Licheng Zheng

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Education

Hong Kong University of Science and Technology Sep 2025 – Oct 2026(Expected)
MSc in Artificial Intelligence Hong Kong SAR, China

Shanghai University Sep 2021 – Jun 2025
B.Eng in Artificial Intelligence Shanghai, China

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

Internship

NIO Auto Dec 2024 – Jul 2025
3D Data Algorithm Intern of Calibration Team Shanghai, China

- Participated in **Generative Reconstrction Project**, in duty of **video generative model**.
- Attempts in adapting **SOTA Video VAEs** to our network, and attached to speedup frameworks, with a **100% - 500%** speedup.
- Experience in **training** a video generative model **from scratch**, detailed configs in all three stages of a bootstrap training method.
- Developed automation evaluation scripts for standardized rendering reports.

Shanghai Huixi Technology Co. Ltd. Jul 2024 – Oct 2024
Data Development Intern of Algorithmic Toolchain Group Shanghai, China

- Designed and developed **Python** workflow tasks for a self-operated closed-loop data platform.
- Deployed and fine-tuned prompts of **multimodal LLMs** towards better and automatic data annotation and mining.
- Developed **Python-Database** interfaces in order to manage large amounts of data stored in **PostgreSQL** and **AWS**.
- Accelerated file I/O (JPGs, PKLs, and PCDs) by **50%** using **C++ and Pybind11**.

Shanghai Lightwheel AI Co. Ltd. Dec 2023 – May 2024
Research Intern of 3D-reconstruction Group Shanghai, China

- Optimized 3D reconstruction algorithm for auto-driving scenes and enhance output quality.
- Participated in **Python** development automation evaluation, and the whole process automatically performs weekly algorithm evaluation.
- Using **Vue** and **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.
- Developed **Dockerfile** to standardize the development environment across 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
- **Mentors**: 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. A specialized BERT network was deployed using **Pytorch** for paper understanding, and 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** and **TensorRT**. Kalman filter and trajectory model are used to improve the impact point of the projectile and achieve accurate strike. And as group leader, taught new members about C++, CMake, OpenCV and Linux commands. Link for: **courseware**.

Awards and Honors

Scholarship for Innovation of Shanghai University Dec 2022

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

The 1st Shanghai Youth Artificial Intelligence Challenge 1st Prize, Nov 2018

Skill Set

Programming Languages:

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

Tech Skills: **Pytorch**, CUDA programming, machine learning & deep learning.
Tools: Hands-on experience in **Ubuntu** and **git** on daily basis.
Language Proficiency:

- Overall band 7 for IELTS Acadamic Test (L7.5, R8.5, W6, S6.5)
- JLPT (Japanese-Language Proficiency Test) N2: 114

Interests: Photography, Programming, Classical Music.