

# MINYANG LI

Google Scholar ◊ GitHub ◊ Personal Website

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## EDUCATION

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**The Hong Kong University of Science and Technology (Guangzhou)** *Sep. 2023 – Jun. 2027 (expected)*

B.E. in Artificial Intelligence

**Current GPA:** 3.414/4.3

**Selected Coursework:** Deep Learning (**A+**), Introduction to Artificial Intelligence (**A+**), Creative Coding and Interactive Art (**A+**), Computational Techniques for Sketch-based Creativity (**A**), Introduction to Computer Vision (**A**), Introduction to Data Science and Analytics (**A**), Introduction to Computer Science (**A**).

**National University of Singapore (NUS)**

*Jun. 28 – Jul. 18, 2026*

Exchange Student

## RESEARCH INTERESTS

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My current research interests center on computer vision and visual generative models, with a primary focus on diffusion models and their theoretical and practical aspects.

## PUBLICATIONS

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- [1] Zhen Yang\*, Guibao Shen\*, **Minyang Li\***, Liang Hou, Mushui Liu, Luozhou Wang, Xin Tao, and Ying-Cong Chen, “RectifiedHR: Enable efficient high-resolution synthesis via energy rectification,” in *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) Findings*, Jun. 2026, pp. 3809–3819.
- [2] Haoyuan Yu, Qichun Yang, Liuqian Yu, Xia Li, **Minyang Li**, and Yingxian Yang, “Future climate change increases streamflow and risks of hydrological hazards in the Pearl River Basin,” *Water*, vol. 18, no. 3, p. 436, 2026.

## RESEARCH EXPERIENCE

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**Topic: High-Resolution Image Synthesis [1]**

Apr. 2025 - Aug. 2025

*Advisor: Prof. Ying-Cong Chen and Mr. Zhen Yang*

ENVISION Lab at HKUST(GZ)

- Contributed to a training-free high-resolution synthesis method for pre-trained diffusion models, enabling image generation beyond the native training resolution without additional model training.
- Implemented and extended the method to multiple downstream generation tasks, including image editing, customized generation, controllable generation, and video generation.
- Took primary responsibility for extensive experimental validation of the method by benchmarking quantitative metrics and qualitative perceptual quality against prior baselines across image generation and these downstream tasks.
- Participated in rebuttal-stage technical analysis, clarifying the methodological differences between our approach and related prior work, particularly regarding sampling-trajectory truncation and guidance-based compensation.

**Topic: Computational Hydrology [2]**

Jun. 2024 - Sep. 2024

*Advisor: Prof. Qichun Yang*

Earth, Ocean and Atmospheric Sciences Thrust at HKUST(GZ)

- Adopted a deep learning framework for hydrological and geospatial time-series prediction.
- Built the preprocessing pipeline for large-scale spatiotemporal datasets, covering resolution alignment, cleaning, and training-ready formatting.

- Trained and evaluated LSTM-based models for precipitation prediction across China.

## INTERNSHIPS

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### AI Researcher (Algorithm Intern)

*Mentor: Dr. Tianyi Zhang*

Mar. 2026 – Present

Knowin AI, Nanshan, Shenzhen, China

- Working as a core member on VLA-related topics.
- Leading a real-world robotic data collection program, including collection workflow coordination and SOP design.
- Supporting real-world testing and evaluation of robotic models, providing feedback for iterative system improvement.

## SELECTED PROJECTS

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### Multi-Object Image Editing

*Independent*

Jun. 2025 - Jul. 2025

Course Project in Deep Learning

- Proposed VGFE, an inversion-free flow-based image editing framework that uses VQA-guided editing strength search to automatically select optimal edit strength while reducing computational overhead. Extended the method to multi-object editing by designing a reassembly and re-editing pipeline tailored for inversion-free diffusion/flow models. [Report]

### Skeleton-Adhered Style Transfer for Chinese Characters

*Collaborator: Jian Yang*

Oct. 2025 - Dec. 2025

Course Project, in CompTec for Sketch-based Creativity

- Developed CalliGen, a sketch-based Chinese calligraphy generation system that transforms rough hand-written skeletons into stylized calligraphic characters while preserving users' structural intent. Designed an efficient pipeline to construct a large-scale paired dataset of Chinese character images and skeletons for training. Co-designed an interactive prototype supporting sketch editing, style selection, and real-time generation [Report][Code][Demo video]

### Fact-Aware Consistency Scoring for Model-Generated Answers

*Collaborator: Zhiyi Chen, Zhiling Li*

Apr. 2026 - May. 2026

Course Project in Intro2NLP

- To address the limitations of global embedding similarity in detecting entity, date, number, and span-level errors, we proposed FS-BGE, a BGE-M3 ColBERT-based similarity score with factual token reweighting and answer-span mismatch penalties, and I further explored bidirectional NLI-based entailment scoring and scoring in hyperbolic space. [Report][Code]

## SKILLS

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### Programming/Web

### AI/Robotics

### Systems/Tools

Python, basics of C++ and JavaScript, LaTeX

PyTorch, Hugging Face Diffusers, OpenCV, RLBench, LeRobot

Linux HPC/Slurm, NumPy, Pandas