

# WU CHENGYUE

Hong Kong

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## EDUCATION

The University of Hong Kong

*Ph.D. in Computer Science*

Sept.2023 — June.2027 (expected)

*Hong Kong, China*

Harbin Institute of Technology, Honors School(Top 5% in HIT)

*B.E. in Computer Science - CGPA : 95.6/100 - Rank :1/144(0.7%)*

Aug.2019 — June.2023

*Harbin, China*

Harbin Institute of Technology(Shenzhen)

*Exchange student in Computer Science*

Aug.2021 – Aug.2022

*Shenzhen, China*

## HONORS & AWARDS

National Scholarship

2019 — 2020

Hong Kong PhD Fellowship

2023

HKU Presidential PhD Scholarship

2023

Outstanding Graduate of Heilongjiang Province

2023

Samsung Scholarship

2020 — 2021

Tencent Scholarship

2021 — 2022

Best Student Paper Award in ICDIS 2022

2022

Runner-up in NTIRE Challenge CVPR 2022 Image Inpainting

2022

First Prize of School Scholarship

2019 — 2021

First Prize in Chinese National Mathematics Modelling Contest for College Students

Oct. 2021

Honorable Award in American Mathematics Modelling Contest for College Students

Mar. 2021

## PUBLICATIONS

- **Wu C**, Chen X, Wu Z, et al. Janus: Decoupling visual encoding for unified multimodal understanding and generation[J]. arXiv preprint arXiv:2410.13848, 2024.
- **Wu C**, Gan Y, Ge Y, et al. Llama pro: Progressive llama with block expansion[J]. arXiv preprint arXiv:2401.02415, 2024.
- **Wu C**, Wang T, Ge Y, et al.  $\pi$ -Tuning: Transferring Multimodal Foundation Models with Optimal Multi-task Interpolation[C]//International Conference on Machine Learning. PMLR, 2023: 37713-37727.
- **Wu C**, Ge Y, Guo Q, et al. Plot2Code: A Comprehensive Benchmark for Evaluating Multi-modal Large Language Models in Code Generation from Scientific Plots[J]. arXiv preprint arXiv:2405.07990, 2024.
- Lu Z, **Wu C**, Chen X, et al. Hierarchical diffusion autoencoders and disentangled image manipulation[C]//Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision. 2024: 5374-5383.
- Wang C, Chen X, **Wu C**, et al. Automatic time series forecasting model design based on pruning[J]. Applied Soft Computing, 2024: 111804.
- Wang Z, Duan S, **Wu C**, et al. Generative data augmentation for non-iid problem in decentralized clinical machine learning[C]//2022 4th International Conference on Data Intelligence and Security (ICDIS). IEEE, 2022: 336-343.
- Lu, Z., Huang, D., Bai, L., Qu, J., **Wu, C.**, Liu, X., & Ouyang, W. (2024). Seeing is not always believing: benchmarking human and model perception of AI-generated images. Advances in Neural Information Processing Systems, 36.
- Lu, Z., Wang, Z., Huang, D., **Wu, C.**, Liu, X., Ouyang, W., & Bai, L. (2024). Fit: Flexible vision transformer for diffusion model. arXiv preprint arXiv:2402.12376.
- Wang, J., Shao, W., Chen, M., **Wu, C.**, Liu, Y., Wu, T., ... & Luo, P. (2024). Adapting llama decoder to vision transformer. arXiv preprint arXiv:2404.06773.

## PROJECTS

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### NTIRE Challenge CVPR 2022 Image Inpainting

Feb.2022 — Apr.2022

- Propose to explore the types of mask used in the training process. At the same time, using our mask generation strategy can effectively improve the results of the model.
- Use joint spatial and frequency loss in spatial domain and frequency domain with a regular term to reconstruct the image.
- The proposed GLaMa was ranked first in terms of PSNR, LPIPS and SSIM in the NTIRE 2022 Image Inpainting Challenge Track 1 Unsupervised.

## INTERNSHIP

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### DeepSeek

May 2024 – Nov.2024

AGI Research Intern

Beijing, China

- Research on Multi-Modal Large Language Models' understanding and generation application.
- Research on the data centric training for pretrained multimodal models.

### Tencent

Sept.2022 – May 2024

Research Intern

Shenzhen, China

- Research on the Large Language Models and Vision Language Models.
- Research on the data centric training for pretrained multimodal models.

### The University of Hong Kong.

Sept.2022 – Jun.2023

Research Assistant

Hong Kong, China

- Research on the similarity between intra- and inter-modal tasks.
- Research on the parameter-efficient transfer learning of vision-language pretrained models.

### TikTok

Jan.2022 – Apr.2022

Backend Developer Intern

Beijing, China

- Aimed to design and implement microservices with load balancing and high availability, based on the fact of providing TikTok's international live broadcast with the global distributed IDC architecture.
- Responsible for architecture design and development. Participated in the technology selection and solution design of data index authentication service.
- Develop unified API interfaces to microservices for heterogeneous downstream data sources. Support configurable API, thus preventing manual rewrite and reducing human resources by up to 50%.

## TECHNICAL SKILLS

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**Program Languages:** Python, Java, C, C++, SQL, Go

**Certification:** Certified Software Professional (CSP) Top 5.57%

**Language:** CET-6: 582, IELTS: 7.5, Mandarin (mother tongue)

**Developer Tools:** Pycharm, VS Code, Goland, IntelliJ Idea Ultimate

**Technologies/Frameworks:**Pytorch, Scikit-Learn, Linux, GitHub, KiteX