Ltd.

Dec 2023 – May 2024

Research Intern of 3D-reconstruction Group

Shanghai, China

- Optimize 3D reconstruction algorithm to auto-driving scene and produce better results.
- Participate in **Python** development automation evaluation, and the whole process automatically performs weekly algorithm evaluation.
- Using **Vue+Flask** to develop front-ends and back-ends platform, and evaluation metrics are stored using **PostgreSQL**, perform real-time reading, data statistics, and online visualization.
- Develop **Dockerfile** to package the whole process environment and realize a unified development environment for multiple servers.

Institute for AI Industry Research, Tsinghua University

Jun 2023 – Jan 2024

Research Intern, Group Member of DISCOVER Lab

Remote/Beijing, China

- **Research Topic:** Point-based Scene Warping for High-quality Neural Radiance Fields
- **Mentor:** Hao Zhao, Yongliang Shi and Zirui Wu.
- **Overview:** Using Point-based method and design a warping function to minimize the holes in Neural Radiance Fields' rendering, and improve the overall quality of the whole 3D-reconstruction.
- **Content:** Developed project *pointnerf2studio*, which is an unofficial migration for the original implementation of **Point-NeRF** to **nerfstudio**, Project Link: **pointnerf2studio**

Projects

Automatic descriptor acquisition method for NASICON electrolyte

May 2022 – Mar 2023

Group Member, supervised by Prof Y. Liu in Shanghai University

Shanghai, China

- **Overview:** Using the text mining method, descriptors can be extracted from small batch of NASICON solid electrolyte documents and trained based on this model to achieve automatic and efficient acquisition of NASICON solid electrolyte descriptors.
- **Content:** Using **Vue** to develop front-end interfaces and the back-end deployment using **Spring-boot** to communicate with **MySQL** and **Neo4j** databases. BERT algorithm are deployed using **Pytorch** for paper processing, and the extracted descriptors are used to construct the knowledge map using **Neo4j** database.

Computer Vision Recognition System for RoboMaster Robots

Oct 2021 – Dec 2022

Leader of Computer Vision Group, SHU RoboMaster Team SRM

Shanghai, China

- **Overview:** Through the video stream of industrial camera deployed on the robot, this project can identify enemy robots' armor plates, and publish the target coordinate information to lock the platform at the recognition center. Its performance is similar to a self-aiming plugin in First-person shooting games.
- **Content:** The Yolo network is deployed on **Ubuntu** using **CUDA**. Kalman filter and trajectory model are used to improve the impact point of the projectile and achieve accurate strike.

Awards and Honors

Scholarship for Innovation of Shanghai University

Feb 2023

The 21st National Undergraduate Robot Competition (RoboMaster 2022) 3rd Prize, Aug 2022

The 35th Shanghai Youth Science and Technology Innovation Competition 1st Prize, Apr 2020

The 1st International Artificial Intelligence Fair(IAIF, SenseTime hosted) 1st Prize, Mar 2019

Shanghai Youth Robot Knowledge and Practice Competition 1st Prize, Nov 2018 and Nov 2019

Shanghai Youth AI Competition.

1st Prize, Nov 2018

Skill Set

Programming Languages:

- Expertized in **Python**, **C++**, **SQL**, **bash**
- Familiar with **MATLAB**, **Vue**, **HTML**, **CSS**, **TeX**.
- Basic experience in **JavaScript**, **Java**

Tech Skills: C-Compiling methods, machine learning, deep learning, CUDA programming.

Tools: Hands-on experience in **Ubuntu** and **git** on daily basis.

English: Overall band 7 for IELTS Academic Test (L7.5, R8.5, W6, S6.5)

Interests: Photography, Programming, Classical Music.