

XINYI (CINDY) ZHOU

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📅 Earliest Start Date: May 13, 2024 - Latest End Date: August 23, 2024

🌐 <https://www.linkedin.com/in/xinyi-zhou-cindy/> 🏠 <https://github.com/CindyChow123> 🌐 [My Website](#)

Education

University of Southern California

January 2023 – December 2024 (Expected)

Master of Science in Computer Science (General), GPA: 4.0/4.0

Los Angeles, CA

Southern University of Science and Technology

September 2018 – July 2022

Bachelor of Engineering in Computer Science and Technology, GPA: 3.75/4.0

Shenzhen, China

Work Experience

Machine Learning (NLP) Engineer Intern | UBTECH | Shenzhen, China

May 2023 – August 2023

- Fine-tuned LLM chatbots (Vicuna 7B, 13B, and 33B) for more engaging human-robot interactions in tour guiding and scene reception with **DeepSpeed ZeRO** and **LoRA** on a V100 GPU cluster, increasing the user preference by 29.74%.
- Collected over 50,000 high-quality ChatGPT-generated conversations centered around Welcoming and Guiding Dialogues, leveraging **prompt engineering** and **Python** scripts.
- Deployed a Chatbot web service using **Gradio**, **Uvicorn**, and **FastAPI** for user evaluations of fine-tuned models.

Research Assistant of Dr.Luo Tao | SUSTech | Shenzhen, China

August 2022 – December 2022

- Developed innovative MR/VR user interaction demos with **Unity** on HoloLens2 and Oculus Quest2 with UX designers.
- Created **C#** and **Python** scripts to collect and analyze user hand motion data for hyperparameter tuning.
- Analyzed semi-structured interview materials concerning the application of the IxDL language in the industry.

Front-End Developer Intern | Shenzhen Weijie Technology | Shenzhen, China

March 2022 – June 2022

- Developed the front-end for a WeChat mini application that groups Murder Mystery Games for iOS and Android platforms, utilizing **Vue.js** and the **uni-app** framework.
- Implemented customized features, including a sliding date selector and an Apple-style blurry image background.
- Collaborated with designers, back-end developers, and testers on UI design, API design, and code maintenance.

Research Assistant of Dr.Liu Jiang | SUSTech | Shenzhen, China

September 2019 – June 2022

- Developed a **CNN** network with **PyTorch** to address defocus blur in ophthalmic surgical microscope images by image fusion, outperforming other state-of-the-art models on SSIM and PSNR at that time by up to 36.10% and 28.19%.
- Collected a dataset of 3718 multi-focus microscope fundus images and obtained the ground-truth all-in-focus images by a traditional image fusion algorithm.
- Secured funding for the National College Students' Innovative Entrepreneurial Training Plan Program as the principal investigator (Grant No. 202114325010).

Publication

Xinyi Zhou, Louying Hao, Qiushi Nie, Yingquan Zhou, Lihui Wang, Yan Hu*, Jiang Liu, "A Novel Multi-focus Fusion Network for Retinal Microsurgery," in *IEEE International Symposium on Biomedical Imaging (ISBI)*, 2022, doi: 10.1109/ISBI52829.2022.9761531

Projects

Color Correction WeChat Mini Program | Front-end Developer

February 2021 – May 2021

- Developed a photography application designed to showcase the challenges color-blind individuals face in object recognition through color space conversion.
- Implemented the front-end and developed a **JavaScript** algorithm for color space conversion that simulated the visual experience of individuals with color blindness.

Epidemiological Analysis of COVID-19 cases in Korea | Data Analyst

April 2020 – June 2020

- Visualized the distribution of patients, spread of disease geographically to understand the pandemic trend by **Python**.
- Utilized KMeans clustering on population mobility data to categorize the epidemiological risks of Korean cities.
- Predicted patients' recovery time and epidemic trend with regression analysis and the SIR Model for Spread of Disease.

Honors

Outstanding Graduate Student Award

June 2022

Southern University of Science and Technology

The First Class (Top 5%) of Merit Student Scholarship

November 2021

Southern University of Science and Technology

Technical Skills

Languages: Python, C#, JavaScript, Java, HTML/CSS, C++, SQL

Technologies/Frameworks: Hugging Face Transformers, Linux/Unix, PyTorch, DeepSpeed, Git, Prompt Engineering, Gradio, FastAPI, Vue.js, React, UniApp, Unity3D, Spring Boot, the Microsoft Mixed Reality Feature Tool